

2012

Internationalising Chinese Maritime Higher Education: Developing Content and English Language Integrated Teaching and Learning

Pyne, Robyn Morgan

<http://hdl.handle.net/10026.1/1010>

<http://dx.doi.org/10.24382/3261>

University of Plymouth

All content in PEARL is protected by copyright law. Author manuscripts are made available in accordance with publisher policies. Please cite only the published version using the details provided on the item record or document. In the absence of an open licence (e.g. Creative Commons), permissions for further reuse of content should be sought from the publisher or author.

**INTERNATIONALISING CHINESE MARITIME HIGHER EDUCATION:
DEVELOPING CONTENT AND ENGLISH LANGUAGE INTEGRATED
TEACHING AND LEARNING**

by

ROBYN MORGAN PYNE

A thesis submitted to the University of Plymouth
in partial fulfilment for the degree of

DOCTOR OF PHILOSOPHY

Plymouth Business School
Faculty of Social Sciences and Business

In collaboration with
The Economic and Social Research Council
and
Dalian Maritime University

September 2011

© This copy of the thesis has been supplied on condition that anyone who consults it is understood to recognise that its copyright rests with its author and that no quotation from the thesis and no information derived from it may be published without the author's prior consent.

Author's Declaration

At no time during the registration for the degree of Doctor of Philosophy has the author been registered for any other University award without prior agreement of the Graduate Committee.

This study was financed with the aid of a studentship from the Economic and Social Research Council and carried out in collaboration with Dalian Maritime University.

A programme of advanced study was undertaken, which included skills development courses, a University of Cambridge ESOL Examinations Certificate in English Language Teaching to Adults awarded from a University of Plymouth partner college and a postgraduate qualification in Learning and Teaching in Higher Education.

Relevant scientific seminars and conferences were regularly attended at which work was often presented; external institutions were visited for consultation purposes and several papers prepared for publication.

Publications (or presentation of other forms of creative and performing work):

Pyne, R., Gong, X., (2008) A Communicative Learning and Teaching Strategy for English for Specific Purposes in Chinese Higher Education Institutions, *Proceedings of the International Maritime English Conference (IMEC)*, Shanghai, 29th – 31st October 2008.

Progoulaki, M., Pyne, R., Bao, J., Theotokas, I. (2008) Cooperation and Competition in the Global Market: Manning Issues of Chinese and Greek Fleets, *Proceedings of the International Association of Maritime Economists (IAME) Conference*, Dalian, 2nd - 4th April 2008.

Pyne, R. Dinwoodie, J. and Roe, M. (2007) Enhancing the Intercultural Competence of Postgraduate Logisticians, *International Journal of Logistics Research and Applications*, 10(3), 1-13.

Pyne, R. and Koester, T. (2005) Methods and Means for Analysis of Accidents, Safety and Crew Interaction in the Maritime Domain, *The Archives of Transport*, (17) 3-4.

Pyne, R., Koester, T. (2005) Accidents, safety and crew interaction in the maritime domain, *Proceedings of the European Safety and Reliability Conference*, Gdynia Maritime University, 20th – 30th June 2005.

Pyne, R and Roe, M. (2004) Cultural Interaction Among Mixed Nationality Crews and its Influence on English Language Ability, *Proceedings of the Lloyds Ship Manager 2nd Manning and Training in China Conference*, Shanghai, 29th – 31st October 2004.

Presentations and Conferences Attended:

- 2009 ESRC/Cambridge Judge Business School/MIT 'Enterprisers' (The University of Warwick) - Delegate
- 2008 IMEC, '20th International ME Conference' (Shanghai Maritime University) - Paper
- 2008 'All of Our Futures' Centre for Sustainable Futures Conference (The University of Plymouth) - Poster
- 2008 'Vice Chancellor's Learning and Teaching' Conference (The University of Plymouth) - Poster
- 2008 International Ship and Port Interface Conference (ISPIC) (Bremen University of Applied Sciences) – Post conference 'Research Methods', workshop facilitator
- 2008 International Association of Maritime Economists (IAME) Annual Conference: 'Sustainability in International Shipping, Port and Logistics Industries and the China Factor' (Dalian Maritime University) – Paper (Shortlisted in top ten for 'Best Paper' prize)
- 2007 The Company of Master Mariners of Canada, Newfoundland Division, 'Human Resource Solutions in a Dynamic Maritime Industry' - Paper
- 2007 UKGrad, 'Self Awareness' (Windermere) - Delegate
- 2007 ESRC, 'Dealing with the Media' (London) – Delegate
- 2007 'Transportforum' (VTI; Swedish National Road and Transport Research Institute, Linköping). – Session Chair
- 2006 'International Maritime Transport' Conference (Barcelona) – Paper
- 2005 'European Safety and Reliability (ESREL)' Conference (Gdynia Maritime University) – Paper
- 2004 Lloyds Ship Manager 'Manning and Training in China' Conference (Shanghai) - Paper

External Contacts: Prof Liu Zhengjiang and Prof. Luo Weihua, Dalian Maritime University, China.

Word count of main body of thesis: 79, 519

Signed**Robyn Morgan Pyne**

Date

Dedication

For my mother, *Lyzie Pyne*, who passed away in 1999. This thesis is dedicated to her; for her love and all that it has enabled me to achieve in my life so far.

Acknowledgements

A thesis of this size cannot have been produced without the help, support and input from a vast number of people. In the first instance, I wish to acknowledge the generous 1+3 funding received from the Economic and Social Research Council. In addition to thanking my two supervisors at the University of Plymouth, Professor Michal Roe and Professor John Dinwoodie, I would also like to thank my colleagues at Dalian Maritime University's International Maritime Conventions Research Centre, under the leadership of Vice President Professor Liu Zhengjiang and his deputy Mr. Bao Junzhong. Thanks to my 'office family': Wang Yanhua, Professor Zhang, Sara Zhang, Coral, Xiao Han, Jenny and Pei Pei, for your support and inimitable listening comprehension practice during lunch breaks.

I would like to thank my colleagues from Dalian Maritime University's Foreign Languages College under the leadership of their Dean, Professor Luo Weihua, for their collaboration across continents on our tri-party syllabus development project. The research process and the resulting syllabus have had the potential to be fraught and with much misunderstanding. However, they have been successful projects and ones that we have all benefited from greatly.

I would also like to thank my family, friends and loved ones who have supported me both in the UK and China. Thank you to Simon and to my father for your love and support across continents throughout the research, and thanks to Emma for being so supportive in the editing process. Thanks to my Chinese family (the Guo family of Zhuji) for welcoming me into your home, giving me my Chinese name and teaching me my first words of Mandarin.

Among the countless Navigation students to whom I bestow my greatest thanks for their time participating in this research and making me feel at home in Dalian, Zhou deserves my personal thanks. As do Stephen and Dabou, the student volunteers who at the very beginning kindly waited for my flight from Shanghai that was delayed for 10 hours. Thank you to David Yang and Wang Ying for coordinating the student volunteers through the International Cooperation and Exchange Office and for all that you facilitated prior to and during my many research visits. Thank you also to my friend Yan, for taking care of me when all English communication stopped during the flight delay. A beautiful friendship with you grew from this chance encounter.

The foreign expert teachers are an important group to thank also. Offering moral support on 'bad China days' and companionship in celebrating important milestones. Thank you Peter, Susan, Dave and Mike, to name just a few.

Thank you all! 谢谢大家!

Guo Xiao Yan 郭小燕 2010年

Abstract

This thesis examines how new maritime nations, which are engaged in the export of seafaring labour, need to respond to the demands of the international maritime industry. In particular, traditional maritime nations are calling for greater *internationalisation* of maritime education and training. The global labour market for seafarers, which is dominated by employers from traditional maritime nations, demands internationally minded graduates. China's response to these demands for quality labour exports from new maritime nations is the subject of exploration in this thesis. Within the specific context of Maritime English teaching and learning, a significant opportunity for innovation and change is identified.

The research took the form of an international collaborative education project in pursuit of the following question: *What teaching and learning development opportunities are there for improving the communicative competence of Chinese Navigation officers?*

The author of this thesis, formally a seafarer, is a teaching practitioner in higher education in the UK. For the purposes of this thesis, the author became a visiting researcher, and later a teaching practitioner, at the case maritime higher education institution in China. Becoming a member of the teaching staff at the host institution was a necessary step in order to establish and carry out teaching practitioner-led research as a member of a professional learning community. The aim of this professional learning community has been to collaborate on a Maritime English

teaching development project. This development work has since continued beyond this PhD study into a commercially funded project, which demonstrates the necessity and timeliness of the research.

This thesis sets out to report on the collaborative process of an international education development project as it was experienced. Research was carried out over a 15.5 month period spent in-situ at the case institution. The institution was selected as it is the most influential maritime university in China in terms of national maritime higher education policy reform, due it being under the direct authority of the Ministry of Transport of the People's Republic of China rather than the Ministry of Education, as is the case with other universities. The author had to work very hard to overcome a number of cultural issues to become accepted as a teaching practitioner in the research setting. Once accepted as a participant researcher, research-based professionalism founded on previous teacher training and experience allowed for a living theory approach to improving both own teaching practice and that of new-found colleagues.

The outcomes of this PhD study are multiple:

- The ethnographic account of the development process in the form of this PhD thesis.
- The establishment of a professional learning community between teaching practitioners and continued research and development work.

- The local teaching and learning innovation in the form of a new content and language integrated syllabus for Maritime English teaching, suitable for Chinese learners at maritime higher education institutions.
- The continued collaboration between an industry stakeholder and the local teaching practitioners in the further development of a new Maritime English syllabus and accompanying teaching resources to ensure that it meets the needs of employers.

As understanding grew of how Chinese maritime higher education institutions are preparing their students for employment in the global labour market for seafarers, the research objectives emerged while *in-situ*. The aim of the research centred on working with local teaching practitioners and industry stakeholders to improve the quality of maritime education graduates' transferable skills, in terms of their intercultural communicative competence. The key feature of the study was to collaboratively identify teaching and learning development opportunities for improving the preparedness of Chinese maritime higher education graduates to work in a safety critical environment, where they will need to communicate effectively in English.

The internationalisation of the Maritime English syllabus, and the wider Navigation curriculum, through content and language integrated learning and teaching is the main recommendation of this thesis. The evidence presented in this thesis has led to

the conclusion that this curriculum intervention is necessary for improving the transferable skills of Chinese Maritime Higher Education graduates. The content and language integrated learning approach to teaching was found to offer Chinese maritime higher education institutions with a solution to boost intercultural communicative competence in meeting the demands of the international maritime industry for professionally skilled, and competent-in-English seafarers for labour export.

Contents

Author's Declaration.....	3
Acknowledgements.....	6
Abstract.....	8
List of Figures and Tables.....	15
Abbreviations.....	17
Chapter 1 - Introduction.....	19
1.1 Scope of Thesis.....	19
1.2 Background to the research problem.....	23
1.3 Research rationale.....	43
1.4 Research Themes.....	49
1.5 Research Question.....	54
1.6 Research Objectives.....	54
1.7 Research Timeline.....	56
1.8 Methodology.....	57
1.9 Limitations.....	59
1.10 Thesis structure.....	60
1.11 Summary.....	67
Chapter 2 - Internationalising Chinese Maritime Higher Education.....	69
2.1 Introduction.....	69
2.2 Internationalising higher education.....	71
2.3 China's higher education reform and internationalisation.....	76
2.4 Scholarly perspectives on Chinese higher education reform.....	80
2.5 Models of educational development.....	84
2.6 Summary.....	92
Chapter 3 - Researching Chinese Seafarers.....	94
3.1 Introduction.....	94
3.2 Classification of Chinese seafarers.....	95
3.3 Availability of Chinese seafarers.....	101
3.4 The multi-national environment.....	102
3.5 Communicative competence and the multi-national environment.....	110
3.6 The implications of the revised STCW 2010 on ME teaching and learning.....	115

3.7	Summary	120
Chapter 4 – Methodology		123
4.1	Introduction.....	123
4.2	Research philosophy	124
4.3	Naturalistic research	125
4.4	Ethnography	129
4.5	Action Research	136
4.6	Systematic analysis: grounded theory	150
4.7	Deciding a focus for the inquiry.....	155
4.8	Case reporting	156
4.9	Deciding the sampling	166
4.10	Data collection	174
4.11	Classroom and teaching observations	176
4.12	Navigation student surveys.....	183
4.13	Standardised industry approved language tests	185
4.14	Improvised task-based language testing.....	189
4.15	Interview with Dean of Navigation College.....	202
4.16	ME perception survey	203
4.17	Interviews with GLMS stakeholders	205
4.18	Cross-cultural collaborative syllabus development.....	209
4.19	Research ethics.....	215
4.20	Validity and reliability	226
4.21	Limitations	235
4.22	Summary	236
Chapter 5 - Framing the local teaching and learning ecology		240
5.1	Introduction.....	240
5.2	Student/Teaching practitioner cases a) classroom observations.....	246
5.3	Student cases b) Navigation student surveys	254
5.4	Student cases: c) standardised industry approved language testing	263
5.5	Student cases d) task-based language testing.....	267
5.6	Teaching practitioner cases b) ME perception survey	279
5.7	Interviews with GLMS stakeholders	284
5.8	Interview with Dean of Navigation College.....	288

5.9	Summary	290
Chapter 6 – International collaborative innovation		298
6.1	Introduction.....	298
6.2	Becoming a participant as observer/researcher	304
6.3	Innovation to solve an educational problem	307
6.4	ME learning and teaching proposal to the institution	309
6.5	Developing and maintaining relations in the field	313
6.6	Creating and sustaining the Maritime English Professional Learning Community	317
6.7	The innovation process.....	324
6.8	Communicative language teaching classroom practice.....	332
6.9	The model of change: CLIL as a solution for internationalising MHE	337
6.10	Maritime industry stakeholder involvement	344
6.11	Summary	350
Chapter 7 - Conclusion		359
7.1	Major findings - Curriculum interventions as a tool for internationalisation	360
7.2	Achievement of research objectives	366
7.3	Transferability of research	369
7.4	Further research	370
7.5	Final remarks.....	375
References		379

List of Figures and Tables

Figure 1:	Percentage coverage of journalistic text by topic area 2000 – 2005.....	33
Figure 2:	Percentage coverage of journalistic text by topic area 2006 – 2010.....	33
Figure 3:	Preliminary research themes	50
Figure 4:	Simplified key areas of research focus on Chinese seafarers	95
Figure 5:	Age and experience of seafarers by sector division.....	98
Figure 6:	Detailed key areas of external stakeholder focus on Chinese MHE	100
Figure 7:	Final literature based conceptual model	118
Figure 8:	Triangulation of stakeholder perspectives	214
Figure 9:	Catalytic and tactical features of research design	237
Figure 10:	Residential status and mean intended sea service in years	259
Figure 11:	Residential status and maximum intended sea service in years.....	260
Figure 12:	Percentage scores for all year groups	264
Figure 13:	Third and fourth year students scoring above 80% pass threshold	266
Figure 14:	Third and fourth year test takers scoring below 80% pass threshold.....	266
Figure 15:	Current status of ME/CoC examinations.....	278
Figure 16:	Attitudes to time spent learning ME	280
Figure 17:	Attitudes to time spent teaching ME	280
Figure 18:	MHE policy environment.....	289
Figure 19:	Phases of research inquiry and a user systems collective process of problem solving.....	316
Figure 20:	MEPLC educational collaboration model.....	318
Figure 21:	Conceptual model of institutional organisation and communication channels for innovation project	353
Figure 22:	Proposed model for timing of additional English language assessment ...	364
Figure 23:	MELT-DC incorporating government and other institutions.	371
Table 1:	Trends in demand and supply 2000-2005	24
Table 2:	Main nationalities for senior officers for all shiptypes and flags	27
Table 3:	Main nationalities for junior officers for all shiptypes and flags	27
Table 4:	Main nationalities for ratings for all shiptypes and flags.....	27
Table 5:	Summary of newspaper reports under analysis – socio-cultural discourse	38
Table 6:	Summary of newspaper reports under analysis – <i>protectionist</i> discourse ..	41
Table 7:	Data collection phases, description and role of researcher	56
Table 8:	Language learning strategy taxonomy	114
Table 9:	Enrolment of students in Chinese MET institutions 1996 to 2005.....	159
Table 10:	Marlins computer based test of English for seafarers breakdown.....	189
Table 11:	Third year Navigation students participating in first round of task based language testing	192
Table 12:	Final stage Navigation students participating in second round of task-based language testing	193
Table 13:	Data collection phase A, B and C	244
Table 14:	Focussed coding of classroom observations	247

Table 15:	Self administered survey student personal information responses	254
Table 16:	Structured interview student personal information responses	256
Table 17:	Father's employment status and intended sea service in years	260
Table 18:	Results of pilot computer based Marlins tests	263
Table 19:	Third and fourth year students Marlins, IELTS, ICAO and YME.....	268
Table 20:	Third and fourth year students task-based language test summary	270
Table 21:	Private MET cadets task-based language test summary	274
Table 22:	Graduate CMSA task-based language test summary	276
Table 23:	Master mariner CMSA task-based language test summary	276
Table 24:	The availability of native teachers oral practice and teaching.....	281
Table 25:	Data collection phases D and E.....	303
Table 26:	Decision making matrix.....	327
Table 27:	ELT pedagogy comparison table	329

List of Appendices

Appendix 1	- Classroom observations coding frame	394
Appendix 2	- Detailed coding of classroom observations	396
Appendix 3	- Informed consent form	397
Appendix 4	- Final stage Navigation student survey	400
Appendix 5	- Industry approved language test	422
Appendix 6	- Teacher perception survey instrument	427
Appendix 7	- Industry stakeholder question frame	429
Appendix 8	- Navigation four year degree curriculum (translated from Chinese)	431
Appendix 9	- Yardstick for Maritime English	438
Appendix 10	- ICAO Speaking Level Descriptors	440
Appendix 11	- IELTS Level Descriptors	442
Appendix 12	- IELTS/CEFR equivalency	444
Appendix 13	- Interview transcript (Dean of Navigation College)	446
Appendix 14	- Example teaching observation 1	459
Appendix 15	- Example teaching observation 2	462
Appendix 16	- Teaching observations coding frame	468
Appendix 17	- Summary of ME initiative proposal	474
Appendix 18	- Example CLT ME Lesson Plans	475
Appendix 19	- New ME syllabus outline	484
Appendix 20	- Example syllabus detail	485
Appendix 21	- Example of accompanying teaching materials	487
Appendix 22	- Published Paper 1 (Archives of Transport)	507
Appendix 23	- Paper Presented at IMEC Conference 2008	523
Appendix 24	- Published Paper 2 (IJLRA)	538
Appendix 25	- Paper Presented at IAME Conference 2008	551

Abbreviations

B.Sc.	Bachelor of Science
BIMCO	Baltic and International Maritime Council
CEC	Certificate of Equivalent Competency
CECR	College English Curriculum Requirements
CET	College English Test
CIIPMET	EC Study on the MET Systems of China, India, Indonesia and the Philippines
CLT	Communicative Language Teaching
CLIL	Content and Language Integrated Learning
CMETRG	China Maritime Education and Training Research Group
CMSA	China Maritime Safety Administration
CoC	Certificate of Competency
EFL	English as a Foreign Language
ELT	English Language Teaching
ESOL	English as a Second or Other Language
ESP	English for Specific Purposes
EU	European Union
GFLTRC	Globalization and Foreign Language Teaching Research Centre
GLMS	Global Labour Market for Seafarers
HE	Higher Education
HF	Human Factors
IAMU	International Association of Maritime Universities
ICAO	International Civil Aviation Organisation
IELTS	International English Language Testing System
IMCRC	International Maritime Conventions Research Centre
IMEC	International ME Conference
IMO	International Maritime Organisation
ISF	International Shipping Federation
ISM	International Safety Management Code
K-12	Kindergarten through twelfth grade
LDC	Learning Development Community
L1	First Language
L2	Second Language
MARCOM	Report on the impact of Multicultural and Multilingual crews on Maritime Communication
MARPOL	International Convention for the Prevention of Pollution from Ships
MCA	Maritime and Coastguard Agency
MET	Maritime Education and Training
ME	Maritime English
MELT	ME Language Teaching
MEPLC	ME Professional Learning Community
MHE	Maritime Higher Education
MHF	Maritime Human Factors

MoC	Ministry of Communications
MoE	Ministry of Education
MoTPRC	Ministry of Transport of the People's Republic of China
NMN	New Maritime Nation
PLC	Professional Learning Community
PRC	People's Republic of China
PandI	Protection and Indemnity
RO-RO	Roll-on Roll-off
SIRC	Seafarers International Research Centre
SLA	Second Language Acquisition
SMOU	Singapore Maritime Officers Union
STCW	International Convention on Standards of Training Certification and Watchkeeping for Seafarers
TMN	Traditional Maritime Nation
TOEFL	Test of English as a Foreign Language
ToSE	Test of Spoken English
UN	United Nations
UNESCAP	United Nations Economic and Social Commission for Asia and the Pacific
UNESCO	United Nations Educational, Scientific and Cultural Organisation
UNCTAD	United Nations Conference on Trade and Development
WMU	World Maritime University
WTO	World Trade Organisation

Chapter 1 - Introduction

1.1 Scope of Thesis

The 2005 analysis of the 'global labour market for seafarers' (GLMS) (Alderton *et al.* 2004:57) carried out by BIMCO/ISF (2005) revealed that China was in close succession to the Philippines to become the dominant supplying nation for both officers and crew. This has increased emphasis among Chinese Maritime Higher Education (MHE) institutions on enhancing the employability of Chinese Navigation and Marine Engineering graduates so as to increase China's share in the GLMS. The 2010 analyses show that China has succeeded in its aim. China is currently the leading supplier of manpower to the GLMS (Drewry, 2009; BIMCO/ISF, 2010), making this a significant and timely case study of global interest, in terms of its maritime education and training (MET) systems.

Put simply, this thesis is about the labour market for seafarers and how the globalisation of this industry over the past 30 years gives rise to the demand for the internationalisation of MET, particularly in 'New Maritime Nations' (NMNs) (Athanasios, 2007:64; Gekara, 2008:15). A conflict of interest occurs between the NMNs and the 'Traditional Maritime Nations' (TMNs) (Cullinane and Robertshaw, 1996:322; Iheduru, 1996:22; Odeka, 1998:507; Selkou and Roe, 2004:27; Gekara, 2008:4), as the latter has been both the driving force behind the international political agenda of addressing the quality of MET for countries involved in the GLMS, and they are also the main

benefactors of its globalisation; TMNs are the main employers of seafarers from NMNs (Lane *et al.* 2002).

Global interest in China's MET systems has been growing since they started to increase their supply of manpower to the GLMS from 1995 onwards (BIMCO/ISF, 1995;2000;2005). Since China first demonstrated the potential to overtake other nations in the quantity of manpower supplied to the GLMS, this has given rise to increased international attention being focussed on Chinese MET systems in particular. In order to develop the analysis and discussion in this thesis, the context of MHE in China has been singled out. The analysis and discussion in this thesis fits within the theoretical frameworks of globalisation and internationalisation of higher education (HE).

The use of the term *internationalising* in the title of the thesis was chosen to represent the focus of this research being on the processes of achieving internationalisation of China's MHE system. Similarly, *globalising* refers to the processes and events necessary to achieve *globalisation*. In a non-educational context, to internationalise means to 'make something become international' (Cambridge University Press, 2011:n.p.), and internationalisation is the act of making something become internationalised. The term *internationalisation* differs from the term *globalisation*, in so much as the former refers to a complex set of conditions, which at times risk a demise of state power:

Globalisation is the flow of technology, economy, knowledge, people, values, ideas . . . across borders. Globalisation affects each country in a different way due to a nation's individual history, traditions, culture and priorities. Internationalisation of higher education is one of the ways a country responds to the impact of globalisation yet, at the same time respects the individuality of the nation.

(Knight, 1997:6)

Although many of the well established definitions of internationalisation used in the context of HE make explicit reference to process (Knight and de Wit, 1995;1997), there are others that do not. Knight (2004:6) acknowledges the confusion regarding definitions of internationalisation and states that the term is ‘...interpreted and used in different ways in different countries and by different stakeholders’. According to Knight and de Wit (1995:21) internationalisation of HE refers to:

The process of integrating an international/intercultural dimension into teaching, research and service of an institution.

The main emphasis of this thesis is upon how NMNs, like China, have responded to the globalisation of the maritime labour market by internationalising their MET systems, and what more can be done to further internationalise MHE in China. The confusion caused by semantics, as identified by Knight (2004), has led to the term *internationalising* being used in the title of this thesis to emphasise its focus on the processes involved in educational development, when working towards achieving greater *internationalisation*.

China's dominance in the GLMS makes it an obvious focus to explore what more can be done to meet the demands upon it to become more internationalised in the context of MHE teaching and learning. NMNs, like China, participate in the GLMS out of concern for finding employment for their citizens and to boost the national economy through the development of related businesses e.g. manning agencies. However, maintaining competitive advantage isn't as simple as merely complying with the regulations set out in the International Convention on Standards of Training Certification and Watchkeeping for Seafarers (STCW) 78/95/2010. Manpower supplying nations must also meet the demands of TMN customers. In China, the organisation of the maritime labour market is such that the demands of TMN customers are communicated through manning agents acting as a third party. The demands being communicated are often above and beyond the requirements of the international regulations and may reflect their ratification into the national laws of the relevant flag state of the customer. Until its recent amendment in 2010 the STCW 78/95 was not as prescriptive as many examples of national maritime legislation. For example, it did not set the recommended testing system or a minimum 'pass mark' for demonstrating certain competencies (McCarter, 1999:11) included in the convention.

The recent revision of the STCW 78/95 in 2010 has seen some of the competency requirements of the industry translated into key features of the updated regulations. In particular, the revised STCW 78/95/2010 places English language competency skills at the fore (IMO, 2011). Although more detailed, the updated STCW 78/95/2010 still relies on the ratification of the regulations into the national law of International Maritime Organisation (IMO) member states for the setting of *pass mark* standards.

To add to the regulatory pressure for quality brought about by the STCW update, in the 1995, 2000 and 2005 GLMS analyses a future shortage of quality officers had been predicted (BIMCO/ISF, 1995;2000;2005). The global economic slowdown in 2008 led to a reduction in vessel capacity throughout 2009/10, and the most recent analysis reveals a more stabilised balance of supply of and demand for manpower for the foreseeable future (BIMCO/ISF, 2010). Prior to the 2010 analysis of the GLMS, the issue of scarcity had meant that quality may have taken a back seat to quantity. With the GLMS in balance and under the revised STCW 78/95/2010 regulations, NMNs are under increasing pressure to meet demands for quality MET. The demands placed on NMNs for quality labour exports to the GLMS are intensified by greater regulatory and economic pressures than ever experienced before.

1.2 Background to the research problem

The seafarer, in economic terms, is a factor of production (Stopford, 2009). Manning is a large part of a vessel's operating costs and the GLMS came about due to great interest by TMNs in the cost savings presented by the growth in supply of seafarers from NMNs. The instrument that both facilitates and controls the globalisation of the labour market for seafarers, in terms of the free flow of suitably qualified people, is the STCW 78/95/2010. In the analysis of trade newspaper articles, pre and post 1978, there is an increase in the mention of China's participation in the GLMS throughout this 30 year period in recent history. For China in general, the last 30 years has seen international trade and labour exchange grow, as instrumented by government policies

introduced at the end of 1978 (Howe *et al.* 2003). Increased interest in China as a participant in the GLMS over the past 30 years is both as a result of China's own '*gaige kaifan*' (reform and open the door) policies (Gamble, 2003:16), deregulation in shipping (Selkou and Roe, 2004) and the harmonising effect of the STCW 1978/95/2010. Since China's World Trade Organisation (WTO) accession in 2001, the maritime industry's interest in its labour supplying capability has shown even greater interest frequency (BIMCO/ISF, 2000;2005) (See Table 1).

Table 1: Trends in demand and supply 2000-2005

Global Totals		Active Demand (000)		Active Supply (000)	
		2000	2005	2000	2005
Officers		420	476	404	466
Ratings		599	586	823	721
Total (millions)		1.019	1.062	1.227	1.187
Global Rankings		Active Supply 2005		Total	
		Officers	Ratings		
1.	China	42,704	79,504	122,208	
2.	Philippines	46,359	74,040	120,399	
3.	Turkey	22,091	60,328	82,419	
4.	India	46,497	32,352	78,849	
5.	Ukraine	28,908	36,119	65,027	
6.	Russia	21,680	34,000	55,680	
7.	Indonesia	7,750	34,000	41,750	
8.	Greece	17,000	15,000	32,000	
9.	Myanmar	6,000	23,000	29,000	
10.	Egypt	3,970	17,999	21,969	
Percentage of World Supply from top-10 countries (%)		52,1%	56,4%	54,7%	
Total Global Supply 2005		466,000	721,000	1,187,000	

Source: Amalgamated from BIMCO/ISF (2000;2005)

1.2.1 The global labour market for seafarers

According to Alderton *et al.* (2004:57) the period from 1980 to the year 2000 saw the most significant 'emergence of a global labour market for seafarers'. Furthermore, the BIMCO/ISF (2005) study stated that the number of Chinese seafarers in the GLMS stood at 122,208. Chinese national statistics, based on Seaman's books issued from the Maritime Safety Administration, showed a significantly higher figure of 394,345 (Shen *et al.* 2005 *cited in* Wu *et al.* 2007). It is clear that there is disparity between statistics issued by crewing nations regarding crew supply figures and the seafarers that China has available to the global fleet. Causes of this disparity include false certification and the enhancement of figures for promotion and sales reasons that reflect anticipated figures rather than actual ones (Leggate, 2004).

The BIMCO/ISF (2000) survey and follow up activities contribute to reporting and forecasting crew supply against demand. Leggate (2004) has questioned the quality of data produced by crewing nations and its effect on the results contained in the BIMCO/ISF (2000) report, calling for a further update. However, despite these criticisms of the BIMCO/ISF surveys (1995;2000;2005;2010) for the lack of parity of figures with national administrations, Leggate admits that the threat of scarcity of suitably qualified seafarers in 2005 and beyond was a real one. Due to the significance of China as a supplying nation to the GLMS, the BIMCO/ISF (2010) update was executed with the direct assistance of the International Maritime Conventions Research Centre (IMCRC) at Dalian Maritime University. As a result, the most recent analysis has the potential to

be the most accurate indication of the number of Chinese seafarers participating in the GLMS to date.

In 2001 the Seafarers International Research Centre (SIRC) undertook a study entitled 'Crewing the International Merchant Fleet' (Lane *et al.* 2002). The aim of their study was to account for the actual number of crew employed on the world's merchant vessels, with specific consideration for the rank of the crew members, vessel type and nationality. This research confirmed the position of the Philippines as the leading crewing nation when data were collected in 2001 and highlighted a varying trend of employment of different nationality groups, in different ranks, on different classes of vessel. The data identified that in the high risk and highly specialised sectors, such as roll-on roll-off (RO-RO), refrigerated ships, oil tankers, general cargo, passenger, and chemical and gas tankers, that the Philippines dominated the employment figures. For these types of vessels, the Philippines was consistently the primary supplier of crew for each rank category of rating, junior officers and senior officers. In the container and bulk sector, the dominance of the Philippines was showing weakness as a significant number of Chinese seafarers were employed in these sectors (Lane *et al.* 2002).

Table 2: Main nationalities for senior officers for all shiptypes and flags

Rank	Nationality	Frequency	%
Senior Officers	Philippines	964	19.0
	Greece	450	8.9
	China	430	8.5
	Russia	316	6.2
	India	292	5.8
	Ukraine	281	5.5
	Poland	264	5.2
	South Korea	264	5.2
	Germany	230	4.5
	Others	1012	31.2

Source: Adapted from Lane et al. (2002)

Table 3: Main nationalities for junior officers for all shiptypes and flags

Rank	Nationality	Frequency	%
Junior Officers	Philippines	1,947	35.4
	China	465	8.4
	Russia	344	6.3
	Ukraine	325	5.9
	India	323	5.9
	Poland	245	4.5
	Greece	168	3.1
	South Korea	165	3.0
	Myanmar	139	2.5
	Others	704	25.0

Source: Adapted from Lane et al. (2002)

Table 4: Main nationalities for ratings for all shiptypes and flags

Rank	Nationality	Frequency (000)	%
Ratings	Philippines	2,600	38.5
	China	521	7.7
	Poland	379	5.6
	Russia	350	5.2
	India	325	4.8
	Ukraine	286	4.2
	South Korea	169	2.5
	Myanmar	161	2.4
	Croatia	150	2.2
	Others	872	31.2

Source: Adapted from Lane et al. (2002)

According to Lane *et al.* (2002) a steady rise was observed in other nationality groups in international manning, including Chinese and Eastern European seafarers. For Chinese seafarers their participation in the GLMS was mainly onboard container ships and bulk carriers. Increases were also seen in the participation of African seafarers, but these figures were not as substantial as those relating to Eastern European or Chinese crew. By the time of the BIMOC/ISF update in 2005, China had become the leading maritime labour supplying nation, taking over the formerly dominant position of the Philippines (Table 1). It was in 2005 that China was recognised for the first time by the BIMCO/ISF study as holding dominance in total supply of seafarers to the GLMS. This increase in 2005 was not observed in all categories, and the Philippines maintained dominance in terms of their supply of officers. With the increase in students enrolling on three and four year diploma and degree programmes respectively (CMSA, 2006), it was anticipated by industry stakeholders at the time that the next BIMCO/ISF survey would show a further increase in China's supply of officers that would be over and above that of the Philippines, which was confirmed recently by the 2010 update (BIMCO/ISF, 2010).

1.2.2 *The emergence of Chinese seafarers in the GLMS*

The bulk of English language academic research publications addressing the subject matter of Chinese seafarers have been authored by researchers who have, at one time or another, been associated with the SIRC at Cardiff University. The uniqueness of these publications is in their application of social research methods in performing studies in relation to Chinese seafarers. Although a number of these key researchers

have moved on from the SIRC, they continue to each make significant contributions to Chinese seafarer research literature as well as informing other aspects of China's economic and social development.

The importance of the SIRC as a research institute is critical in seafarer related studies for all geographical regions. The centre benefits from the injection of funds from the IMO, the EU and ongoing charitable financing from Lloyds Register to support its research programmes. Data from these research reports and papers concerning Chinese seafarers are included, where appropriate, to inform discussion. Key researchers from the SIRC team who have devoted their work over the past decade to the subject area of Chinese seafarers include Bin Wu and Minghua Zhao, under the former direction of Tony Lane. Reference is made throughout this introduction to the key reports and papers produced by this group, with data being used from their large scale and internationally funded project: *Crewing the International Merchant Fleet* (Lane *et al.* 2002). In addition, the literature review chapters of this thesis make extensive use of fundamental publications by Zhao and Wu (Zhao, 2000a;2000b;2002; Zhao and Wu, 2002; Wu, 2004;2006; Zhao and Amante, 2005; Wu *et al.* 2007).

In particular, there is one research paper authored by Wu (2004) that provides a concise summary of what he perceives as the key categories of research interest in Chinese seafarers. These very categories of research interest provide an appropriate

framework through which to present a synopsis of the literature. It is for this reason that the choice was made to structure the following précis around Wu's (2004) categories for Chinese seafarer research.

1.2.3 *Four dimensions of Chinese seafarer research*

Wu (2004) describes four approaches to the consideration of Chinese seafarers in the global labour market. The first approach relates to 'demand' (Wu, 2004:1), which focuses on the comparative advantage and the position of Chinese seafarers in the global maritime labour market. The second of these categories is 'supply' (Wu, 2004:1) in which the focus of research is on the current and potential scale of supply of Chinese seafarers to the global labour market. The third concentrates on the 'multinational environment' (Wu, 2004:10). This approach to research has concern with the 'adaptation of Chinese seafarers [to multinational environments] with a focus on their English competence' (Wu, 2004:1). The fourth area identified by Wu (2004:1) is 'resource management' and concerns the nature of the relationship between China's crew resource management organisations and the global labour market.

Despite his recognition of four distinct dimensions of Chinese seafarer research, Wu (2004:1) is critical of the limited scope of the existing literature as showing commonly 'neglect of the diversity of Chinese seafarers'. As a result, he has devoted much of his published work over the last decade to exploring further each of these areas of focus by applying social research techniques. In Wu's opinion:

research that exposes the diversity of Chinese seafarers, as well as other areas of socio-cultural insight, is greatly necessary to impact on people's existing understanding of the Chinese seafarer phenomenon

(Wu, B. conversation at 2nd LSM Manning and Training Conference, October 2004).

Inspired by Wu's (2004;2006) previous research and his open expression on this topic, it is the intention of this research to explore the third of his dimensions; Chinese seafarers' adaptation to the multinational environment, with particular focus on English language competency, and in doing so to apply social research methods to representing truthfully the diversity of Chinese seafarers.

1.2.4 Content analysis of maritime trade press

...social reality is produced and made real through discourse, and social interactions cannot be fully understood without reference to the discourses that give them meaning.

(Phillips and Hardy, 2002:3)

In the absence of extensive academic literature concerning Chinese seafarers and the multinational environment, content analysis and critical discourse analysis have been applied to two daily trade news publications. The purpose of this exercise was to gauge understanding of how Chinese seafarers are viewed by the industry in terms of their

participation in the GLMS. Overall, this analysis showed findings that concur with Wu (2004) and his classification of Chinese seafarer research into four dimensions, as outlined in the previous section. It was found that only few articles promoted the *new professionalism* among Chinese seafarers, as observed by Wu (2006), and many industry journalists have a tendency to portray them in a negative light.

Much as an historian would turn to newspapers of a certain era to gauge popular opinion, two industry periodicals have been referred to in order to inform this section of the thesis. This allows for the piecing together of a retrospective account of industrial perceptions. Two daily newspapers are published for maritime industry professionals and both of these were analysed in terms of their content. A search was performed for the term *Chinese seafarers*. The period 2000 to 2009 was selected for the analysis of maritime industry discourse in relation to China's participation in the GLMS through the medium of the trade press. Figure 1 and Figure 2 show the amalgamated results for the analysis of both daily newspapers.

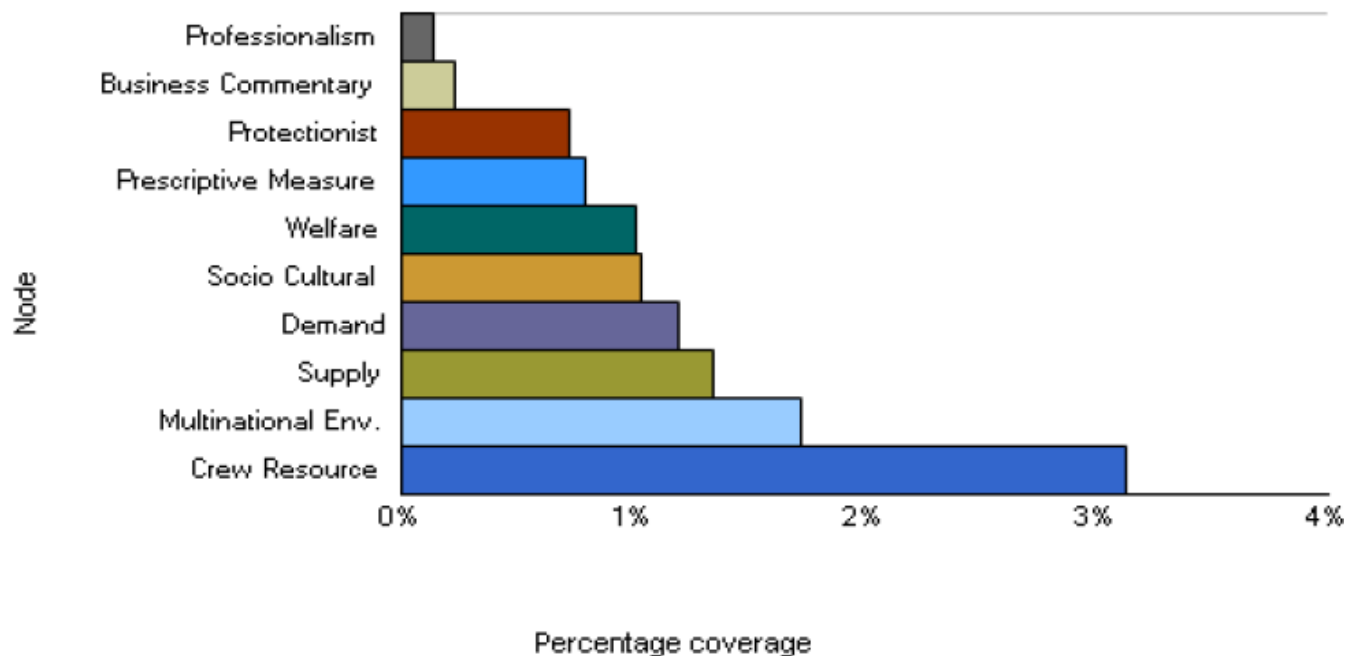


Figure 1: Percentage coverage of journalistic text by topic area 2000 – 2005

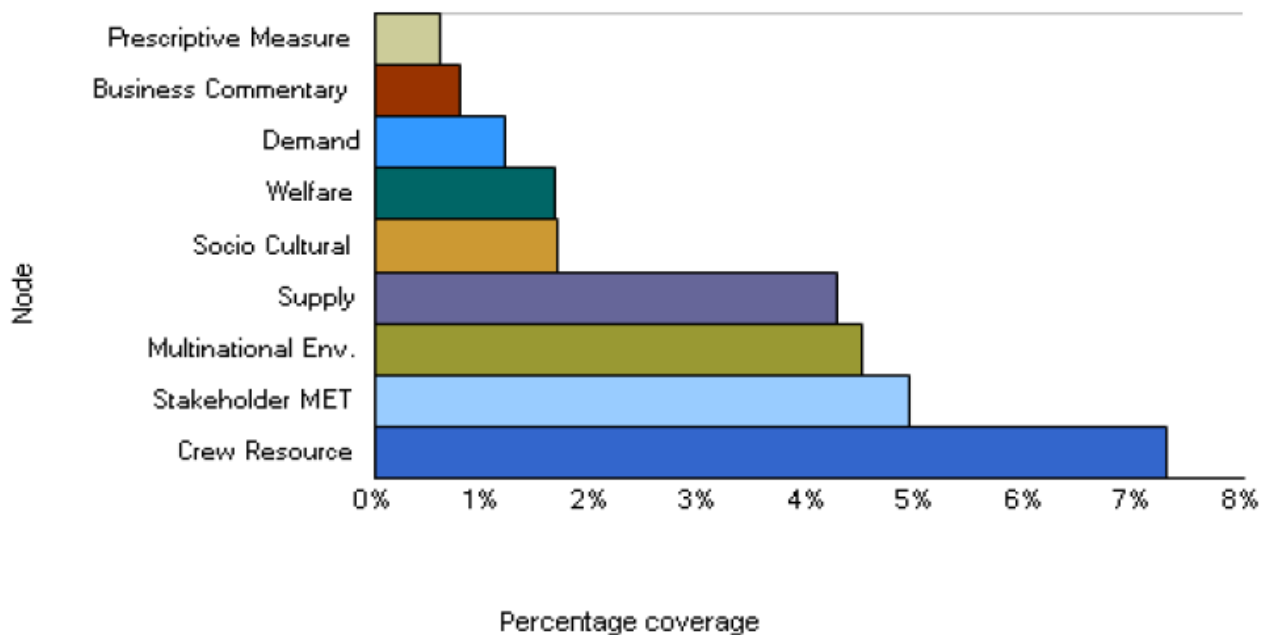


Figure 2: Percentage coverage of journalistic text by topic area 2006 – 2010

Figure 1 shows the trends for journalistic reporting on the topic of Chinese seafarers over the period 2000 to 2005. Figure 2 shows trends in the literature for 2006 and throughout 2009. This division represents the timings of the most recent BIMCO/ISF GLMS analyses (BIMCO/ISF, 2005;2010). This period offers an interesting insight into the shift towards employing Chinese seafarers that occurred between the 2000-2005 analysis of the GLMS (BIMCO/ISF, 2000;2005).

In general, a number of articles indicated that that the Philippines's reputation had been damaged in the late 1990s by false certificates, a rise in litigious action and expensive payouts to crewmembers following minor accidents. China is presented as an affordable alternative, with concerns about the *multinational* [working] *environment* representing just below 2% of coverage (Figure 1). It is clear from both of these figures that reports relating to the crew resource management dimension of Chinese seafarer research have remained dominant during the period 2000 to 2009, in terms of the percentage coverage.

Figure 1 shows this variable at just above 3% and in Figure 2 it has risen to over 7% of the media coverage concerning Chinese seafarers. This led to the conclusion that the higher frequency of *crew resource management* stories reflected the dominance of industry interest relating to this variable during both time periods. In recent years the number of *crew resource management* stories has increased by over 100%, illustrating that industry interest in sourcing crew from China has doubled in the last five years.

As discussed in the introduction, the issue of 'resource management' is the fourth dimension of interest in Chinese seafarer related research as identified by Wu (2004:1). This particular dimension '...concerns the nature of the relationship between China's crew resource management organisations and the global labour market' (Wu, 2004:1). It was particularly interesting to see that crew resource management related articles dominate the trade publications' coverage throughout the second period of analysis also. In addition, this category showed an increasing trend from a little over 3% of articles for the period 2000 to 2005, to just over 7% of its features from 2006 to 2009 (Figure 2). This indicates that industry interest from a *crew resource management* perspective was the strongest and reflects China's entry as a significant player in the GLMS. In the 2000 to mid 2006 texts, the *multinational environment* factor was the second most reported feature at 1.75% of coverage. In the more recent period, post 2006, this grew to 4.75%. A factor that did not feature frequently in the early analysis of these trade publications was the reporting of the involvement of, and investment by, foreign industry stakeholders in MET operations. Post 2006 this category occupied 5% of coverage. It is possible to infer that increased interest in Chinese manpower also caused an increase in the multicultural environment perspective. This in turn is likely to have affected the stakeholder involvement in Chinese MET as solutions were being sought in this respect.

From one perspective, the content of the articles was of a pro-globalised labour market perspective of discourse that promotes the shift of maritime labour supply to China as a positive prospect, which offers economic benefits to managers. This extends to prescriptive discourse. The 行业新闻 category refers to the reporting of the previous experience of a professional in manning and training in China and offers insight and advice to an anticipated audience of other professionals on how to succeed in this market. These articles may also serve the hidden agenda of promoting maritime services. Secondly, there emerges the counter-discourse and the protectionist dimension, whereby the weaknesses of the former discourse examples, which aim to promote the employment of Chinese seafarers, are identified and exploited. The protectionist category is one that causes much concern in light of the damage that such negative reporting can have on industry attitudes. References to Chinese seafarers that fall within this category are generalisations and negative cultural stereotypes. These references were found within articles that seem to be attempting to deter professionals from entering the Chinese manning and training market. What is left to be concluded is if there is any hegemony arising from one particular discourse's dominance over time (Teo, 2000). In other words, whether TMNs protect the livelihoods of their own nations' seafarers, over those from NMNs, through this kind of protectionist reporting.

1.2.5 Critical discourse analysis of maritime trade press

Critical discourse analysis was used by Teo (2000) to explore how the term *Asians* was used interchangeably with specific socio-cultural groups e.g. Vietnamese, when

Australian newspapers were reporting incidents of social unrest and criminal activity. His findings were that by carelessly using the term *Asians* interchangeably with specific references to one particular social cultural group, Vietnamese, that the newspaper was guilty of racism. His argument being that by using an umbrella heading implied that all *Asians*, and not just the nationality of the guilty party, were responsible for these criminal acts. Similar reporting was found in maritime industry newspapers during this discourse analysis activity. In places the term *Asian seafarers* was used interchangeably with *Chinese seafarers*, and in another article the term *Asian seafarers* was used when it came to reporting on substandard MET practices. In light of Teo's (2000) research, it is clear to see how this is an example of promoting negative cultural stereotypes, and is possibly racism. This is an example of failing to recognise that within the grouping of *Chinese seafarers*, there is a diverse selection of individual nationalities. Returning to Wu's (2006) argument, even using the term *Chinese seafarers* in the maritime press is not desirable, as this in itself refers to an incredibly diverse social group of individuals with different regional origins and varying levels of education and experience. Chinese seafarers, like any other social group, are of varying ages, origin (urban/rural) and educational background.

Table 5: Summary of newspaper reports under analysis – socio-cultural discourse

	Date	Source	Example	Secondary Category
1	07.10.2003	Lloyds List	Some lads submit old, dirty notes, even coins. Every penny was from their parents. It was so moving, tears would well in my eyes. These words of an instructor at a Chinese maritime college illustrate how a life as a seafarer is more than just a job for trainees from China and the Philippines — it is a gamble by their parents to risk everything for a career which will provide an escape from poverty for their children. MOST Filipino and Chinese seafarers hail from poor peasant families, who sometimes pay out huge multiples of their annual income to put their sons through maritime training, often for uncertain reward.	Supply
2	07.10.2003	Lloyds List	Filipino seafarers come from families that average six children, while their Chinese counterparts are typically from families of three or four, which is larger than average given the countries strict laws on the question.	(None)
4	19.11.2004	Lloyds List	The education standards in the hinterland seem to be lower than in the cities. The belief seems to be that such cadets will sail for more years than the boys from the city.	Supply
5	12.10.2006	Tradewinds	Chinese seafarers, for example, tend to rank risks such as sinking, fire and explosion higher than other nationalities, while Filipinos rank them lower, say researchers from the Seafarers International Research Centre (SIRC) in Cardiff.	(None)

Influenced by the application of critical discourse analysis by Teo (2000), this technique was chosen for the further analysis of *Chinese seafarer* related articles in light of the *socio-cultural* and *protectionism* categories which emerged from the content analysis. According to Bryman (2009), critical discourse analysis emphasises the role of the language used in a text as a power resource and relates it to ideology. Fairclough (1992) attributes this power resource as having a relationship with socio-cultural change. In this vein, critical discourse analysis provides a means for interpreting written accounts by offering a platform for seeking out the ideological foundations of a certain belief or socio-cultural change (Fairclough, 1992). It is the critical aspect of this analysis technique that allows for attention to be paid to the ideological basis of any discourse that is the subject of inquiry (Teo, 2000).

Examples of comments representing industry opinions in relation to Chinese seafarers and their preparedness to work in the multinational environment, as explored in the analysis as *socio-cultural* and *protectionist* views, are shown in Table 5 and Table 6. The socio-cultural category includes references to Chinese seafarers identified as a socio-cultural group. These two perception categories are chosen for inclusion in the discourse analysis tables as they are seen as examples of generalisations and cultural stereotyping.

Much of the press reporting relating to Chinese seafarers, as Wu (2006) highlights, neglects to recognise the diversity of Chinese seafarers as a socio-cultural group. Little

consideration is given to their age, origin or educational background in these references. In this analysis of maritime industry trade newspapers, some bias that could be classed as a form of racism was observed in its reporting in relation to Chinese seafarers. In this instance, critical discourse analysis provided an appropriate approach to analysing the newspaper articles further and in-depth. Critical discourse analysis has the capacity to provide insights into the ideology of the language used in discourse; how its use can produce a phenomenon like racism and legitimise it through neutralising statements (Bryman, 2009). It is believed that publishing these types of articles for maritime industry readers on a daily basis is highly likely to have had much negative effect on opinion in relation to sourcing crew from China, which strengthens the need for appropriate in-depth academic research to replace these examples of anecdotal inaccuracies.

Table 6: Summary of newspaper reports under analysis – *protectionist* discourse

Date	Source	Example	Secondary Category
04.03.2005	Tradewinds	'The most common complaint is about the low level of English language fluency amongst Chinese seafarers,' said Martis.	Multinational environment
07.10.2003	Lloyds List	Chinese maritime training spends a great deal of time teaching English. But this is not an issue in the Philippines, given the country's history as a former US colony.	Multinational Environment
11.07.2005	Lloyds List	There seems little doubt that the wages of Chinese seafarers are soaring and this has prompted concern about the long-term capacity of Chinese seafarers in the global labour market.	Demand
29.09.2005	Lloyds List	COLUMBIA Shipmanagement is reluctant to hire Chinese crews, because of the extent of state control over the employment process, a company executive has told an industry audience. She recognised that the Chinese government had made efforts to develop a pool of seafaring labour suitable for the international market. But generally speaking, Chinese seafarers do not communicate well in English.	Resource management
		There is also the risk that crew will be lost back to the Chinese market, if and when government policies change.	Supply
20.04.2006	Tradewinds	China is facing an officer crisis. The newly-trained seafarers will be deployed on China's own ships before being made available to foreign owners who currently employ around 40,000.	Supply
Efthimios Mitropoulos, secretary general			

of the International Maritime Organisation, Multinational
told the forum the English language skills Environment
of Chinese seafarers would have to
improve.

1.2.6 Chinese seafarers and the multinational environment

Following the amendment of the STCW '78 in 1995 and the surrounding speculation among TMNs concerning the quality of MET in NMNs participating in the GLMS, the World Maritime University (WMU) responded to a call for research made by EU Directive 98/35/EC into the effectiveness of the convention in having established a minimum level of training for seafarers. This call for a research investigation was prompted directly by the revision of the STCW '78 Convention in 1995. The conclusion of the WMU (1998) Study on the MET Systems of China, India, Indonesia and the Philippines (CIIPMET) study in relation to Chinese MET was that:

One of China's major problems with 'selling' its seafarers to other nations' flags is that of language. This factor has held up the development of China's export of seafarers and has put it at a distinct disadvantage in comparison with the Philippines.

(WMU, 1998:5)

The WMU (1998) study is the only one carried out with such an objective as to explore the standards of MET in a number of NMNs in the Asia Pacific region. It was also carried out by a United Nations (UN) funded institution, with the WMU being an organ of the IMO. As such, it is reasonable for its audience to view its contents and findings with the belief that it is authoritative and reliable. However, in the literature review to this thesis the methods employed by the WMU (1998) research team and the contents of the final research report are discussed in a critical light. It is argued by the WMU (1998) that reform of MET in NMNs is of paramount concern for TMNs. Although this may be a genuine exclamation, from an educational development perspective it is the place of the NMNs to be innovative in reforming their MET systems. This is in order to allow sufficient consideration of the local cultural context, rather than it being the role of TMNs (whose considerations of the local cultural contexts may be limited) to dictate how this should be achieved.

1.3 Research rationale

Morgan and Wu (2011:6) identify a series of research gaps in the context of policy studies of HE in China, one of which is of particular relevance to this research: 'The contribution of HE development to China's global strategy, together with the internationalisation of China's HE sector and implications for its reform and development'. This research gap can be interpreted to include MHE and, as such, holds much relevance for this research. Notably, this is the same Wu (2004;2006) who classified Chinese seafarer research into the four perspectives outlined earlier.

There is much synergy between Wu's Chinese seafarer research (Wu, 2004;2006; Wu *et al.* 2007), his work on sustainable development in rural China (Wu, 2003) and his most recent research into China's education policy and HE reform (Chen and Wu, 2011;Morgan and Wu, 2011). On the subject of research methodology for understanding HE development in the post-expansion era in China, Morgan and Wu (2011) identify a need for a theoretical breakthrough and studies that address the following:

- Empirical surveys and qualitative methods bring together the voices, opinions, needs, and suggestions of all stakeholders. It is particularly important to identify the barriers to and the potential benefits of HE development for vulnerable groups such as rural families, migrant workers and urban low-income families.
- Interdisciplinary studies to provide a whole picture of the dynamics, constraints and potential of HE development. Alongside conventional educationalists and economists, the contribution of scholars from other disciplines, such as geography and sociology.

This PhD research is very much an interdisciplinary study that falls within the second of the research gaps outlined above. Anticipation of the 2010 analysis of the GLMS and the forthcoming amendments to the STCW 78/95, presented a timely opportunity for research and development in the context of China's MHE. China shows great willingness to respond to the demands for quantity and quality from TMNs. Added to this,

it is anticipated that the amended STCW 78/95 is likely to result in stakeholders placing greater emphasis on intercultural communication skills. These two features created desirable social conditions for exploring opportunities for potential developments in MHE, and the use of a research design that facilitates implementation of these changes in working towards internationalising China's MHE teaching and learning.

In the most recent era of WTO accession in 2001, China's reform efforts have been accelerated greatly. As such, there is an expanse of literature about China's ongoing HE reform, and terms such as *internationalisation*, *globalisation* and *modernisation* are common place in such articles. One particular area of great interest for academic research is in China's education reform. Education reform policy has been enacted periodically since China opened their doors to the world in 1979. In terms of education, the most significant changes have resulted from the education reform policy of the 1990s, and more recently the 2001 education reforms. Within English language teaching (ELT) in China, each of these eras of reform has had specific policies for this aspect of education. The most recent policy reform for ELT is the 2004 'College English Curriculum Requirements (for Trial Implementation)' (CECR) (Luo, 2007:8).

This thesis proceeds from the premise that the labour market for seafarers is a globalised one. A key characteristic of globalisation is that the internationalisation in question leads to active, continuous and dynamic deterritorialisation (Scholte, 2000; Giddens, 2002; Stiglitz, 2002). In keeping with this, the maritime industry is made up of

companies operating internationally in a climate that has seen its national economic barriers reduced and, in some cases, eliminated. The maritime industry, and in particular the seafarers labour market, is globalised in this respect as it operates in an environment where capital, finance and labour are quite often freed from the confines of national economic and geopolitical territories (Scholte, 2000; Stiglitz, 2002). Metaxas (1985) refers to a long history of *internationalisation* in the maritime industry, which precedes the use of the term *globalisation* in the relevant literature from subsequent periods. This terminology was only adopted to describe what was happening in seafarer supply and demand from the latter two decades of the 20th Century (Scholte, 2000; Giddens, 2002; Stiglitz, 2002; Alderton *et al.*, 2004).

Hirst and Thompson (1999) argue that nation states themselves are becoming more important with the growth and liberalisation of international trade and prefer to refer to the *internationalisation* of national economies instead of accepting the weakening of states that characterises the standpoint of other mainstream globalisation theorists. China is an NMN and *transformationist* state (Sorensen, 2004), and as a result it proceeds with much caution and an analytical approach to the processes and events that are shaping current economic trends. Sorensen's (2004) theory is that even though significant changes are at foot in transformationist states, which are altering the nature and the role of that state, it is not necessarily the case that the power of the state as a regulatory body is in demise. In the context of the GLMS and China as an NMN, the manning industry is characterised by companies, although locally based, operating internationally. The practice of *flagging out* and registering a vessel in a country in

which certain NMN certificates of competency (CoCs) are recognised, allows TMN shipping companies to benefit by employing the seafarers that are being exported by China's maritime labour industry. However, TMNs cannot employ Chinese seafarers directly and this must be through a seafarer expatriation agent in possession of a government issued operating licence in accordance with the Regulations of the People's Republic of China on the Administration of Seafarer Expatriation, which came into force on 1st July 2011. This replaces similar legislation in terms of the role of seafarer expatriation agents. TMNs wishing to enter the Chinese labour market for themselves by setting up satellite recruitment and crewing agencies can only do so through joint venture companies with local firms.

To remain critical, these examples demonstrate how, in the case of China, the GLMS operates in an internationalised way, rather than a globalised one, in the case of China. There have been changes in the nature of how China operates in the GLMS and there have also been changes in its role i.e. WTO membership, but the Chinese government proceeds with much caution and careful analysis of the processes and events involved in globalisation before its committal takes place. In other words, China is benefitting economically from the export of seafarers to the GLMS, but as a nation state it has not yet become fully globalised in a geopolitical sense.

This thesis posits that each of the TMN led studies highlighted in this section, have led to a situation where unreasonable pressure and expectations have been placed on NMNs, specifically those in the Asia Pacific Region, to reform their MET provision in order to satisfy the unrealistic demands of TMNs. These expectations are unreasonable and unfounded as, at the time, they were over and above the international regulations contained within the STCW 78/95 and are not measured against an internationally agreed standard.

This thesis explores the ME provision of China's largest and most influential Maritime University through the perspectives of its staff, students and a group of industry stakeholders. The case MHE institution selected for this study has been the subject of two previous studies (WMU, 1998; Yercan *et al.* 2005). This thesis differs from previous studies into ME teaching and learning as it takes a collaborative curriculum development approach to creating a new Content and Language Integrated Learning (CLIL) syllabus. The syllabus has a great degree of validity in terms of its *catalytic* and *tactical authenticity* (Lincoln and Guba, 1985) to meet the needs of TMNs, as its development involved the local ME teaching practitioners, current students and a key industry stakeholder who was representing a number of TMN customers.

China's MHE system is not the only means by which to supply the GLMS and there are a multitude of non university level institutions providing private MET. Internationalisation efforts in private sector MET are becoming more common as private investment is targeted towards cadet training. Although economic considerations are increasingly driving internationalisation efforts in HE, this is not the case for all initiatives. In China, polity remains the main driver of change particularly at the level of curriculum, where

academic, social/cultural, ethical, political, and even environmental rationales feature more strongly (Kreber, 2009).

1.4 Research Themes

The following statements represent the four key propositions and the ‘theory’ behind embarking on this research investigation. These are statements of belief formed *a priori* based on the preliminary literature review, prior to entering the field. These themes are summarised below and illustrated in Figure 3.

- **Theme 1 - TMN /NMN economic cost trade-off**

The employment of NMN seafarers makes economic sense for companies wishing to decrease operating costs as their wages are relatively lower than other nationality groups.

- **Theme 2 - TMN seafarer scarcity**

The practice of actively employing suitably qualified NMN seafarers to feature in a multi-cultural crewing mix has the potential to be the solution to the forecast shortage of manning for the international merchant fleet.

- **Theme 3 – NMN seafarer incidents and accidents**

The growth in multi-cultural crewing due to cost and scarcity has caused an increase in incidents where communication features in the chain of causation of an accident or incident.

- **Theme 4 - NMN seafarer English language competency**

Safety concerns, specifically the limited ability of seafarers from NMNs to communicate in English, are factors restricting their employment in the GLMS.

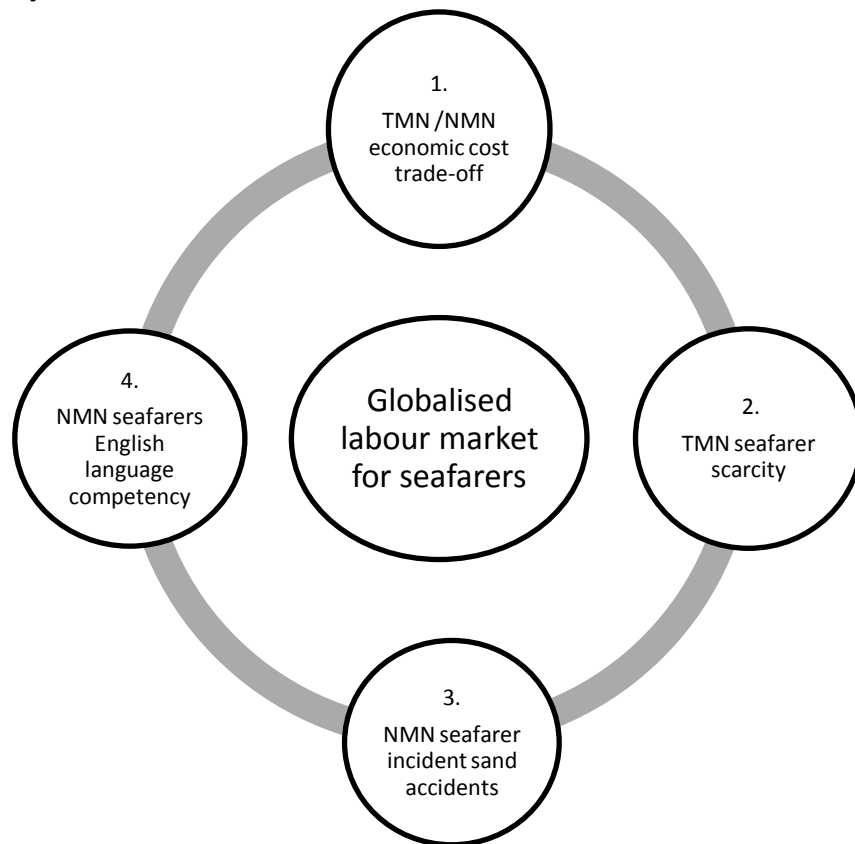


Figure 3: Preliminary research themes

These four general focus research themes were used as a framework for the search for and collection of relevant literature for the literature review chapter. In particular, focus was placed on Chinese seafarers from an early stage of the research. This was in line with the original proposal for the research in which the choice to focus on China was justified by their emerging dominance in terms of number of seafarers in the GLMS at the time of the research (Lane *et al.* 2002; BIMCO/ISF, 2005), which continued into 2009 (BIMCO/ISF, 2010). With the focus on Chinese seafarers in the GLMS in relation to these four themes, the literature was collected and organised accordingly. It transpired that these four themes had some commonality with the four perspectives on Chinese seafarer research, as presented by WU (2004): supply, demand, the multinational environment and crew resource management.

It was not always the intention of the research to explore the teaching and learning practices in China as an NMN. However, as China is an NMN that has expanded rapidly, exploring how it is responding to demand for competent-in-English seafarers for export to TMNs is of great interest as a case study. It was felt at the outset of the research that NMNs, like China, are exploited by TMNs for their cheap labour in a harsh competitive and policy environment. Despite satisfying the international regulations governing MET, NMNs are continually, and possibly unfairly, accused by TMNs of providing substandard MET. Specifically, the concerns expressed by some in the industry that Chinese seafarers' English is substandard became the focus in terms of a desire to separate perceptions from reality. In other words, this research explores the foundations beneath

each of research theme four, and in specific reference to Chinese MET; are they grounded fears or just the perceptions of a very vocal minority?

Such research requires gaining in-depth insight into a relatively unexplored area, which was achieved successfully through this project. However, it was not always the intention for the thesis to explore the situation from a specifically educational perspective. Nor was it the intention at the outset of this research that it would find itself exploring the way ahead for Chinese MET teaching practitioners to engage with industry stakeholders in localised innovation and change activities within ME learning and teaching. Never the less, these are key research findings.

At the stage of applying for PhD research funding, the title and aims of the research were quite broad. The title read *An Analysis of the relationship between communication and safety - English language competence of PRC Seafarers*. In the initial application for funding it had been outlined that the intention of the research had been to:

- *research the relationship between language skills, social organisation and safety within the specific context of ship operations with particular reference to the rise in number of Chinese seafarers and the level of English speaking capabilities.*

- *investigate the significance of social organisation on-board ship in the development and maintenance of linguistic skills in English in cases where the majority of seamen are of Chinese nationality whilst officers are of a different nationality.*

These general research aims were still pursued and the direction of the research did not change dramatically. However, after carrying out an institutional visit in mid 2006, the emphasis of the research behind the thesis diverted towards towards the educational practices employed in the teaching of ME at Chinese MHEs. This change meant that the study itself became a piece of educational research instead of being one that would have seen the fieldwork carried out onboard ship. This was also considered a much more realistic approach as negotiating access had become a challenge due to changes in security measures initiated by the 9/11 attacks in 2001 that came into force around the time of the beginning of the research.

The most significant change in the intention, or scope, of the thesis was following the initial visit to an MET institution in China. In the section below, the objectives of the research from this stage onwards are divided into *general focus research objectives* and *refined research objectives* and an explanation is given as to how and why each category of objective came about. In addition, for the latter category of refined research objectives there is an explanation of what influenced their inclusion and roughly when

this occurred. In order to assist in clarifying when each of the refined research objectives was introduced and how data were collected in support of the objective. A table illustrating all of the phases of the research has been included in the following section (Table 7).

1.5 Research Question

In this era of increasing globalisation many TMNs have taken advantage of the cost savings of employing NMN seafarers. This has been made possible by the marketplace formed by neoliberal labour policies (Selkou and Roe, 2004; Gekara, 2008), about which there are important questions to be asked. In particular, *how can Chinese MHE institutions further internationalise their curricula to meet the demands of the GLMS?* The overall aim of the thesis is to assess China's ability to participate in the GLMS in terms of the English language ability of its seafarers.

1.6 Research Objectives

It was not possible to develop detailed research objectives at the outset of this study due to its in-depth nature. Much of its direction was determined 'in-situ' (Bogdan and Biklen, 1992:2). However, it is possible to state the broad research objectives that were the fundamental basis of the study. In this section, the research objectives are broken down into three main categories: (1) the research objectives related to the research design, (2) the research objectives related to the data collection, and (3) the research objectives related to the data analysis.

1.6.1 General focus objectives

Motivated by the prejudices of TMNs towards NMNs and the specific lack of in-depth research into teaching and learning of ME within Chinese MET, which was evident from the preliminary review of literature, two broad research objectives were established prior to embarking on the first field phase of the research:

Objective A – To frame the research setting through social mapping; gathering demographic and statistical data and describing the local teaching and learning practices.

Objective B – To build an understanding of the local learning and teaching ecology from the perspectives of teachers, learners and those in leadership.

1.7 Research Timeline

1.7.1 Stage specific research objectives

The two general focus research objectives were refined following the initial phase of observations carried out in the research setting, after which it was necessary to refine them. Due to the nature of this research and the methods employed, the refined objectives presented in this section are emergent in nature as they were formed *in-situ* (Bogdan and Biklen, 1992) as the research process progressed.

Table 7: Data collection phases, description and role of researcher

Phase (Objective)	Description	Duration	Interaction
A – Problem framing (Objective i)	Classroom observation Pilot student language assessment Pilot student surveys	1.5 months*	Complete observer/ Observer as participant
B – Further fact finding (Objective i)	Teaching observation and reflection Student language assessment Student surveys/interviews Student task based language testing Key gatekeeper interview	2 months*	Observer as participant
C – Knowledge (Objective ii.iii)	Classroom teaching practice Establishing MEPLC Key stakeholder discussions/interviews Teaching observation and reflection	6 months*	Participant researcher
D – Innovation (Objective iii/iv)	Collaborative syllabus development	4 months	Participant researcher
E – Implementation (Objective iv)	Consultation on new syllabus materials development Exiting the field	2 months	Complete participant
Total Time		15.5 Months	

* part time research while also studying Mandarin as part of ESRC scholarship

- i. To build an in-depth understanding of the specific needs of the local teaching and learning ecology from the perspectives of teachers, learners and those in leadership;*
- ii. To explore the scope for innovation and change in the local teaching and learning ecology through engaging its teaching practitioners and institutional leaders;*
- iii. To explore the scope for innovation and change in the local teaching and learning ecology through collaboration between local teaching practitioners and an external stakeholder;*
- iv. To seek to empower the local teaching and learning ecology's practitioners to implement educational change and innovation.*

1.8 Methodology

One central feature of this thesis is the migration towards employing ethnomethodology and the ability to assess its impact through *catalytic authenticity* and *tactical authenticity* (Lincoln and Guba, 1985). During an ethnographic study, and at the point of deciding its end, *catalytic authenticity* allows the researcher and the research participants to assess the impact of the research. As mentioned already, the initial aims and objectives of the research had evolved after the funding application had been granted. This was accompanied by an extensive critical review of educational research literature, which brought about the general focus objectives in section 1.7.1. These revised objectives

and a review of this literature were submitted for approval through the annual monitoring process. The funding body subsequently authorised this shift of focus and change of methodological approach.

1.8.1 Authenticity

To investigate the research problem in this project, a multi-faceted methodology was applied, including surveys, follow-up interviews, classroom observations, English language testing and collaboration in a *professional learning community* (PLC) (Erikson *et al.* 2005;2008; Ryan, 2011) of ME teaching practitioners (herein after referred to as the MEPLC). The key feature to establishing authenticity and increasing the credibility of the research was the prolonged involvement in the setting, persistent observing, and peer debriefing (Ryan, 2011a). The data collected was analysed at each stage to examine its relevance to the research problem and associated research questions, with additional research objectives emerging from the research results themselves. Piloting of surveys was conducted to locate ambiguities, confusion, or other problems in the content as well as in the format of the questions, thus increasing validity and reliability of the research.

The main action research participants, or *research actors*, were the teaching practitioners. To some extent the key gatekeepers from the host academic institution's management staff and the industrial manning and training stakeholder were also research actors. The students took only a passive role in the research and are not

considered as research actors is this description. This is a necessary distinction to make in light of the following paragraph concerning *catalytic* and *tactical* authenticity. It is also important when discussing the authoritative/participatory model of educational development at a later stage.

Lincoln and Guba's (1985) principles of *catalytic* and *tactical* authenticity are applied to gauging the authenticity (success) of this qualitative piece of research. The first of these principles assesses the extent to which action is promoted by the research process. In other words, have the constructions offered up through the research process been deep and sophisticated enough to move the participants to action or decision-making about themselves or the research setting? This differs from tactical authenticity in that action is not the key measure of impact, rather it is the reflection upon self or setting and having the desire to act that is being assessed when referring to catalytic authenticity.

1.9 Limitations

Taking into consideration the tens of maritime universities with thousands of enrolments, the sample size and depth of this study has its limitations due to the relatively small number of participants involved. The representativeness of the samples and generalisability of the findings from this research are therefore not guaranteed. The findings may only apply to participants and situations involved in this research, and

further research at other location is required to assess the extent to which these findings are generaliseable across Chinese MHE as a whole.

Despite the apparently homogenous nature of MHE teaching and learning under a centralised curricula, the selection of research sites in this study did not provide a large enough or wide enough sample in terms of variance of characteristics, such educational level, entry level English proficiency and regional development, to make any form of generalisation from its findings. This study does not intend to develop a thorough and complete coverage of all the aspects of MHE in China due to limited time and resources at the disposal of the researcher. The scope of this study was limited to exploring ME as it is taught to Navigation undergraduates and China Maritime Safety Administration (CMSA) professionals on postgraduate programmes at a state run MHE. Observations were also carried out at a private training institution, but these were limited in scope and do not form a major part of the analysis.

1.10 Thesis structure

Chapter 2 focuses on a review of research and scholarly literature on internationalising HE. Educational change, and how to achieve this effectively, is a constant theme of this section of the literature review. As well as defining and clarifying what *internationalising* means, in the context of HE, this section of the literature review seeks to present some theories and models on educational change. The relationship between globalisation and English language is also discussed in this chapter and the concept of *Global English* (Graddol, 2006) is presented as a key concept in internationalising HE in

countries where English is not the native language. Some of the literature points towards China's WTO accession in accelerating its promotion of Global English teaching and learning. This replaces prior thinking on ELT and the former regime of the College English Test (CET). Reference is made in this section to both HE and ELT reform policy in China, and how to approach international collaborative research for achieving change in this setting.

Chapter 3 is a summary of the academic research concerning Chinese seafarers to date. This chapter complements the relevant background information on supply and demand presented in the introduction to this thesis. The review of literature in this chapter is centred on the theme of Chinese seafarers and the multinational environment. Whereas the analysis that featured in the introduction was concerned mostly with how Chinese seafarers' participation in the GLMS is presented in industry trade journals, this chapter is concerned only with academic papers and formal research reports. The effect of the STCW 78/95/2010 on MET in NMNs is addressed and the implications for ELT are outlined. A gap in the literature is identified when it comes to methods for exploring ME teaching and learning development.

Chapter 4 is an outline of methodology in terms of research philosophy, approach and the strategies employed to achieve the objectives of the research. In this study the STCW 78/95/2010 and the influence of the IMO model course 3.17 - *Maritime English* are the foci of the initial investigation. Classroom observations, language

testing, learner surveys and interviews, teaching practitioner debriefing and curriculum development activities were the main sources of data. Associated documents on the existing curriculum and discussions relating to its development were also collected and analysed. These data were analysed both qualitatively and quantitatively to answer the research question and to achieve the research objectives.

Two further chapters, 5 and 6, provide evidence of the findings, which are discussed in light of educational development theory. Emphasis in chapter 6 is on qualitative analysis, but certain aspects of the data lend themselves to quantitative analysis e.g. language testing and surveying, the results of which are presented in chapter 5.

Chapter 5 reveals key information about the local teaching and learning ecology. This chapter is framed from an observer as participant perspective (Gold, 1958). Data were collected over three main periods of research. Firstly, during the visit of six weeks, time was spent carrying out pilot research activities and deciding if the research setting would make an appropriate case study. This included time spent carrying out over 20 hours of classroom observations at the host Chinese MHE institution. Additional data collection tools included language testing, and developing and piloting a survey instrument. Secondly, a return visit was made for administering the final survey and to continue the language testing with a wider sample of students, using varied techniques, and to carry out formal teaching observations. Thirdly, a period of six months as a participant observer completed the framing of the local teaching and learning ecology. Nine and a half months of this research were part time and took place

while carrying out Mandarin language study as part of the PhD scholarship. This itself provided valuable insight as the researcher was enrolled as an international student at the case Chinese MHE institution and experienced language teaching and learning from this perspective also. The remaining six months were spent researching full time *in-situ*, as a teaching practitioner and participant researcher.

Chapter 5 also reports results from task-based language testing activities that featured various groups of students. These were carried out to stimulate natural communication in English in a real life Navigation context for the sake of assessing communicative competence. Tests were executed in such a way that ability to communicate, in English, on topics relating to Navigation could be assessed. This led to developing further tasks and lesson plans for use in the next phase of the research (participant observation). Group discussion with students was paired with further language testing i. using industry approved standardised tests, and ii. through face-to-face improvised interviews. Teaching observations also took place in dedicated ME classes, which consisted of mainly Navigation and some Marine Engineering students.

The purpose of chapter 6 is to investigate further the local teaching and learning ecology through structured observations of the teaching practice. This involved the teaching practitioner completing a section of an observation form before the observation, stating the aims of the session and aspects of their teaching on which they would like to receive feedback. These were followed up with face-to-face feedback and discussion with the relevant teaching practitioner after each observation. The observations also provided a chance to view ME lessons, which were not running during the summer term when the initial research visit had taken place.

These observation activities were not only aimed at gaining further and more in-depth information to inform understanding of the local teaching and learning ecology, but also to attempt to engage the local teaching practitioners in identifying the needs of the research setting for innovation. In chapter 6, reflections on attempts to engage teaching practitioners in establishing the need for innovation are explored in relation to the theories of educational change of Zaltman *et al.* (1973), and Rogers and Shoemaker (1971). In addition, these are analysed in relation to the application of PLCs in international collaborative teaching development projects by Erikson *et al.* (2005;2008) and Ryan (2011a).

The current IMO model course for ME is examined, as are the current national curriculum and the 2004 CECR. The *authoritative/participative* model of educational development (Zaltman *et al.* 1973;1977) is explored and applied to the context of ME curriculum development. The role of the Ministry of Education (MoE) and the Ministry of Transport for the People's Republic of China (MoTPRC)/CMSA are explored in the context of ME teaching curriculum development. The MoE/MoTPRC/CMSA represent the *authoritative* in Zaltman *et al.*'s (1977) model, while the local teaching and learning ecology's practitioners represent the *participative*. Informal discussions took place with the staff responsible for ME teaching and learning and their opinions were sought on the *status quo* of ELT for the Navigation cohort. The balance between superior and subordinate in innovation and implementation is explored in light of Rogers and Shoemakers (1971). The major finding is that innovation in ME teaching and learning is largely externally driven by MoE/MoTPRC/CMSA and MoC policy, the latter being in response to China's increased role in the GLMS.

Chapter 6 focusses on a period of regular interaction as a practitioner researcher operating as part of a PLC, the ME Professional Learning Community (MEPLC). Data were collected through three visits made to the research setting during this period. This phase of the research was carried out using an ethnographic action research approach. The purpose of this chapter is evidencing the participatory, educative nature of the research efforts in identifying opportunities for innovation and change. Evidence from this phase of the research is used to argue that the project holds a high degree of *catalytic authenticity*. The opportunities and constraints realised from earlier analysis were built upon in this phase of the research in terms of the extent of internal and external influence on effecting educational innovation and the implementation of changes. The outcomes of earlier phases of analysis revealed that innovation in ME teaching and learning is largely externally driven by government policy and China's increased role in the GLMS.

A comparison between the components of the collaboratively devised CLIL syllabus for ME, the CECR 2004 and *Global English* (Graddol, 2006) reveals that they have much in common. This strengthens the theory established through chapter 5 that the particular model of ELT embedded in the new syllabus for ME is set to meet the demands of the GLMS as well as satisfying government policy. Through the new CLIL syllabus for ME, pedagogy shifts from being teacher-centred to being student-centred and focus is

turned away from reading comprehension skills towards developing listening and speaking skills. These are themes supported both by the CLT approach of the IMO model course for ME, and the CECR 2004. The new syllabus for ME combines CLIL and CLT influences, while having been developed collaboratively by the setting's teaching practitioners. This removes the danger of it being an *educational import* (Zhong, 2006; Ryan, 2011a).

Chapter 7 presents a summary of the main findings of the collaborative educational development project and establishes a number of recommendations. The most significant finding is that innovation and change in Chinese MHE is largely externally driven. This has mainly been in the form of political influence, and much evidence of dependence on authority to identify the need for innovation was observed in the research setting. WTO accession in 2001, the 2004 CECR and the amended STCW 78/95/2010 have meant that there have been increased external influences on educational development in recent years. This was observed during this research when an external industry stakeholder became involved in the syllabus development project. This revealed that the potential role of external industry engagement in course design has not yet been explored fully in the research setting.

Changes in attitude to educational innovation and change are occurring and the balance between superior and subordinate have been altered by the internationalisation process that is currently underway. There is still progress to be made, but current educational

reform policy stresses a move from knowledge-based to inquiry-based curriculum, science-based to society-based values, and centralised to decentralised curriculum reform policy (Zhong, 2006; Ding *et al.* 2011; Morgan and Wu, 2011), which each pose a new environment for educational researchers investigation Chinese HE.

In chapter 7 Lincoln and Guba's (1985) concepts of *catalytic authenticity* and *tactical authenticity* are addressed as means for assessing if the research objectives were achieved. The project was found to have both catalytic and tactical authenticity because the research process not only moved the participants in the MEPLC to want to make decisions and to take action (catalytic authenticity), but through the research process they were empowered to consummate these ideas into action (tactical authenticity).

1.11 Summary

An ethnographic description, according to Geertz (1993:20) is, among other characteristics, 'microscopic'. He does, however, recognise that it is justifiable to use the micro to inform the macro. By extending interpretations to wider contexts and giving them theoretical implications 'recommends them to general attention and justifies us constructing them' (Geertz 1993: 21). This thesis opens-out the micro setting of a Chinese MHE institution and its ME teaching and learning practices with a depth of description that removes its profundities making it accessible to broader interpretations and abstract analysis. The final result is a set of empirical evidence with which to confront the macro policy environment.

The final and most ambitious research outcome of this study has been to empower the research setting's actors to exert influence on the relevant micro MET policies through the means of internal collaborative reflective inquiry. This study into the micro policy of reformulation of teaching practice and teacher development at one key MHE institution, as explored through ethnographic action research, has the potential to effect change in a wider macro system. The case study academic institution is not only state run, but its leadership staff also have a research and consultation role in the policy making processes of the ministries for transportation and communication.

Chapter 2 - Internationalising Chinese Maritime Higher Education

2.1 Introduction

MHE in China cannot be understood fully unless it is put into the broader context of the globalisation of HE. The HE sector, like the rest of the Chinese economy, is becoming more globalised than in the past. Literature draws attention to this global perspective and how Chinese HE has, in general, experienced increasing demand since China's WTO accession in 2001 (Leggott and Stapleford, 2007; Luo, 2007; Morgan and Wu, 2011; Ryan, 2011a). This perspective is concerned with a global labour market that is demanding highly skilled workers. These demands of the global labour market have two effects on Chinese HE. Firstly, it places Chinese students in the competitive global market for education as consumers. Secondly, there is increasing demand from foreign students to study in China. As such, China is placed, along with other global providers, in a market where promotion of research capacity and creating world class universities through improving standards of teaching and learning are of great importance. According to Morgan and Wu (2011), there are three key internationalisation themes that feature in China's HE reform agenda:

- HE expansion as part of China's rise in the international community;
- International experience emphasised as a reference point for reform and development;

- The overall aim is to improve the Chinese system through international comparative education of HE management, research and teaching standards and methods.

This chapter of the thesis aims to address the meaning of *internationalisation* in the context of HE, with its focus on China's HE reform policy and practices. Centred on Morgan and Wu's (2011) three internationalisation themes, this section explores the wider HE reform agenda in China as well making specific reference to the current drivers of change in the MHE sector; namely the call for improved English language skills identified as a specific competency requirement by industrial stakeholders and as required in the 2010 amendments to the STCW 78/95. Firstly, this section addresses the meaning of internationalising HE from a number of literary perspectives. Secondly, the literature discussed relate to China's targeting of HE as a development strategy in its rise in the international community. Thirdly, the role of international collaboration through comparative education research is explored within the context of teaching and learning as a way to strengthen China's HE reform policy. Fourthly, the context of developing MHE becomes the focus as the implications of the 2010 amendments to the STCW 78/95 convention on curriculum reform are discussed. Finally, conclusions are drawn regarding the potential scope for international collaborative comparative educational research, the aim of which being to identify opportunities to improve Chinese MHE through its internationalisation.

Many of the organisations associated with the GLMS claim to be international, which is a valid claim for those in compliance with IMO regulations. For MET organisations this may mean that they offer curricula that are international in nature and cater for students who will, eventually, be working away from their home country context (Hayden, 2006). In order to explain what it means to be international in MHE, firstly it is necessary to explore the various origins, definitions and classifications of internationalisation. Secondly, these concepts need to be applied to the maritime domain. In an HE context, the teachers, students, administrators, institutional management the staff, the educational authority, possible sponsors and future employers are all stakeholders. Issues such as curriculum, quality assurance and the role of each stakeholder are of concern for all.

2.2 Internationalising higher education

...reorientation of educational policies is evidently important for educational institutions to gain a competitive edge to confront the challenges before policy makers and academic leaders. Obviously a new regulating system that is more market-oriented and responsive to public interests and concerns is needed so that [the] mission of higher education in the modern world can be better fulfilled.

(Luo, 2007:56)

The following critical review is a discussion of the varying perceptions of internationalising higher education as represented in the academic literature. This

section provides a detailed argument in order to establish why the definitions of Knight and de Wit (1995;1997), which are referred to in the introductory chapter of this thesis, are regarded as the most appropriate. Brown and Jones (2007) describe *internationalising HE* from a number of perspectives. These include: policy and international cultures; assessment, learning, teaching and student support; and curriculum enhancement. This section of the literature review concentrates on teaching, learning and curriculum development.

2.2.1 *Teaching, learning and curriculum enhancement*

When dealing with internationalisation in the students' home learning environment, Leggott and Stapleford (2007) posit that the following conditions are necessary for a university to foster internationalisation:

- University-wide adoption of internationalisation strategy
- Internationalising learning, teaching and research through an internationalised curriculum
- Innovative work related activities; CLIL teaching and learning strategies, collaborative projects, simulations, and intercultural volunteering.
- Staff capability for internationalisation; promotion of attendance at international conferences, foreign language classes, and furthering of intercultural competence.

- Sharing good practice through joint research and staff international exchange
- Integration of home and international students.

2.2.2 Practical innovation

Of particular interest from this list is their recommendation for CLIL as a strategy for achieving internationalisation in non-native English speaking countries. The challenge this poses is that students' expectation of learning is coloured by their past experiences. This may be from their former studies at secondary school or their experience so far at university. This is a particular challenge when implementing changes because if only some aspects of their programme of study have adapted to a new approach (i.e. CLIL), then the students will naturally make comparisons. Students may feel frustrated that the clear structure they are used to and the rules and parameters have changed in some classes, while in others they remain the same (McLean and Ransom, 2005). This is likely to be blamed on the teacher and is likely to have damaging effects, negating the original intentions of the innovative change that has taken place and acting as a barrier to further implementation. However, with China's wider economic and social change, their learning culture is changing. In Chinese the verb *to teach* (*jiao shu*) translates to the literal meaning *to teach the book*. More recently the expression *yu ren* (to cultivate a person) is replacing the view of the teacher (Cortazzi and Jin, 1997). From this updated perspective, the teacher is no longer there just to teach the book, but has become a model of learning (Jin and Cortazzi, 2006).

2.2.3 *Employability*

'Wish lists' (Leggott and Stapleford, 2007:121) of what employers want include far more than just subject-specific knowledge and skills. According to Leggott and Stapleford (2007) the HE curriculum can be enhanced to address employability, other transferable skills and international cultural issues. Examples include:

- Tailored interventions - Employability and career management skills, and international approaches to work-related learning.
- Internationalisation of the curriculum - Reference is made to the practices of other cultures and examples are not limited to the local context.
- Transferable skills awareness - Raising the students' self efficacy in terms of the relevance of transferable skills to employment contexts, both at home and globally.

They extend this viewpoint to recommend increased transparency of degree transcripts to ensure that transferable employability skills are listed clearly. Critics of this approach argue that the role of HE is to teach the philosophy of the subject and not the skills of learning or life. McLean and Ransom (2005), and Lawrence (2001) highlight that despite expansion in recruitment, many academics are still teaching to the *elite* rather than to the *actual*. This attitude of *pure* teaching limits the 'value-added' (Lawrence, 2001:4) style that supports the wider learning process. McLean and Ransom (2005) outline

suggestions for pedagogical strategies for *value-adding* in the curriculum. This value adding is in the form of:

...developing the intercultural competencies necessary for success in higher education and eventually, for employment in a global market place.

(McLean and Ransom, 2005:46)

Adopting international perspectives is essential in the enhancement of the employment prospects of students of any nationality in the global labour market as it stands today. Employers world-wide share the same 'wish list' (Leggott and Stapleford, 2007: 121) of the required graduate employability skills. When students are able to study or work in another country this automatically permits them to develop these skills. However, it is important for these students to be aware of their skills development as part of their pre-travel preparation and post-travel reflection. For those unable to gain international insight from studying or working overseas, then similar skills development can be facilitated in their home university through embedding employability and intercultural capability into the curriculum. In both situations, the creation and implementation of a suitable internationalisation strategy, as well as judging and communicating internationalisation achievements through cross cultural capability auditing activities, are necessities (Knight and Yorke, 2006; Leggott and Stapleford, 2007; Sweeny, 2010).

2.3 China's higher education reform and internationalisation

China is trying to remedy the mismatch between its Higher Education system and employers' requirements by increasing the funding for Higher Education in China and encouraging more Chinese students to study abroad.

(Leggott and Stapleford, 2007:131)

Despite radical reform of Chinese HE since its 1993 policy *Zhongguo Jiaoyu Gaige he Fazhan Gangyao* [Mission Outline for the Reform and Development of China's Education] (Communist Party of Central Committee and State Council, 1993), there has been limited knowledge of its impact outside of China (Ryan, 2011b). Morgan and Wu (2011), and Ryan (2011a) reveal a lot about China's education reform with insider perspectives. Unlike some other transitional economies, China is deliberately targeting tertiary education as a development strategy (Morgan and Wu, 2011). Morgan and Wu (2011) provide a concise aim for HE reform in China, which is to make university study more widely available and for it to produce better quality graduates. They do not qualify these two concepts directly in their editors' introduction to the text, but from interpretation of other chapters in the same volume these terms refer to: *quantity* - greater access to HE, particularly for rural citizens; *quality* - graduates who are suitably qualified for the global labour market. This is in keeping with the wider academic discourse on *internationalising HE*, as discussed above, as well as highlighting similar elements to Leggott and Stapleford (2007) in the opening quotation to this section; accessibility and employability. There is some challenge to this thinking and Morgan

and Wu (2011) question if targeting tertiary education is the correct choice of development strategy for China. Specifically, they question if China can make the move from *quantity* of HE provision to *quality* of teaching and learning. Morgan and Wu (2011) suggest seeking the opportunities for international research collaboration within the context of teaching and learning as a way to strengthen China's HE reform policy.

2.3.1 *The STCW and the Internationalisation agenda of Chinese MHE*

The IMO is an organ of the UN and it is responsible for the regulation of the maritime industry. This form of regulation is of the centralised typology in terms of governance. Individual states will ratify conventions into their own national laws and the STCW 78/95/2010 is no exception to this. China has a number of agencies who implement its policy in terms of MET; the Ministry of Transport of the PRC (MoTPRC) (the former Ministry of Communications (MoC) became part of this in 2008), CMSA, and the Ministry of Education (MoE). Both international and national agencies have instruments for achieving their policy objectives in terms of MET. The IMO has a series of model courses to facilitate various aspects of MET and to help member states to comply with the STCW 78/95/2010 convention. The relevant course for ME is *Model Course 3.17 – Maritime English* (IMO, 2000;2009). There is evidence from the textbooks being used by ME teaching practitioners in China that this IMO publication has influenced the textbooks that are in use. However, it was not evident that teaching practitioners were aware of the model course itself and had not explored its contents and

recommendations for teaching approach. Instead, they were reliant on the centrally produced textbooks that were designed to prepare students to pass the English language element of the CMSA CoC examinations. This is an important point to note in relation to discussions surrounding internationalising Chinese HE in general, and in the specific context of MHE, is that it presents problems in itself. The situation above is a clear example of the transitional state of play for ELT in Chinese MHE and the difficulties caused for teachers and learners. The reform is a complicated project, impossible to be accomplished overnight, and needs to be implemented step by step (Zhong, 2006).

To expand further, Zhong (2006:373-374) identifies three aims of the HE reform and internationalisation that is underway in China (speech marks indicate the use of exact wording from the national education reform policy):

- 'the transformation from "centralization" to "decentralization" in curriculum policy'
- 'the transformation from "scientific discipline-centered curriculum" to "society construction-centered curriculum" in curriculum paradigm'
- 'the transformation from "transmission-centered teaching" to "inquiry-centered teaching" in teaching'

The third of these aims echoes a teaching approach which is respected highly internationally and is characteristic of worldwide education reform. According to Reich (1992) it is important for policy decision makers to comprehend that a nation's

knowledge-based assets are held in the abilities of its citizens to solve the complex problems of the future. In a knowledge-based economy a nation's prosperity depends on its research and development contribution to the world economy. In this climate, HE is more necessary than ever before.

The second theme is also of great importance for China as it will have the widest of socio-cultural implications of the three aims. The first aim, on the other hand, is the cause of a complex situation in ME teaching reform. The *New Curriculum* referred to in the academic literature concerning China's education reform, is one that came about in 2001. However, policy for reforming ELT in particular was not enacted until 2004. The variety of different policies and the confusion this may cause is partly to blame for a lack of reform in certain situations, and ME teaching is one of them. At present research is underway to reform the ME curriculum and assessment arrangements in China, but this will still present itself as a centralised education policy once decided and institutions will be expected to adhere to it. This is in conflict with the first aim outlined by Zhong (2006). Conversely, teaching practitioners are still expected to embrace the reform in light of these aims. To remain critical and to highlight the issue facing ME academic staff who operate under both the MoE and the MoTPRC. On the one hand they are operating in an environment with lessened importance placed on centralised curriculum policy by the MoE; while on the other hand they are awaiting instructions in the form of a centralised policy concerning a new teaching curriculum for ME, which is being developed by the MoTPRC in direct response to the 2010 amendments of the STCW 78/95. This presents a very black and white picture of teaching practitioners locked in a

policy limbo, but fortunately this is not the entire picture. Overall, the various HE reform and internationalisation initiatives have created an environment in which academic staff are becoming practitioner-researchers engaged in action research (Ryan, 2011a).

2.4 Scholarly perspectives on Chinese higher education reform

In order to explore opportunities for international collaborative research in Chinese MHE, it is necessary to divide the scholarship on the topic of HE reform in China into distinct perspectives (Morgan and Wu, 2011):

- Demand/supply
- Interest relationship
- Social justice
- Global

2.4.1 *Demand/supply perspective*

The demand/supply perspective deals with economic factors related to the balance/imbalance between the demand for Chinese graduates and their supply. This perspective is the same principal as studying the GLMS from a demand/supply perspective (Wu, 2004) in which the availability of seafarers is analysed in terms of

quantity and quality. Despite differences in terms of exact figures, methods of counting and the explanations given for what is observed, there is a certain level of agreement between scholars and professional organisations regarding this perspective. The general criticisms are as follows:

- Focus is on the functional relationship between demand and supply with little attention being paid to quality differentiation amongst HE providers.
- Quantitative analysis is provided based on national statistics or questionnaires without qualitative data regarding the 'opinions, voices and comments' of the various stakeholders (Morgan and Wu, 2011:2).

2.4.2 *Interest-relationship perspective*

Those with an interest-relationship perspective consider higher education expansion as a 'process of new industrial emergence' (Morgan and Wu, 2011:2). They wish to study this phenomenon in terms of 'motivation, dynamics, efficiency, impact and growth trends' (Morgan and Wu, 2011:2). Of importance are the relationships between stakeholders' interests and how their involvement is structured in terms of the 'responsibilities, contributions, challenges and possible solutions' (Morgan and Wu, 2011:3). Analysis is largely qualitative, but quantitative data may feature to provide an insight into financial information for the HE institutions. This approach provides insights into the internal dynamics of the systems, the roles of stakeholders and the challenges.

2.4.3 *Social justice perspective*

The social justice perspective concerns 'access, affordability, employability, distribution of higher education resources by region, and the long-term impacts on students and their family livelihoods' (Morgan and Wu, 2011:3). This is described as a widened perspective, bringing in social change, economic transition and political implications into the study of Chinese HE expansion. It pays attention to specific regional concerns and socio-economic groups. This research perspective may combine official statistics with empirical study.

2.4.4 *Global perspective*

The global perspective on Chinese HE reform reported by Morgan and Wu (2011) earlier on in this chapter, is possibly the most significant policy areas they is therefore discussed further in this section. The three key internationalisation themes that feature in China's tertiary education reform agenda relate to:

- China's rise in the international community through HE expansion;
- improving the international experience for students studying at home;
- international comparative research into HE management, and research and teaching standards with the aim of improving China's HE system in each of these respects.

Increasing demand for China's HE has occurred since WTO accession in 2001 (Morgan and Wu, 2011; Ryan, 2011a; Leggott and Stapleford, 2007; Luo, 2007). Like the rest of the Chinese economy, the HE sector has become more globalised in order to satisfy this demand. In the past the demands upon HE were for it to increase its quantity in widening participation. Today, the main demand is for quality to serve a global labour market that is demanding highly skilled workers. Chinese graduates, from both home and overseas programmes, are now placed in a competitive global labour market. Increasing demands from students outside of China are also affecting the university curriculum in China. Along with other global HE providers, China is now in a market for undergraduate and postgraduate students where promotion of research capacity and creating world class universities through improving standards of teaching and learning are of great importance in attracting students and academics.

The major criticism of previous research into how Chinese MET can meet the demands of the GLMS, as voiced in the introduction to this thesis, is that they are the manifestations of TMNs in an attempt to make external interventions. These attempted interventions have been largely ignored, or rejected, by local teaching practitioners, frustrated by *pedagogical imports* (Hu, 2002; Ryan, 2011a). Zhong (2006:376) calls for a 'global perspective and local action' when attempting to internationalise Chinese HE. As a more successful alternative to unpopular *pedagogical imports*, Ryan (2011a), and Morgan and Wu (2011) both suggest seeking opportunities for international research

collaboration within the context of teaching and learning as a way to strengthen China's HE reform policy.

2.5 Models of educational development

It is difficult to capture all of the various new teaching methods and ways of learning that have evolved from the rapid changes in the education system during the late 20th and early 21st century. This section does not attempt to possibly account for each and every one of these methods and changes, but what can be surmised simply is that new ways of learning have replaced old. This section therefore deals with the theoretical background of educational change from a number of perspectives; origin of change (e.g. social conditions, authority figures or participants themselves), effectiveness, (e.g. surface level or in-depth commitment from teaching staff), and application are each addressed herein.

There are various models of educational change and innovation sharing common themes such as initiation and implementation. According to all models, decision making is influenced by an element of both external and internal factors, but it is the extent to which this occurs that is the major differentiation between them. Some models go into very specific detail concerning the decision making processes, while others are vaguer. In terms of knowledge, this too has varying levels of detail or process depending on which model is observed. A common criticism of all of the models explored in this

section of the literature review is that they lack information beyond the initial innovation and implementation cycle, and that they do not take enough account of continuous development.

2.5.1 Initiation

Change can be viewed as an internal process that originates from the organisation (the educational institution itself). Conversely, change can also be externally driven and be particularly dependent on social conditions (Zaltman *et al.* 1973). These two broad categories are common sense and it is easy to differentiate one's one experience of change between the two categories, and whether or not it can be attributed wholly to one or the other to establish the balance between internal and external drivers of change. It is also possible to predict what is likely to drive change once familiar with an educational context. For example, if recent change in policy has occurred it is natural to assume that the research setting may react to this. Or, if the research actors have been engaged in recent research concerning their practice, they may make decisions based on their findings and drive forward change from within.

In order to explore the internal change mechanisms of an HE institution, its organisation and processes need to be explored and understood. Some would argue that these need to be infiltrated by researchers who establish themselves as participants (Gold, 1958). In this model the internal environment of an organisation is fundamental in effecting

change. It is essential to establish the nature of the initiation in terms of whether it was internal or external. Zaltman *et al.* (1973) posit that there are sub-stages also. For initiation: knowledge-awareness; attitude formation; and decision. For implementation: initial and continued, sustained implementation. These sub-stages may have varying drivers and can be a combination of forces acting both internally and externally. There is scope for this model to be applied to the teaching and learning ecology in this study, particularly in terms of the issue of catalytic and tactical authenticity (Lincoln and Guba, 1985), and it is necessary to establish the drivers of change and the decision making mechanisms in place at each stage.

There are other models that focus on social conditions alone. Levin's (1974) *Polity* model refers to instances when educational change is effected in response to changes in society or polity. In terms of the two broad categories of Zaltman (1973), these would be classed as external drivers of change. Yet, it is difficult to comprehend how continued implementation could be so reactive in a society where values and politics are varied and diverse. For the case of China this model holds weight, as is illustrated through its three implications:

- for any change agent to have effect it is a requirement that any attempted change should be developed and presented in a way consistent with the values and goals of the society;
- major educational changes should be introduced when major changes in the society occurred;

- and the change agent must identify social influences which are very important to change being considered.

For each of the models described above, an imbalance of external over internal influences effecting change could have a negative effect. If change is introduced externally, it may come with complicated implementation strategies that are also being centrally coordinated, but that may not take heed of local social conditions. On the other hand, if a setting is biased towards internal innovations, it may make wider implementation a difficult task as not all who are supposed to be implementing the change are able to realise its importance as the innovation was not their own.

The Authoritative/Participative models proposed by Zaltman *et al.* (1973) characterise change in terms of the extent to which decisions are made by authority figures. In this framework, decisions about the nature of the process of change are made entirely by individuals holding positions of authority. However, the definition of an authority figure is open to interpretation and in contemporary environments power is becoming less centralised. Authority figures can be from within or from outside an educational organisation. At one stage or another those who implement the change will have to have some degree of input. The extent of this will vary depending on the individual culture. For example, individual teaching practitioners may not be part of the decision making process to set up a development project, but their input is most likely required regarding which textbooks to use, or how to teach. This may become part of an

established policy, according to the assumptions of this model. Establishing the balance of participant vs. authority figure, and identifying who is regarded as each is of interest when in the initial phases of this research in establishing the characteristics of the local teaching and learning ecology.

Roger and Shoemaker (1971) emphasise the interactions between superior and subordinate in situations when innovation stems from an authority figure. They divide the decision making process into three stages; knowledge of the need for change; persuasion regarding intended change, and decisions regarding acceptance or rejection of changes. In Roger and Shoemaker's (1971) model, these decision making processes are handled by authority figures.

There are alternatives models that present decision making from an individual decision maker perspective (Zaltman *et al.* 1977). These include adoption of innovation on an individual level. These models offer much insight into the decision making process from a cognitive perspective in terms of people's experiences, how decisions were made e.g. in a group or organisational context, or in relative isolation. There are also similarities with other more conventional organisational change models in so far as the initial stimulus for innovation may still be external. However, it is the individuals' awareness, in terms of perception of problem recognition that leads to the innovation, which makes the decision an internal one. In this model, focus is on the individual, or group, in identifying

a gap between their social reality and what is socially desirable. Innovation comes about as a means to close the gap.

What each model has in common is the need to convince the various stakeholders and actors of the need for change. In addition, each model requires that a clear representation of the proposed solution is made available and that it must be realistic given the environment for which it is designed.

2.5.2 Implementation

In the Authoritative/Participative models (Rogers and Shoemaker, 1971; Zaltmna *et al.* 1973) the decision making stage is followed by implementation. According to Rogers and Shoemaker (1971) the implementation phase includes modes of communication of the decision to the various adoption units within the organisation. Action by the adoption units then occurs to implement the change. Interestingly, adoption units may also reject the change. This model of educational development does not take into account crossover of roles between decision making and implementation. As such, alternatives need to be considered, which have a modified view of educational development.

In individualist models, once the desire to act has come about this is followed by an informative stage when the various possible strategies are given consideration in terms of their possibilities and attributes. Similar to Rogers and Shoemaker's (1971) 'persuasion' stage, a comprehension stage follows which is concerned with gaining support and commitment from others in order to legitimise and adopt the changes. A shortcoming of the individual-oriented model is that they lack clarity when it comes to the ongoing implementation process. Zaltman *et al.* (1977) are critical in this respect as well as stressing the limitations of the presentation of such models. Linear presentation makes out that the various elements occur one after the other, but in reality these may happen simultaneously or in a different order.

Havelock and Huberman (1978) do not categorise educational change by its source of the innovation, but by observing the pattern of initiation and implementation. Their observations of educational innovation processes in Africa, Asia and Latin America led to a model that describes the internal qualities of various projects. This model enables understanding of the structural mechanism of innovations, rather than their initiation. This resulted in a model that takes greater consideration of implementation patterns than those proposed by Rogers and Shoemaker (1971) and Zaltman *et al* (1973;1977).

2.5.3 Implications

To conclude, educational change is often initiated when the current practices are challenged and questions are being asked about the way things are done. Proposals for innovations are the outcome of a search for a more effective means of achieving learning objectives. These may be initiated externally or internally and constitute a new way of execution or restructuring the current provisions. Change, in this context, does not normally come about on a whim.

Those in the position to make decisions must become aware that the present system is limited in achieving modified goals. Once that decision is made to initiate innovation, attempts to persuade others must take place in order for the change to be successful. Stakeholders need to be convinced of why the change is needed and suggestions of how to provide a more acceptable alternative should be proposed.

2.6 Summary

In order to present an entire picture, rather than a snapshot outsider view, there is significant scope for interdisciplinary studies to fill this particular research gap. It is desirable to provide a holistic view of the dynamics, constraints and potential for developments in MHE. An interdisciplinary study like this should take into account the advice given by leading educationalists in the field of educational development research spanning more than three decades (Rogers and Shoemaker, 1971; Zaltman *et al.* 1973;1977; Levin, 1974; Paulston, 1977; Havelock and Huberman, 1977; Stenhouse, 1980; Oja, 1989; Anderson and Biddle, 1991; Eisnser, 1991; Zuber-Skerritt, 1991;1992; Bogdan and Biklen, 1992; Kemmis and McTaggart, 1992; LeCompte *et al.* 1992; Knight, 1993;1997; Le Compte and Preissle, 1993; Guskey and Huberman, 1995; McKernan, 1996; Thorne and Wang, 1996; Weiskopf and Laske 1996 *cited in* Cohen *et al.* 2000; Beaty, 1996; Ng and Tang, 1997; Cohen *et al.* 2000, Gordon, 2002; Hu, 2002;2003;2005; Bax, 2003; McLean and Ransom, 2005; Erickson *et al.*2005;2008; Hatzipanagos and Lygo-Baker, 2006; Jin and Cortazzi, 2006; Lai, 2006; Zhong, 2006; Dornyei, 2007; Guan and Meng, 2007; Hayden *et al.* 2007; Haywood, 2007; Kember and McNaught, 2007; Leggott and Stapleford, 2007; Luo, 2007; Marshall, 2007; Hall and Lewis, 2008; Liu and Fang, 2009; Ryan, 2011a;2011b).

2.6.1 *Educational development in the context of ME*

The *global English* model of ELT may result in the deminse of English as a Foreign Language (EFL) (Graddol, 2006). Supporters of this argument believe that the future of English has become more closely tied to the future of globalisation itself. These arguments help to establish the theoretical framework of this thesis, i.e. to examine what needs to happen in China to develop the MHE ELT field to maintain pace with the process of globalisation.

It is a clear conclusion that educational change is driven by external social conditions. For China the phenomena of social and economic globalisation has had a significant effect on education policy. This applies to the context of MHE as much as mainstream HE provision. China's rapid growth of share of the GLMS has meant that it must engage in a competitive and adaptive system of MHE, which responds to changes in policy by developing its teaching and learning practices. It is faced with meeting the standards of the GLMS and the educational curriculum, quality and management are increasingly being established by international standards irrespective of national polity.

Chapter 3 - Researching Chinese Seafarers

3.1 Introduction

The scope of this chapter of literature review lies with the third area of focus identified by Wu (2004); Chinese seafarers' adaptation to the multinational environment, with particular focus on English language competency (Figure 7). Another of Wu's (2004) dimensions, that of supply/demand, is outlined already in the introduction to this thesis. This chapter of literature review does not repeat this focus on supply/demand, but complements it with further information concerning the classification and availability of Chinese seafarers to participate in the GLMS. The focus of this literature review progresses to outlining the challenges facing Chinese MET and crew resource managers, from the perspective of the GLMS as a multinational environment. A gap in the academic literature is identified, revealing the need for in-depth exploratory research into the preparedness of Chinese seafarers to participate in the GLMS in terms of their English language competency. Various conceptual models are presented throughout this chapter (Figure 4) and illustrate the understanding of the research setting based on the literature.

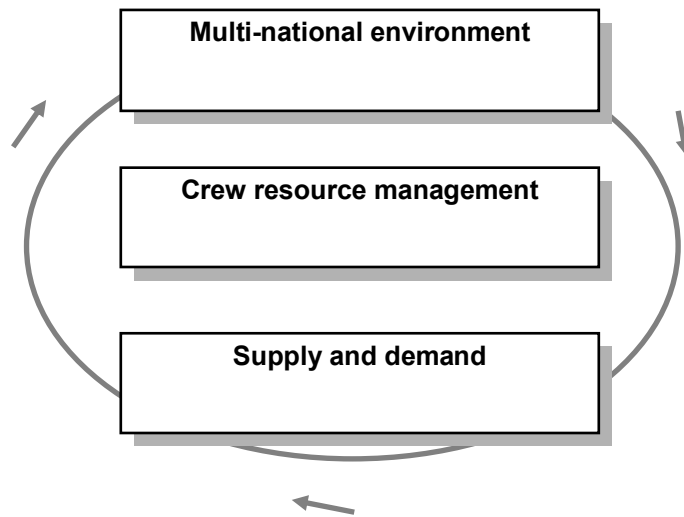


Figure 4: Simplified key areas of research focus on Chinese seafarers

3.2 Classification of Chinese seafarers

Work groups are common among Chinese seafarers employed by state owned enterprises (SOE) who also act as a crewing agency and send a complete or near complete compliment of crew to a vessel. These phenomena leave less than 10% of PRC seafarers working in a multinational environment:

SOE seafarers are predominantly employed by or have signed a long-term contract (over 3 years) with an SOE company, while NSO [Non-State Owned] seafarers are those who have signed a contract with a crewing agency for either a long (usually 3-5 years, called 'agency tied' seafarers) or short (8-12 months, called 'freemen') time. The outstanding difference is that the majority of the SOE seafarers work for the company's vessels while the NSO seafarers are totally dependent upon either the domestic or international labour market[s].

(Wu, 2004:3)

The pattern of recruitment of Chinese seafarers in groups for overseas employment has been developed in a restrictive way by crewing agencies and SOEs for a number of reasons specific to the multinational environment onboard. One benefit of this arrangement is that the seafarer's competency in English may not be good enough to work within such a setting individually. English support can be provided for less fluent crewmembers e.g. through the simultaneous translation of orders into Mandarin by a more proficient colleague. Another recognised reason for this recruitment pattern is the facilitation of control that an employment agency or an SOE can exert over their employees if they are in a group. Common practice was to send a political commissar to sea with groups of Chinese seafarers to maintain their Communist Party values, while they were being exposed to what was predominantly western onboard culture (Zhao 2000a).

In addition to SOE seafarers, Wu (2004) reflects on the growing number of officers from Non-SOE shipping companies who are entering the global labour market. Nearly 50% of senior NSO officers were discovered to be HE graduates, compared with only 30% from SOEs. There is also a considerable difference in the average age of an NSO seafarer when compared to an SOE seafarer. SOE seafarers are generally older with more experience, in respect of their time in industry rather than their portfolio of employment. These figures are very relevant to this research investigation as they can be related to an anticipated increased level of English language competence among NSO seafarers

in the senior officer ranks, which may translate into other ranks. The rationale behind this inference of a relationship is based on NSO seafarers being younger, with an average age of 33 years (Wu, 2004) (Figure 5).

This age differentiation means that the *opening-up* of China in the late 1970s will have benefitted the younger group as far as education is concerned. English language education has since become more prolific and been integrated into the state education curriculum. The numbers of Chinese youths taking the Test of English as a Foreign Language (TOEFL) and International English Language Testing System (IELTS) examinations each year is growing rapidly in China. In 2002, 80,000 candidates around the world took IELTS compared with 40,000 in 2001 (IELTS, 2003). In 2008, 1.9 million people globally took IELTS in a 12 month period (University of Cambridge ESOL Examinations, 2009b). In 2009, for the general training category of the IELTS examination, which is relevant for test takers seeking employment rather than aspiring towards further academic study, Chinese candidates scored a mean of 6.15 for listening, 5.99 for reading, 5.62 for writing and 5.79 for speaking. This equates to a mean band score of 5.95 overall (University of Cambridge ESOL Examinations, 2010).

Half of NSO senior officers in Wu's (2004) study were found to have had some form of HE, benefiting again from the increased integration of English into the Chinese higher education curriculum since 1979 (Qiang *et al.* 2008; Chang 1962).

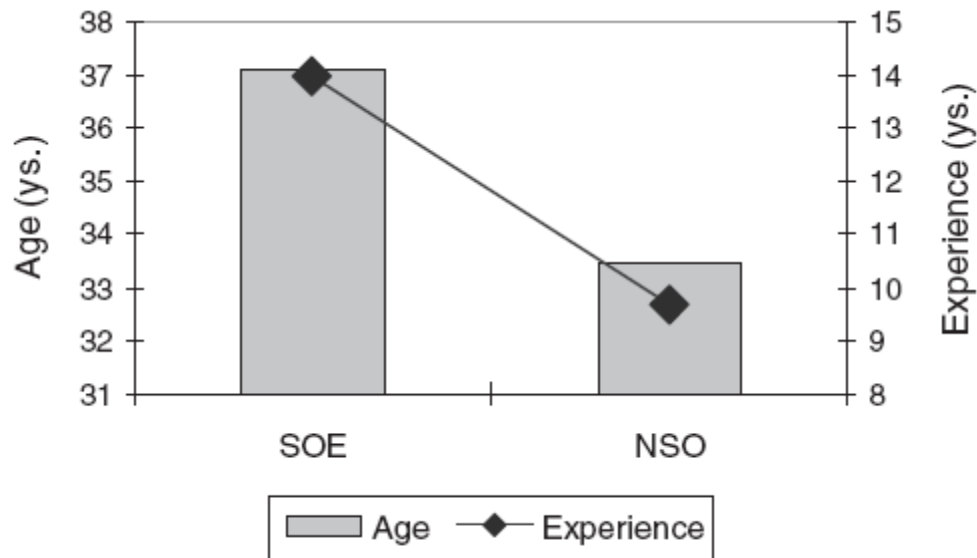


Figure 5: Age and experience of seafarers by sector division

Source: Wu (2004:4)

CoC endorsement for oil and gas tankers and passenger ships is a specialisation requirement influenced heavily by industry safety demands and enforced by the relevant legislation STCW 78/95 (IMO, 1994). This process of endorsement is in place as a measure to ensure additional skills training for these highly technological operational sectors for which specific dangers from human error (Reason 1990) have been identified (IMO, 2004b). Employing crew who have undergone additional and extensive operation specific training and who hold endorsed CoCs is a requirement of all IMO member states, but only some member states are fully compliant and give complete effect to the STCW 78/95/2010 convention. These states are categorised by the IMO as white list countries and it has published these details following each annual session of the Maritime Safety Committee (MSC). It is a matter of policy that seafarers with

CoCs issued by states registered under flags not on the White List, in other words flags of convenience, will not be employed by those who are giving 'full and complete effect' to the STCW and who are, as a result, on the White List. Membership with protection and indemnity (P and I) clubs and classification society rules are also instruments for regulating the compliance with the endorsement of CoCs, which could explain the employment trends seen in these two categories when considering nationality (UK P and I Club 2000). The flag state of registry of a tanker is more restricted due to insurance companies' limited preparedness to underwrite these vessels compared with those in lower risk sectors.

In the dry bulk and container shipping industry sectors incidents are not necessarily so costly for the insurer. In these sectors, higher numbers of Chinese are employed when compared with tanker/gas carrier, passenger RO-RO, reefer and general cargo vessels. A possible explanation for crewing patterns is that ship operators in the tanker sector are subject to more rigorous controls on employing crew. The results of the SIRC survey showed Chinese seafarers in the top three of the frequency information employed onboard container and bulk carriers across all ranks, but that with tanker/gas carriers they only feature in the top three for supply of ratings. Chinese seafarers featured as the third crewing nation onboard tanker/gas carriers in the world's merchant fleet with a 6.8% share of supply of ratings (Lane *et al.* 2002). This strengthens the explanation for this pattern being attributed to industry regulations. In addition to this oil tankers have experienced negative press due to large scale oil disasters and the high cost associated with the clean-up of spills and compensation payouts. This has

resulted in increased insurance premiums and public pressure on the industry for increased corporate responsibility (UK P&I Club, 2000). This is also the case for RO-RO passenger vessels, and training and certification and P&I insurers' requirements are also stringent. This is true of reefer and general cargo sectors to a lesser degree as public pressure is not so vocal due to reduced perception of an immediate threat of pollution or loss of life. However, the value of cargo in these two sectors combined with frequency and cost of loss or damage dictate that crew with a high level of competence and specialised training are more likely to be employed in these sectors than those from open registries about whom there remain concerns relating to competencies and English ability (Lane *et al.* 2002).

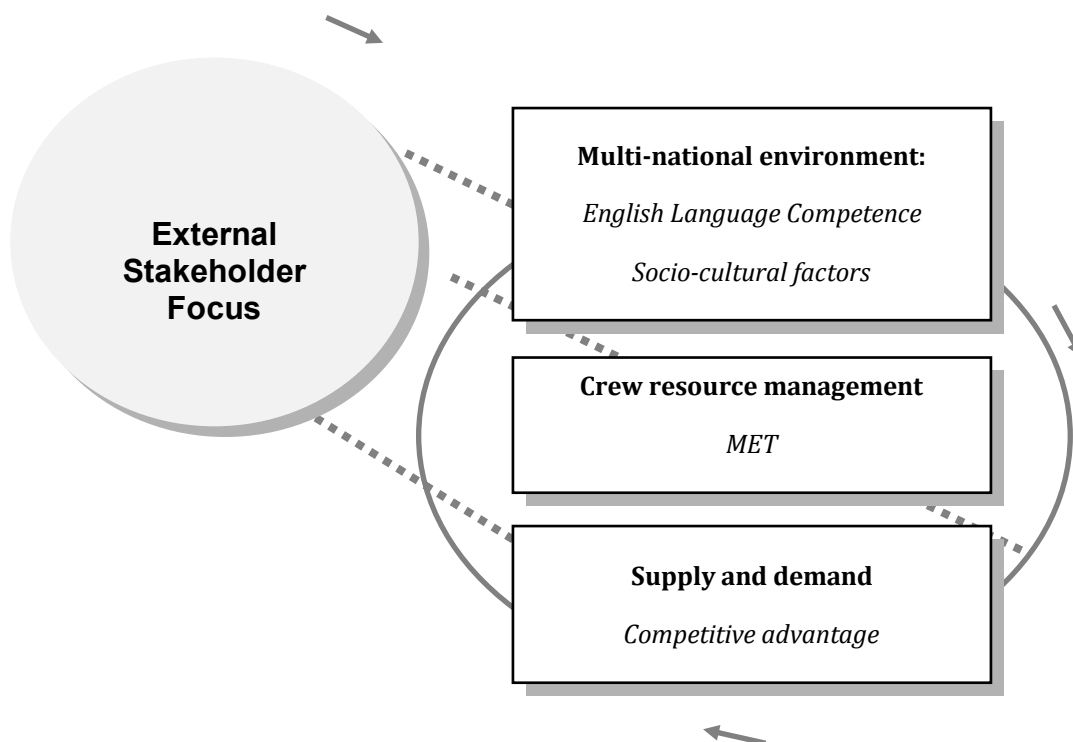


Figure 6: Detailed key areas of external stakeholder focus on Chinese MHE

3.3 Availability of Chinese seafarers

In 1996, it was reported by researchers at SIRC that there were over 80,000 Chinese seafarers registered, with the exception of those from Hong Kong and Taiwan, 11,000 of whom were serving onboard foreign flagged vessels (Zhao, 2000a). Following WTO accession in 2001, these figures rose to 127,630 and 37,000 respectively (Zhao, 2002). According to Lane *et al.* (2002) the computed number of Chinese seafarers, officers and ratings, serving at any one time was 34,441 or 5.4% of the world seafarer population. According to CMSA (2006) data sourced directly, at the time there were 75 seafarer education and training institutions in China, including 8 maritime universities, 14 maritime colleges, 3 secondary vocational schools and 50 training centres. The annual enrolment figure in 2006 for Chinese maritime colleges and universities was 11,230 students, with 4,462 students enrolling for secondary and vocational colleges (CMSA, 2006).

In China between 1996 and 2005, international certificates (class A) were issued to 8,183 masters, 11,714 chief mates, 28,354 second/third mates (CMSA, 2006). This makes a total of 48,251 CoCs issued for unlimited navigation in a nine year period. It is difficult to derive how many seafarers are in active supply for international employment from this figure, as a proportion of these could have been double counted. In other words, the holder of a second mate's CoC may have also taken further examinations during this period to become a master. In addition, further complications arise in

accounting for international availability of seafarers when the choices of individuals are taken into consideration. Class A CoC holders have the choice to work in the global fleet or to remain in domestically owned companies.

Wu (2004) explored attitudes of Chinese seafarers towards international vocation and concluded that qualification wasn't the only deciding factor in their availability for employment in the international merchant fleet. Cultural factors influenced respondents quite significantly and negative responses were recorded in relation to working among non-Asian crews due to the culture and language concerns of the Chinese seafarers themselves (Wu, 2004).

3.4 The multi-national environment

This dimension concerns itself with Chinese seafarers' adaptation to the multicultural working environment in terms of competency and English language training. According to survey work carried out by researchers from SIRC, a lack of opportunity exists for PRC seafarers to work onboard vessels crewed by more than one or two nationalities, which has been attributed to industry recruitment patterns. A multicultural working environment in this context is one comprising of three or more nationalities (Wu 2004).

The EU Directorate General VII and the SIRC (1999a:1), collaborated on a research report which sought to explore the 'Impact of Multicultural and Multilingual Crews on MARitime COMmunication' (MARCOM). This study also involved some of the researchers and from the WMU who in 1998 had published the CIIPMET report. SIRC and its partners from WMU and the Institut für Sicherheitstechnik/ Verkehrssicherheit (Institute for Security Technology/Maritime Safety Association) (ISV) in Rostock worked together on both the WMU's (1998) CIIPMET study and the MARCOM project (European Union-DG VII and SIRC 1999a;1999b). Without key stakeholder involvement from Chinese research institutes in the projects teams, these reports are limited in presenting a manifestation of the recommendations by TMNs for NMNs to improve their MET provision in specific ways. Interestingly, many of their recommendations were above and beyond the requirements of the internationally agreed STCW 78/95 convention that was in force at the time. Readership and awareness of both of these studies was common among the Chinese researchers at the IMCRC at the host academic institutions, but their recommendations were viewed as specious as they lacked insider insight.

Specific findings of Wu's (2004) research indicate that only 24% of PRC seafarer employment on foreign vessels is onboard those of Western nations, whereas the remaining 76% is onboard Eastern flagged vessels belonging to Japan (10%), Singapore (14%), Taiwan (17%) and Hong Kong (35%). Onboard these Eastern flagged vessels, similar cultural settings and language use are common place and are frequently preferred by the seafarers themselves (Lane *et al.* 2002; Wu 2004).

It has been proposed that there is a major difference between China's crewing patterns and those of other global seafarers holding unrestricted CoCs. When compared with other nationals of equivalent competency, the Chinese were still operating in a restricted recruitment climate. The key difference is that approximately 40% of other non-Chinese seafarers were working in multicultural environments (Lane *et al.* 2002), whereas 75% of Chinese seafarers were recruited through a single nationality crewing pattern, or as a work group.

In a personal communication, a representative from the Norwegian Ship-owners Association (NSA)'s Centre at Shanghai Maritime University commented that over 400 Chinese cadets were performing very satisfactorily. The representative stated that among their other desirable characteristics were those of being highly motivated and disciplined. He expressed that their English language skills were still lacking, but that they were 'catching up' through the installation of a language laboratory aimed at giving support and tuition in English for Specific Purposes (ESP). The Norwegian Maritime Directorate's instructions regarding the requirements for quality control of maritime education were developed in line with the IMO regulations, but they go beyond the requirements of the STCW 78/95 convention. Their construction took place around a number of goals, as well as the need to comply with the IMO Convention (Sletner, 2000):

- Admission of rules for students

- A list of equipment with respect to the course objectives for all subject syllabi
- The routines for the assessment of students with regard to the course objectives and the subject syllabi
- A description of the evaluation and appraisal of examinations, and
- The qualifications of the instructors and external examiners

According to Sletner (2000), the requirements for quality standards within MET were given little attention in the STCW '78 regulations and English language competency was given no focus at all. After revision in 1995, these rules on quality standards contain limited reference to English language competency, but are yet to be prescriptive (IMO, 1995). More prescriptive information on English language ability is contained within the IMO's model course 3.1.7 ME (IMO, 2000) and it is advised by the IMO that training institutions should follow this syllabus.

3.4.1 A model for improving ME training for maritime transportation safety

Quite recently, Yercan *et al.* (2005) have followed suit in making specific recommendations for improving ME (ME) teaching and learning, by comparing the practices of TMNs with those of NMNs. Their conclusion being that NMNs should adjust their practices to reflect those of TMNs. This is another example of a study that is viewed in a critical light in terms of its research methodology. It was carried out through

a collaboration of institutions in TMNs. Yercan *et al.*'s (2005) development of hypotheses is specious, as no actual institutional visits to NMNs were carried out and data were collected via a questionnaire without attempting to triangulate the analysis by incorporating data from other sources. In particular, this study compares and contrasts ME teaching provision in TMNs and NMNs. Yercan *et al.* (2005) carry out their analysis by plotting the positions of International Association of Maritime Universities (IAMU) member institutions against one another in a positioning model. Positioning is based on each institution's responses to a Likert style questionnaire in the context of ME teaching provision and support services. The positioning model used produces a visual matrix, which has been used as the analysis tool. The major criticism of this paper occurs because the authors are unable to substantiate their claim for making appropriate recommendations for improving ME learning and teaching in NMNs as a means to 'achieve maritime transportation safety' (Yercan *et al.* 2005:213), which are based on the results of their positioning analysis. These hypotheses are not grounded in the data collected and instead the study puts forward predicate hypotheses to represent *a priori* theory with insufficient research having been performed to have reached such conclusions. It does not go on to establish theory that is based on the analysis of the data; *a posteriori*. In other words, Yercan *et al.* (2005) make unfounded recommendations for NMNs to change their ME teaching practices on the sole basis that there are differences in how ME teaching is carried out at various IAMU institutions.. There is no relevant data to allow them to position one against the other in terms of the effectiveness of the effectiveness of pedagogy. In addition, the title of the paper is misleading, as the recommendations that are made don't have a necessary

relationship with being able to 'improve maritime transportation safety' Yercan *et al.* (2005:213). The hypotheses and recommendations are based on Yercan *et al.*'s (2005) culturally imperialistic assessment of pedagogy (Cathcart *et al.* 2006; Zhong, 2006) and not the results of sufficient analysis.

One particular paper is of special interest for both its educational development context and for reasons of methodological approach. Yercan *et al.* (2005) have attempted to develop a model for improving ME training for maritime transportation safety and have reported their findings in the research paper in question. The authors address topical issues in international MET including both the concerns of resource management and the multinational environment (Wu 2004). Yercan *et al.* (2005:213) refer to the former under the heading of 'Maritime services' and confront the latter issue in terms of 'international protocols'. In terms of methodological approach, Yercan *et al.*'s (2005) research favours the 'conventional [positivist] paradigm' (Lincoln and Guba 1985:356). In other words, their research is at the 'deductive-verificatory-enumerative-objective' end of the scale (Lincoln and Guba 1985:335). For this research, the 'inductive-generative-constructive-subjective' aspect of the cline is favoured for this research. Yercan *et al.*'s (2005) inappropriate choice of methodological approach that confirms the appropriateness of choice of paradigm as the 'genuine article' (Lincoln and Guba 1985:47).

In addressing their research questions, which are not transparent from their paper, Yercan *et al.* (2005) could have employed inductive inquiry in their research, but it is

deductive inquiry that is the dominant approach taken. In their paper, Yercan *et al.* (2005) have two main objectives, i) to illustrate their plotting of IAMU institutions against each other in the context of their approaches to ME teaching practices in a positioning matrix, and ii) to outline a number of hypotheses concerning a model programme of study for ME. When reading this paper, it became apparent that the data collection they had targeted through their survey instrument could have been very useful if collected in a naturalistic setting and interpreted using analytic induction. However, and possibly for reasons of access and time, data were collected remotely through email correspondence and analysed with the testing of *a priori* theory. This *a priori* theory is the same set of hypotheses presented through their paper (objective ii). Instead of forming these hypotheses through analytic induction of the data, they used the data to confirm their institution's existing hypotheses. How this theory was generated originally and whether it is 'grounded' (Glaser and Strauss 1967; Lincoln and Guba 1985:41; Miles and Huberman 1994:11) is not knowable from their paper as these aspects of the methodology have not been disclosed.

From the example of Yercan *et al.*'s (2005) paper, this thesis returns once again to reiterating why it is that Lincoln and Guba's (1985:68) are correct in stating that for social science the 'naturalistic paradigm is *the* paradigm of choice'. For Yercan *et al.* (2005) it would have taken a revolutionary choice to adopt the naturalistic paradigm, due to potential fears of having the legitimacy of their findings questioned by the audience with whom they are attempting to communicate. In this instance, it seems that their desire to

present the results of statistical analysis to support their hypotheses came before judging the appropriateness of their methodology to their research questions.

3.5.2. *EC study on the MET systems of China, India, Indonesia and the Philippines (CIIPMET)*

Another major study of the Chinese MET system was in the form of the CIIPMET report. Through the CIIPMET study (WMU 1998), a selection of maritime institutions in Asia were explored against a set of predetermined criteria. The CIIPMET report was researched by the WMU using both qualitative and quantitative means to explore the standards of operation of the key MET institutions of Asia; in light of the STCW 78/95 Convention. The CIIPMET research team's approach was forced by the necessity to make a comparison between institutions, to use deductive reasoning. As a result, in this type of comparison of systems there is the implication that one single model of ME provision can be applied universally. The CIIPMET report is concerned with the quality of MET outside of the EU, but the study was carried out in 1997 and published in 1998 and has not been updated more recently. In addition, the approach of the CIIPMET was particularly positivistic. Its aim was to assess the participating institutions' compliance with the STCW 78/95 in terms of their programmes, facilities, staff and the capacity of these programmes in their entirety to comply with international standards. Data were collected through distance correspondence responses to questionnaires and a one and a half day visit to each institution, in this respect the CIIPMET was limited in its scope for in-depth inquiry.

3.5 Communicative competence and the multi-national environment

The ability to communicate effectively in English is paramount for navigation officers working in a multi-cultural crewing environment. It is also a necessity for navigation officers who are sailing internationally and who will need to communicate with pilots and shore staff in English. Navigation onboard a merchant vessel is mostly performed by an individual who is working alone. When a ship enters or leaves port or when manoeuvrability is restricted the computational requirements of the task are assumed to exceed the capabilities of any one individual (Hutchins, 1996). At these times communication with shore personnel via very high frequency (VHF) radio is frequent and it is also common for a harbour pilot to be onboard. Day-to-day, the safe operation of the vessel while at sea also requires a significant amount of intra-ship communication between personnel.

During each of the safety critical situations referred to previously, operations will be carried out by a team of individuals working together. In all instances, and not only when multicultural crews are concerned, the need for effective communication is paramount (Hutchins, 1996). During such times, miscommunication can cost lives, loss of cargo, and pollution. In writing about *Learning to Navigate* Hutchins (1996) emphasises the times at which effective communication is a necessary part of the onboard safety

system. Hymes (1972:283) refers to this ability to communicate effectively as 'communicative competence'. Therefore, it makes sense to point out that all crew members who are working in a multicultural onboard environment need a certain level of *communicative competence* in English order to ensure the safe operation of a merchant vessel. The specific role of the navigation officer in communicating with shore personnel and with the pilot, means that their level of communicative competence is of particular concern when regulating the GLMS.

It is evident from studies of maritime accident reports that human error has been blamed as a significant factor in the chain of causation on a countless number of occasions. In investigating aviation incidents and accidents, the International Civil Aviation Organisation (ICAO) has devised the accident/incident data reporting (ADREP) taxonomy, which breaks human error down into a number of subcategories. In particular, communication failure (human – group) is a factor that is analysed in ICAO incident and accident investigation and cited in their ADREP taxonomy (ICAO, 2004).

Poor communication between crewmembers from the same culture who are speaking the same language can, through misunderstandings and mistakes, be a threat to the overall safe operation of an aircraft, or merchant vessel. If the additional variable of a multicultural crew, some, or all, of whom are using English as a second language then the odds of miscommunication may be increased (European Union DG VII 1999a;1999b). The exploration of communication failure is well documented within

aviation, but there are no published studies that have attempted to explore its role in the maritime domain by using such a framework as the ADREP taxonomy. Despite this lack of data, the importance of demonstrating communicative competence in English has gained increasing emphasis in the IMO's STCW 78/95/2010. This lack of analysis and gap in the research inspired the author to collaborate on a conference paper, which has subsequently been published in a conference special volume (Appendix 22).

3.5.1 Using language ability in selling Chinese seafarers to other nations' flags

In the introduction to this thesis the findings of the WMU (1998) were expressed in a quotation citing English language ability to as the major constraint for China in the GLMS. Two of the former CIIPMET (WMU 1998) research team are still very much involved in working towards developments in ME learning and teaching. Cole, Trenkner and Pritchard (2002), and Cole and Trenkner (2007;2008) have undertaken much research into establishing a 'yardstick' (Cole and Trenkner 2008:1) for ME assessment criteria (Appendix 9). The International ME Conference (IMEC) in Shanghai in 2008, served to provide greater awareness of Cole and Trenkner's (2007) proposal for a set of internationally recognisable assessment criteria for ME assessment. Having attended the conference in question, this conference served to raise awareness of the plans of Cole and Trenkner (2008) to develop the criteria further. The most recent personal communication with Cole (2009), provided an updated version of the Yardstick. This was exchanged with permission to integrate the criteria into the development project underway with the group of industry stakeholders. This contract with the industry

stakeholders for a ME development project, called for consulting services to oversee the project between the case institution and two of the project's industrial stakeholders who were integral to the ME initiative to develop a new syllabus due to their involvement in this research.

3.5.2 *Communicative Competence and Communicative Success*

Originally formulated by Hymes (1972), 'communicative competence' involves judgments concerning what the mind can manage in terms of grammatical structuring, what is required to achieve the linguistic goal in question and what society will accept: 'Competence is dependent on both knowledge and use' (Hymes, 1972: 282). 'Communicative success' is the situation when all of these aspects have been applied, successfully and the linguistic goal fulfilled. Linguists stress that competence does not automatically equal success. This is important in ESP teaching and assessment as these two essential elements should not only foster and measure competence, but also seek to promote and assess success in context.

Table 8: Language learning strategy taxonomy

Strategy	Description
<i>Direct:</i>	
Memory	Creating mental linkages, applying images and sounds, reviewing well, employing action.
Cognitive	Practising, receiving and sending messages strategies, analysing and reasoning, creating structure for input and output.
Compensation	Guessing intelligently, and overcoming limitations in speaking and writing.
<i>Indirect:</i>	
Metacognitive	Centring learning, arranging and planning learning, evaluating learning.
Social	Asking questions, cooperating with others and empathising with others.
Affective	Lowering anxiety, encouraging self, taking stock of 'emotional temperature'.

Source: Adapted from Oxford (1990)

In all fields of language learning, strategies that go beyond cognitive processes, to include social and other elements of a communicative strategy, are common for the student. The maritime students in question, albeit unbeknown to all of them, in studying English are in pursuit developing their communicative competence. The maritime industry itself is demanding communicative success from Navigation and Engineering graduates. The institution and the students themselves impart conscious and subconscious strategies towards achieving this goal. Oxford (1990) classifies these language learning strategies and their orientation towards the development of communicative competence into a taxonomy, which at the top tier consists of 'direct' and 'indirect' strategies. Each of these two groups is subdivided into three further categories (Table 8). In this taxonomy, 'metacognitive' strategies are understood to help

learners to regulate their learning. 'Affective' strategies concern themselves with the learner's emotional requirements e.g. anxiety, while 'social' strategies lead to increased interaction in naturalistic settings which act to foster acquisition of the target language. 'Cognitive' strategies describe the actions of students to conceptualise in order to make sense of what it is they are learning, 'memory' strategies are those used for storage of information e.g. lists of vocabulary. 'Compensation' strategies resolve to fill gaps in their knowledge and to fill their speech in order to allow them to continue communication.

3.6 The implications of the revised STCW 2010 on ME teaching and learning

Hofstede (1991;1997) claims that *intercultural communicative competence* is vital because people's communication styles are inherently culturally bound. In theory, the STCW 78/95/2010 creates a universal standard for MET, which should mean the abolition of with such divides as value and culture in training and education. In reality these factors still thrive and despite IMO member states appearing on the STCW *white list* because they meet its requirements, there are still geographical differences in MET provision. Earlier in this literature review, the study by Yercan *et al.* (2005) was criticised for its specious proposal that all MET institutions should adopt certain and traits characteristic of Western systems. How the authors have reached their conclusions is a disagreeable concern. However, what their study is successful in revealing are the differences in how IAMU member institutions approach teaching and learning in the context of ME.

The geographical differences observed in ME provision may be explainable by differences in educational culture. The fact that there are differences does not necessarily mean that there is cause for concern. After all, the IMO places great emphasis on consensus driven regulation and the equal footing status held by all member states supposedly puts a stop to hegemonic nations exerting unfair pressure in decision making (Abbott, 1998). Providing MET with the aim of enhancing students' intercultural competencies, communicative or other skills, has to be executed with great attention to pedagogy. If pedagogy is too hegemonic, then it is likely to be rejected by nations that do not identify with the cultural values that are embedded in the teaching (Yang, 2002; Zhong, 2006). The saying *globalisation with Chinese characteristics* finds translations in many contexts, including ELT. In response to China's reform of College English teaching and learning, Adamson (2001:19) wrote of '*English with Chinese characteristics*'.

Hegemonic influence in policy making is also a concern when discussion the STCW 78/95/2010. Decision making at the IMO takes place on a strictly equal footing approach to gaining consensus. However, some argue that certain hegemonic nations (e.g. the US, and those member states in the EU) use their political, economic, or technical prowess to impose their positions (Abbott, 1998). The long awaited review of the STCW 78/95 took place in June 2010. This has been an ongoing process since 2006 and the

convention will come into force is 1st January 2012. There are a number of implications that will have an impact on MET around the world (Trenkner and Cole, 2010).

According to Miles and Huberman (1994) a conceptual model can act to explain the main issues to be explored in terms of the key factors, constructs or variables, and the relationships between them. Miles and Huberman (1994:18) stress that at the stage of conceptual modelling that these relationships are 'presumed'.

The ICAO enforcement of a minimum operational level of English for airline pilots and air traffic controllers that came into force in March 2001, has had a significant impact on training and testing. It also created an entrepreneurial opportunity for businesses to create tests based on the ICAO level descriptors and to offer training courses in aviation English. Now this deadline has passed the market has slumped, but innovators are looking towards ME and the approaching STCW 78/95/2010 amendments deadline. What is different is that there is no minimum standard (or 'pass mark' McCarter, 1999:11).

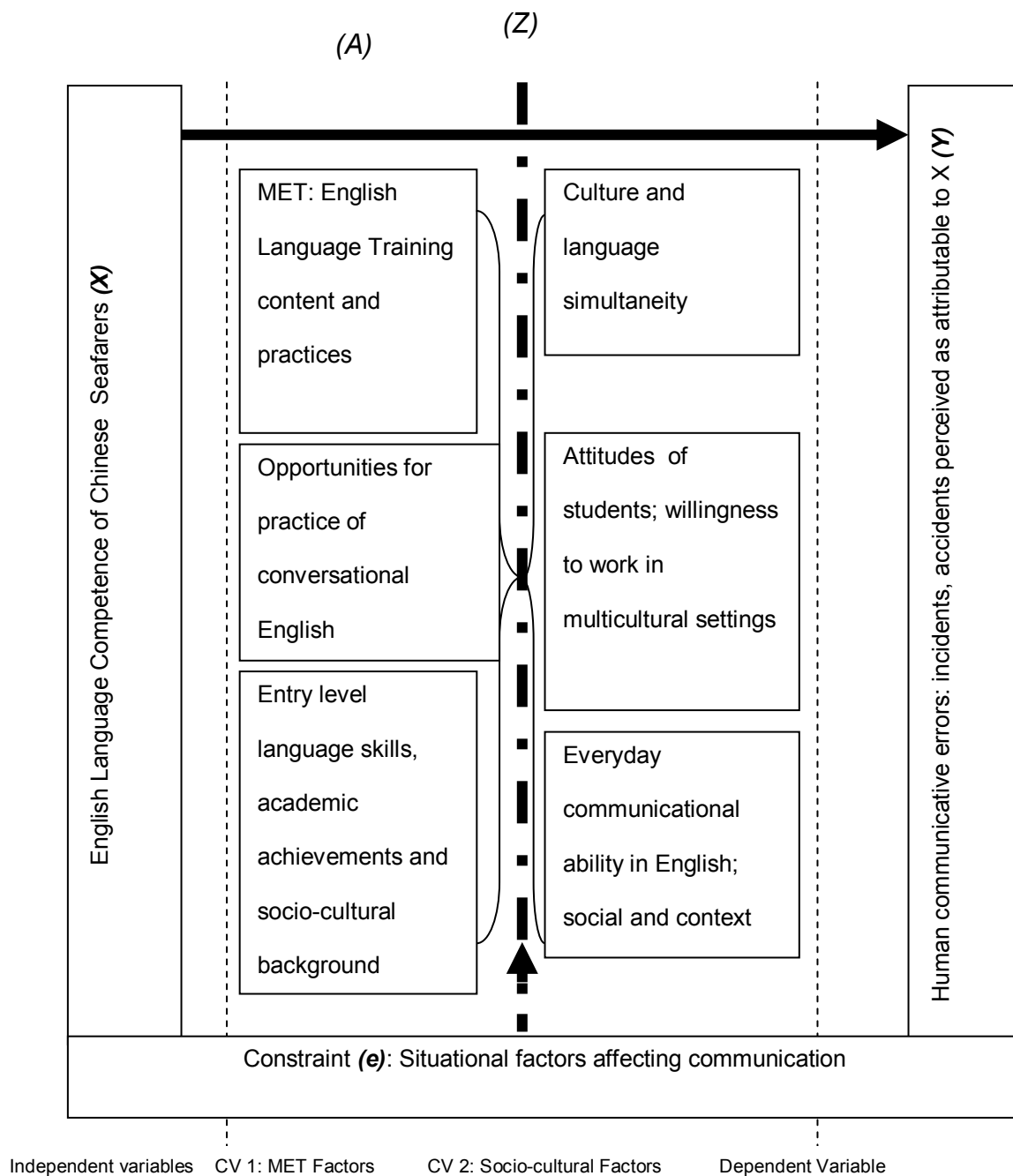


Figure 7: Final literature based conceptual model

All 85 member states party to the original STCW 1978 signed the Final Act of the Conference to execute their agreement to its amendments. Since it rejoined the UN in

1971, China's participation in international policy making forums has seen significant development. Prior to 1978/9, the attendance of the Chinese delegation at UN meetings like the UN Educational, Scientific and Cultural Organisation (UNESCO) had been to promote China's revolutionary values on the world stage (Gu, 2001). China joined the IMO in 1973 and in the most recent major revision of the STCW 78/95/2010 their delegation had a significant role in decision making (Meija, 2011). The concerns expressed by Abbott (1998), and more recently by Hadjistassou (2004), that hegemonic members from the US and EU might be dominating IMO decision making processes should note that the power of TMNs at the IMO is becoming limited. China's dominance in the GLMS in terms of its contribution by sheer number of seafarers and in vessel ownership mean that it is challenging the US and EU's hegemony in the IMO.

The 85 member states have reached agreement on the 2010 revision of the STCW meaning that many of the existing regulations have become more clearly defined in addition to addressing new areas. Some commentators (Trenkner and Cole, 2010) believe that the revision of the STCW 78/95 reflects the higher standards to be met in the field of MET in general. In particular, they believe that this will mean that demand for competency in ME will also be increased. Trenkner and Cole (2010), predict a rise in the importance of ME and posit that this will have a knock-on effect of a higher demand for greater quality of instruction and research in this field also. This could be wishful thinking as others opine changes to regulations like the STCW 78/95/2010 are not prescriptive enough and that it is still too open to interpretation to see sufficient uniform change and enforcement (McCarter, 1999).

3.7 Summary

In this section focus of attention is on research publications has been primarily on those that come within the remit of Wu's (2004) fourth dimension of Chinese seafarer research; 'adaptation of Chinese seafarers to [multinational environments] with focus on their English competence' (Wu, 2004:1). Although in actuality, the review of literature has spanned across each of his four dimensions and beyond, it would make for a long section of this thesis that would lack direction and clarity. In a conference paper prepared by the author for the International Association of Maritime Economists' 2008 annual conference, which took place at the case institution, a broader scope of literature is explored in a deliberate attempt to address each of Wu's (2004) four dimensions (see Appendix 25). It was in preparing a subsequent conference paper for an educationalist audience at the IMEC 2008 that took place at Shanghai Maritime University, that the author took the decision to refine the focus of this chapter of critical literature review to focus on Wu's (2004) fourth dimension (see Appendix 23). In particular, the results of research into ME teaching and learning in Chinese MHE were of particular interest once it had been established through phase A that it was an educational research problem that was to be addressed through this research. Unfortunately, this is an area of academic literature with few publications, which this thesis hopes to remedy to some extent.

Both the CIIPMET study (WMU 1998) and Yercan *et al.* (2005) indicate that native English speaking maritime professionals are a necessity in the provision of ME teaching and that a potential substitute are non-native speaking teachers of English who must spend a proportionate amount of time at sea. Although the case institution was working towards following up these recommendations, both of these pieces of research were shown to be unrealistic by the research setting itself and the latter to hold particularly unrealistic hypotheses. During a three year period, only two retired captains came to the institution to teach and with the exception of an individual and unique case, others left after one term with dissatisfied teaching experiences as reality did not match their expectations. This demonstrates that even with all the best of intentions, the findings of WMU (1998) and Yercan *et. al.* (2005) are proposing requirements that are not necessarily appropriate to impose on the local teaching and learning ecology of MHE. Reviewing this in a critical light, raises the questions as to whether the research setting's actors could respond differently to these recommendations and succeed in implementing these changes. Is it that they are unwilling to have such recommendations imposed on them from the outside and that in not achieving them they are making some kind of indirect stand in opposition? Had they reached the conclusion themselves that employing native speaking former master mariners was the solution, surely they would have put more drive into this initiative and ensured its success. The recommendations of WMU (1998) and of Yercan *et. al.* are further examples of *argumentum ad populum* 'an appeal to popular opinion in order to gain assent' (Mautner, 2000:39) similar in nature to the results of content and discourse analysis of maritime press publications from the last decade. What is needed instead is

genuine exploration in the research setting to explore what would serve the local teaching and learning ecology itself without further perpetuation of bias, cultural stereotyping or under currents of protectionism. It is a necessary condition to ensure that any proposals for MET curriculum reforms in response to the STCW 78/95/2010 amendments are explored through in-depth collaborative research at a local level so as to avoid the risk of rejection as being *foreign educational imports* (Zhong, 2006).

Chapter 4 – Methodology

Researchers are the instruments of research (Eisner 1991); researchers generate rather than test hypotheses; researchers do not know in advance what they will see or what they will look for;..

(Choen *et al.* 1994:137)

4.1 Introduction

The research design outlined in this chapter was constructed in pursuit of the overall aim of the thesis, which is to explore the opportunities for better preparing Chinese MHE graduates to participate in the GLMS in terms of their English language ability. The research question it seeks to answer being: *how can Chinese MET institutions further internationalise their curriculum to meet the demands of the GLMS?* This chapter deals with the research philosophy, approach and instruments employed in an attempt to achieve the research objectives. This chapter traces the process of developing the ethnographic action research methodology from the beginnings of the project to its end. Explanation is given for each research data collection strategy employed in terms of rationale, participants and timeframe, and analysis techniques.

4.2 Research philosophy

If theory is to be grounded in data, those data must first be located and analysed inductively. Since N cannot specify the precise form of the data to be sought, he or she must fall back on an open-ended adaptive instrument: the human being, who, like the 'smart bomb' can wend its way to (purposefully sample) the target without having been precisely preprogrammed to strike it.

(Lincoln and Guba, 1985:43)

Above all, this research is inductive in its approach to the research problem. The review of literature has revealed a research gap in the area of exploring the preparedness of Chinese MHE graduates to work in multinational environments, in terms of their English language ability. Before considering how information should be collected on this subject, it is important to first establish a research philosophy. There is no right or wrong research philosophy as different research philosophies are appropriate depending on the nature of the research question and objectives. The research question and general focus objectives of this study call for the adoption of a subjective ontological perspective, as building theory (rather than testing it) is a very subjective process. In terms of epistemology, this research falls within the interpretivist, or constructionist, viewpoint:

The epistemological position that advocates the necessity to understand differences between humans in their role as social actors.

(Saunders et al. 2009:600).

Social constructionism is a research philosophy that views the social world as being socially constructed. The functionalist paradigm is a philosophical position which is concerned with a rational explanation of behaviours and institutions, such as why a particular organisational problem is occurring in terms of the functions that are performed (Saunders *et al.*, 2009). Constructivist grounded theory is advocated by Charmaz (2006). This strand of grounded theory methodology emphasises the research participants' experience. Both the researcher and research participant construct a view of reality and aim at interpreting the empirical evidence within the research context.

4.3 Naturalistic research

A paradigm is a world view, a general perspective, a way of breaking down the complexity of the real world. As such, paradigms are deeply embedded in the socialisation of adherents and practitioners: paradigms tell them what is important, legitimate, and reasonable. Paradigms are also normative, telling the practitioner what to do without the necessity of long existential or epistemological consideration. But it is this aspect of paradigms that constitutes both their strength and their weakness – their strength in that it makes action possible, their weakness in that the very reason for action is hidden in the unquestioned assumptions of the paradigm

(Patton, 1978: 203)

Paradigms are a way of classifying what is thought about the world, but cannot necessarily be proven. Paradigms are very important to research practitioners and tell the researcher what is important as a focus in their study. They are also normative and

can form a set of instructions as to what one should do as a course of action, without the need for epistemological consideration (Patton, 1978). The paradigm eras to date fit on either side of the paradigm of positivism. Either side of this research paradigm are the pre-positivist and post-positivist eras. This research inquiry rests with the post-positivist paradigm.

4.3.1 Truth and the naturalistic paradigm

Truth has a number of meanings in society. More often than not the truth can be tested against an external norm; correspondence with natural laws, logical reasoning or deductibility. Lincoln and Guba (1985:14) discuss the four types of 'Truth¹, Truth², Truth³ and Truth⁴' as referred to originally by Ford (1975 *cited in* Lincoln and Guba, 1985:14). The tests for truth outlined above do not apply to one particular type of truth. *Truth¹* is the type that may be referred to as 'metaphysical truth' (Lincoln and Guba, 1985:14) and cannot be tested. Instead, it is a basic belief upon which everything else is tested. *Truth¹* is a belief so sure that it is taken for granted by its believers. This type of truth needs to be accepted as a common belief, which does not require proving in order to make sense of the process of inquiry. Unlike *Truth⁴ empirical truth*, which concerns itself with making its claims through hypotheses that are then tested for their affirmation or denial against the laws of science, *Truth¹* cannot be tested in this or any other way. *Truth²*, on the other hand, is 'ethical truth' (Lincoln and Guba, 1985:14). This type of truth is authenticated by the claimant 'conforming to moral or professional standards'

(Lincoln and Guba, 1985:14). In other words, while acting in their professional and respected capacity they *tell the truth*. *Truth*³ is 'logical truth' (Lincoln and Guba, 1985:14). This can be claimed if its hypothesis is logically or mathematically consistent with another claim that is true, also in the *Truth*³ sense (or *Truth*¹ sense). This thesis is concerned with representing the *Truth*² by exploring the research setting and representing it authentically as it is understood by the research participants: 'Authentic information flows after the establishment of trust' (Gordon, 2002:xii). As a researcher it is necessary to construct a view from the many perceptions of reality held by the various research participants:

Truth then emerges not as one objective view but rather as the composite picture of how people think about the institution and each other. [In the context of research based in a care institution] Truth comprises the perspectives of administrators, line level staff, professional workers, outsiders, volunteers and maintenance staff, residents, and family.

(Bogdan and Taylor, 1975:10-11 *cited in* Lincoln and Guba,1985:80)

A characteristic of positivism that resulted in this study veering away from this paradigm is the issue of verification. The main restriction of the positivistic inquiry paradigm is that verification takes greater importance than discovery (Lincon and Guba, 1985). Confirmatory studies concentrate on formal tests of hypotheses,. For this study more importance was placed on entering the research setting and securing a depth of immersion that would allow such significant interaction so as to stimulate the research

setting and its actors into reform. At the outset of this study, this had not been a specific research objective. Instead, following the advice received during the period of research training prior to beginning the inquiry, performing a confirmatory study looked to be appropriate. It was in the pursuit of establishing a hypothesis that could be confirmed or rejected, that the research approach became heuristic. In other words, while trying out different means of gaining depth of exposure to the research setting, there was a series of movements back and forth between being experimental and confirmatory.

Instead, the choice was made to be naturalistic and to pursue discovery over the conventions of validation from the positivist paradigm. It was at this stage of the inquiry when the constraints of the conventions of positivism were realised and therefore rejected. A firm commitment existed from this point forth to the pursuit of the formulation of emergent theories instead of confirmation of predicate. This was primarily due to the belief that something would be lost if the research was to move from emic (subjective) research to etic (objective) practices (Mautner, 2000). This required constant reminders and reflection on the fact that one emergent aim was to identify the problem, choose a focus and then understand the setting in great depth, so as to be in a position to decide what to explore as a solution to this focal problem. Each possible turn towards etic research threatened a loss of depth of understanding over continuing within an emic vein (Mautner 2000). It is not simply that the postpositivist paradigm does nothing to address validity and reliability in its approach, but that it deals with them in a considerably different way than positivism. In its approach to validity, postpositivism

places less emphasis upon generalisability and reliability in favour of phenomenological discovery.

4.4 Ethnography

One cannot refer to ethnography without acknowledging Geertz's (1973 *cited in* Geertz 1993) application of intensive local inquiry. Through interviews and observations his attention to detailing which factors structured particular local events is what characterises his approach and led many to follow in his methodological footsteps. As with action research, ethnography is a powerful research tool, not only concerned with data collection but also its analysis, which can have the effect of empowering those interviewed.

The characteristics of this research approach, is the subject of the work of a number of key authors (Lincoln and Guba 1985; Woods, 1986; LeCompte and Preissle 1993, Denzin and Lincoln 2000; 2003). Each of these references was reviewed at length following the problem framing visit to the case institution, and prior to the second phase of fieldwork, thus greatly influencing its direction. All of these key authors place great stress on qualitative, naturalistic and ethnographic inquiry being characterised by meaning arising out of social situations, through the handling of interpretive processes.

In social situations, humans actively construct their own meaning for situations. Socially situated data is context related, context dependent and context rich. Situations themselves affect behaviour and vice-versa. It is for this reason that Woods *et al.* (1994:1) describe the practitioners in a social situation as being guided in their actions by their 'local rationality' (Lützhöft 2004:17).

When a research objective is specifically chosen to target observing change, the researcher should be there when the change is introduced, when it has been adopted into use and when practitioners have adapted to its use Lützhöft (2004). The realities reported in an ethnography may be multiple, constructed and holistic. In contrast with the epistemological assumptions of positivism alluding to the possible separation of the *observer* from the *observed*, in naturalistic inquiry the 'knower' and the 'known' are inseparable (Lincoln and Guba 1985:28). By an actor coming to know about the circumstances of their action, this may then cause them to alter the relationship which has been described. Most importantly, when referring to the creation of hypotheses, these are only possible when bound by time and context rendering them idiographic; describing what is particular and non-recurrent (Mautner, 2000). This is the ontological stance shared by the researcher, which strengthens the choice of the naturalistic (postpositivist) paradigm over positivism.

4.4.1 *Ethnography in maritime research*

This study PhD belongs to a recently evolved school of research, Maritime Human Factors (MHF). Human Factors (HF) is a cognitive science strand of psychology with its routes in experimental or statistical research. Today, the modern HF researchers are concentrating on how the human is making sense of their social setting. The MHF domain has evolved its focus also on how the humans they are studying make sense of the situation they find themselves in – using whichever means the situation deems most appropriate. In this contemporary strain of HF, MHF researchers' methods are concerned with context and researchers come from non-experimental backgrounds (Lützhöft 2004).

During the 1990s a number of key MHF anthropological studies were performed by Hutchins (1995;1996). Lützhöft (2004), herself a Master Mariner who retrained as a cognitive scientist to gain her PhD, explicitly refers to her reasoning for applying an ethnographic strategy to her research in her PhD thesis. Influenced greatly by the work of Hutchins (1995;1996), she describes how, when researchers are faced with a participatory study that is naturalistic in nature, they should not expect to develop causal laws and formulae as well. In addition she states that field researchers should be prepared for, and manage to any possible extent, their effect on the situation being observed. She praises performing an ethnography as it allows the researcher discuss issues with stakeholders and to ask them to consider the researchers' interpretations of their work situation as derived from data collected in the field, thus

allowing for its validation, sometimes whilst still in the field. She supports her opposition to social research developing laws concerning human behaviour with the work of Giddens (1979). Lützhöft (2004:19) refers to the conventional HF terminology of 'actors' to describe her research participants and the 'circumstances of their action' as the research setting, which belongs to the classical positivists. However, it is important to avoid using the term 'positivist' solely for polemical purposes without a clear definition.

Psychology since the eighteenth century has two sub types: rational and empirical (Mautner 2000). Social researchers borrow from the empirical strand of behaviourism in their use of its terminology; 'actors' and the 'circumstances of their action'. In particular, the classical positivists limit themselves in their approach by working towards achieving hypotheses and laws, as social science by its very nature is characterised by possessing a lack of causal laws.

Giddens (1979) argues that this lack of pursuit of laws in social science is due to the boundaries such laws operate under. In the social sciences these boundaries include the knowledge an actor has about the circumstances of their actions. Thus, any laws governing social science that a social researcher attempts to write may be flawed by an actor coming to know about the circumstances of their work. This knowledge of the circumstances of the actions may cause the actor to alter the relations described by any such hypothesis and cause a law to fail. As recognised by Lützhöft (2004), if the social

researcher cannot rely on the extent of existing methodologies to deduce laws about the situation being observed and if laws, should they have been deduced, or be of little interest or relevance to stakeholders this leaves a fundamental need for a research strategy that will not fail the research objectives of the social research endeavour in question. This gap left for any social researcher requires an alternative as its fill. The natural alternative is carrying out an ethnography.

The entities of an ethnography are in a state of mutual simultaneous shaping, making it impossible to distinguish cause from effect (Cohen *et al.* 2000). Not only is an ethnography a solution to the research conundrum described above, it can also raise results not achievable through classical strategies. Its borrowing of data collection methods from various disciplines is brought together by the overall research design. Fundamentally, an ethnography exists for interpretation rather than as a means of data collection alone. In all settings observed in the social sciences, MET practitioners are guided in their actions by a type of rationality, formed by the constraints upon the situation. Their training for and experiences in the setting are just one example of such a constraint identified by the researcher, that in turn informs the researcher about the setting and allows them to develop a conceptual model.

For a researcher to understand the work of practitioners and to build an appropriately accurate model, they should be part of their everyday work setting and participate to some degree in some day-to-day activities in addition to as well as in unusual

circumstances. It may even be beneficial for the researcher to be from the same discipline or have undergone specific training in order to participate in the research setting. This practice gives insight into building understanding of the research setting and revealing any constraints on the situation. Some of the constraints that a field researcher may observe and record are of the fixed kind, dictated by external factors, or they may be the kind imposed knowingly by the MET practitioners (Vicente 1993). In the MET setting of this research study, a variety of types of constraint were observed and each was recognised as affecting the research setting, its practitioners and other stakeholders. In the role as participant-researcher, these observations and recorded constraints became data that assisted decision making for the next stage of the ethnography and fed into the action research cycle. Some constraints recognised were long lasting; some only momentary occurrences and some were inherent of the system, with a range of other constraints occurring along a continuum. The inductive approach to research design and analytical analysis of ethnography allowed for these constraints to be recognised, explored further and reasoned with, and documented extensively in the research findings. A key characteristic to highlight is that ethnography is fundamentally for interpretation, rather than as the sole means of data collection (Lützhöft, 2004).

4.4.2 Ethnography in education research

Following the problem framing visit to the research setting, the researcher developed great interest in performing an investigation to explore further the attitudes of the group

of final stage Navigation students towards their studies and future careers. This was partly because the groups contained many first generation university students, whose parents had little formal education, and very few second generation HE students in their immediate family. The research findings discussed in chapter 5 of this thesis revealed that there were difficulties for working class students in accessing HE in China and that entering a MHE programme brought about an otherwise unlikely opportunity for a university education.

Gordon (2002:3) is an advocate of ethnography in education and champions 'using ethnographic research as pedagogy for engagement and retention'. There follows is a description of what constitutes an ethnography in educational contexts, with focus on its usefulness to educational practitioners. Gordon's use of the methodology, for both data collection and analysis, was for the production of descriptive cultural knowledge of a group. This application matches one of Hitchcock and Hughes' (1989:52-3) suggestions as to what constitutes an ethnography; other such points of relevancy follow:

- It produces descriptive cultural knowledge of a group
- The description is in reference to a particular cultural context and is from the perspective of the group members themselves.

This normative interest in the social justice characteristics of the research was not complemented by formal research activity, but it is an area of possible interest for the future. It is worth noting the relevance of Morgan and Wu's (2011) *social justice* perspective for scholarly interest in Chinese HE.

4.5 Action Research

When referring to his work on inter-group relations, Lewin (1946:202-3) made the statement that 'research leading to nothing but books will not suffice'. Researchers like Lewin (1946;1952) followed Marx in their pursuits to understand the world through their interpretations combined with a normative agenda to change it (Cohen *et al.*, 2000). Lewin (1946:203) referred to this applied field of research in the context of inter-group relations and characterised it as being 'research for social management or social engineering'. He describes such a field of research as a kind of action research focussing on the 'conditions and effects of various forms of social action, and research leading to social action' (Lewin 1946:202-3).

Action research has many applications across a wide scope of disciplines. Action research can be applied provided the setting being studied possesses a problem that is in need of a solution concerning: people, tasks and procedures (Cohen *et al.*, 2000)

4.5.1 Action research in education

Education is not a field in which activities and pursuits necessarily go as well or as planned on the first attempt. It is a cyclical process of planning, acting and reflecting. In delivering a new aspect of the curriculum that also involves the introduction of new teaching modes, the process of planning, acting and reflecting can be of significant factor to the success of current and future teaching activities. An action research approach is recommended when the 'action' being studied is expected to hold the potential to contribute towards specific improvements in the research context (Cohen *et al.* 2000). It is also appropriate when the research project itself transcends a number of stages. These stages may consist of planning, acting, observing and reflecting, and the investigation process. All of which calls on the consultation of third parties to become stakeholders, leading to their wider participation in the project (Carr and Kemmis, 1986).

One key assumption that was made when attempting to choose the most appropriate research strategy for this project, was that existing moves to adopt the IMO's Model Course for ME, and subsequently the promotion of CLT, could lead to improvements in the research context. Another assumption and aspiration, was that the key stakeholders identified internally would become participants in the project.

The work of Cohen *et al.* (2000) provides a synopsis of the contemporary applications of this research approach in an education context and led to a review of a number of their

key references in more detail (Lewin 1946; Stenhouse 1980; Grundy 1987; Zuber-Skerrit 1996). Included in the comprehensive summary by Cohen *et al.* (2000) are definitions that describe the combination of action with research as having the result of 'disciplined inquiry' (Cohen *et al.* 2000:226). Through this disciplined inquiry, practitioners make attempts to 'understand, improve and reform' practice (Choen *et al.* 2000: 226-7). Action research can be applied in an educational institution by an individual teacher, by a team of teachers in cooperation, or by an individual teacher or a team of teachers cooperating with a researcher or researcher

In each case the relationship between the parties carrying out the research should be sustained and ongoing, with possible other stakeholders e.g. heads of department and sponsors, involved through the regular reporting of progress and concepts (Holly 1984). In the instance of this research, the action research approach served to make a 'small-scale intervention in the actioning of the real world and a close examination of the effects of such intervention' (Choen et al. 1994:186). The most apt definition that made this approach appealing was that:

...to do action research is to plan, act, observe and to act more carefully, more systematically, and more rigorously than one usually does in everyday life.

(Kemmis and McTaggart,1992:10)

The naturalistic research paradigm is split into different schools of thought with only subtle differences between their epistemological viewpoints. The naturalistic research

paradigm offers itself up as an alternative to positivistic research in social science. It rejects having *a priori* theory and hypotheses stating general or universal laws as the basis for data collection. Instead, it offers the perspective that the social world should be seen from the view point of the individual(s), the setting's actors. The step of operationalising variables in order to frame the research is not appropriate in naturalistic inquiry (Bogdan and Biklen 1992). In this view, research questions should be formed '*in situ*' (Bogdan and Biklen 1992:2). Lincoln and Guba (1985) concur that in the absence of having spent time in the natural setting itself, it is impossible to know what is important to control or what to study.

The naturalistic paradigm rejects the hypo-thetico deductive approach to studying human behaviour in favour of an interpretive one, but the planning of naturalistic research still has many of the same issues as conventional inquiry. In naturalistic inquiry, it is not sufficient to plough straight into 'the wild' of the research setting (Hutchins 1995). The following is a summary of the stages in systematic and scientific naturalistic inquiry according to Cohen *et al.* (2000):

- Identifying the problems and research purposes;
- deciding the focus of the study;
- selecting the research design and instrumentation;
- addressing validity and reliability;
- ethical issues;
- and approaching data analysis and interpretation.

If causal laws are deduced through social research, then it is of utmost importance for the researcher to highlight the boundaries under which the resultant hypotheses operate. Any internal stakeholders need to be made aware that the relations described by a researcher's hypotheses may fail as a phenomenon alters outside of the boundaries of the original research context. In other words, in social research, causal laws are rendered redundant outside of the original research context. In this situation, hypotheses that are grounded in one particular research setting are of little relevance to external stakeholders; unless the study is validated in their own research context.

One way of identifying the problems and research purpose is through the development of a conceptual model, which has a number of stages. The first of these is to review the literature, another is discussion with professionals and other academics and a third is to include the theories of the researcher (Miles and Huberman 1994). At an early stage, these theories may be nothing more than hunches, drawn from a number of influencing sources. In order to provide some validity to these theories, in naturalistic research it is necessary to enter the field and to ensure exposure to the professionals in question. This in turn informs the theories of the researcher for inclusion in their conceptual model. The initial problem framing stage of this research, provided the opportunities for such discussions with professionals and other academics to take place. The stages of developing a conceptual model, as described above, are not exhaustive. However, they

represent the common phases in this process, and having consulted Miles and Huberman (1994) and Huberman and Miles (2004).

Having been influenced predominantly only by the review of relevant literature, and limited discussion with professionals and other academics, a perception of the research setting was already beginning to develop at the point of first entering the field for the first time for the purpose of problem framing. As a result, it was necessary to be cautious of existing biased perceptions of the research setting, which had emerged from the review of the literature. These beliefs may only be based on the findings of the literature *a priori* and not represent empirical findings from 'sensory observations' (Mautner 2000:166). As a result such assumption would not have been grounded representations of the research setting's reality.

This research investigation centred on a specific institutional situation. Regarding this situation, a desire for its change was expressed frequently by more than one stakeholder of the research. At times these expressions for change included specific suggestions of partial solutions. It transpired through the research that the status quo of practice was fixed by a continuum of identifiable constraints. These constraints, illustrated in the conceptual model series of figures, were established following the initial problem framing visit. Top level constraints were evident from this problem framing visit, after which, and when out of the field, a review of methodology literature for education research was embarked upon. This literature review was to inform the

decision making process about the future direction of the research. In what had emerged as a necessary widening of one of the original research questions. The research question to be widened related to Chinese MET institutions and their approaches to delivery of ME. The decision was made to add an action research aspect to the research strategy in order to complement the broadened research questions. The key characteristics of action research that deem it appropriate for this study are:

- Its use of data in an ongoing cyclical process;
- Its use of case study;
- Its focus on immediate concerns of practitioners;
- Its avoidance of potentially damaging isolating and controlling of variables;
- Its inclusion of evaluation and reflection;
- Its strive to render the research usable and shareable by participants;
- Its incorporation of rich dialogue and discourse; and
- Its strive to be emancipatory.

(based on Hult and Lennung 1980 and McKernan 1996)

Action research can act in particular as a critical praxis. The Frankfurt School of critical theory looks upon action research as 'critical social science' (Weiskopf and Laske 1996)

cited in Cohen et al. 2000). 'Technical' action research is also described as a critical strain, whereby its application is for the purposes of making an existing situation more efficient and effective. This view is very functional, often short-term and highly technical (Grundy 1987). This approach of action research has been criticised for being limited as it treats teachers individually and ignores externalities such as the wider curriculum under which they are working. *Practical* action research exists to promote professionalism among practitioners; their understanding of interpretation of social situations is facilitated with the aim of their becoming motivated to make improvements, typical of examples of action research from the UK (GundyÊ1987). It was mentioned already that all action research carries some desire to be emancipatory, but one particular school exists that is devoted to this goal (Grundy, 1987).

4.5.2 *Emancipatory characteristics of action research*

Emancipatory action research as described by Grundy (1987) is as much political as educational. Its participants are encouraged to reach a level of understanding of 'illegitimate structural and interpersonal constraints that are preventing the exercise of their autonomy and freedom' (GrundyÊ 1987:146-7). From this viewpoint, action research leads to an egalitarian society, in which equality and cooperation as part of the furtherance of democracy are strong characteristics and exploitation declines. In emancipatory action research settings the participants '...own the problem and feel accountable for solving it through teamwork...' (Zuber-SkerrittÊ1996:3). She goes on to argue that it changes the system itself and that the action researchers themselves are

participants in a community of equals. Empowerment is a theme that runs strongly in this school of action research and there is relevance at times to the reactions of the student group of stakeholders, who once enlightened through their participation in this research, became more aware of their situation and the constraints and possible injustices that it posed. However, it was not the intention to empower the student group, but rather the teaching practitioners. As a result it was necessary to draw limitations on the level of interaction had with the potentially impressionable and reactionary group of undergraduate Navigation students.

It is not surprising that emancipatory action research has gathered specific criticism. Most scathing are the views that it is 'utopian and unrealisable' (Cohen *et al.* 2000: 233) and undermines the individual as playing a significant role as its focus is on self critical communities (Kemmis and McTaggart 1992). It is between emancipatory action research and ethnography in education (in which the students are participating) where the lines become most blurred.

4.5.3 Ethnographic possibilities of action research

In recent years, much attention has been paid to ME initiatives from an international perspective. However, few ME initiatives in China go beyond the narrowness of teaching materials. The key feasibility studies of any great depth are of EU or IMO origin and include exploration of the implications of the IMO's Standard Marine

Communication Phrases (SMCP) (WMU, 1998; European Union DG VII, 1999a;1999b), design of teaching syllabi and teaching approach and MET training provision in Asia. In this environment, characterised by a lack of thorough research and comparison of projects, the implementation of initiatives also requires a methodology through which to collect appropriate data for comparison purposes. Their evaluation is necessary for avoiding theory driven behaviour in MET that is based on second hand evidence, in favour of replacing this with decision making based on first hand empirical research-based confidence. This need to record and analyse appropriate empirical data is enhanced when consideration is given to the key input into those initiatives of significance made by multilateral donors.

In the field of ME research, the greatest multilateral donors have been the EU and the UN, through the IMO. Their initiatives exist primarily with the normative agenda of reducing the negative impacts of communicative error between multicultural and multilingual crewmembers. The research funded by the EU has also attempted also to go beyond the assessment of adopting a specific maritime vocabulary, to the wider social context of Education. In contrast with previous research strategies employed in this field of research (WMU, 1998; Yercan *et al.* 2005), an ethnographic action research strategy allows for in-depth exploration of local contexts and the appropriateness of such international initiatives for these situations. In this favoured research strategy, the ethnography plays the role of guiding the direction of the research and the action research links these findings into the ongoing development of a project.

Ethnography is long established in education (Lincoln and Guba, 1985; Woods, 1986; Hitchcock and Hughes, 1989; LeCompte and Preissle, 1993; Vicente, 1993; Cohen *et al.* 2000; Gordon, 2002; Denzin and Lincoln, 2000; 2003), which together with action research grew to feature strongly during the 1980's (Hult and Lennung, 1980; Stenhouse, 1980; Holly, 1984; Lincoln and Guba, 1985; Carr and Kemmis, 1986; Grundy, 1987; Eisner, 1991; Kemmis and McTaggart, 1992; McKernan, 1996; Weiskopf and Laske, 1996 *cited in* Cohen *et al.* 2000; Zuber-Skerrit, 1996; Cohen *et al.* 2000). The innovation of 'Ethnographic Action Research' is not so well documented and the main reference to this amalgamation of strategies is the subject of work carried out for UNESCO by Tacchi *et al.* (2003:1).

The educationalists' viewpoint regarding ethnography (Gordon, 2002) and action research (Zuber-Skerrit 1996; Carr and Kemmis, 1996; Cohen, 2000), and operating in professional learning communities (Erickson *et al.* 2005:2008; Ryan, 2011a) have been considered at length. Given the appropriateness of both research strategies and Tacchi *et al.*'s (2003) suggestion to amalgamate the two, *ethnographic action research* strategy was selected for this study. Above all, this was down to the opportunities it presents to gain a significant understanding of the local context of the organisation of the local teaching and learning ecology. Among the aims of this research study has been a desire to facilitate the role of various stakeholders play in designing an educational

initiative. The on-going evaluation of the emergent design creates a continuum of research and initiative development (Tacchi *et al.*, 2003).

This research choice was not made in order to assess the feasibility of a predetermined set of project goals or to compare it with another using a set of set parameters. Predetermined parameters in this setting are of little relevance and are superseded by the development of a project to benefit the research setting's stakeholders. Ethnographic action research leads to cooperation between researcher and participants that is characterised by minimal separation of research from project development (Tacchi *et al.* 2003). Through this research strategy, ongoing analysis of the project's development is desirable to ensure the continual awareness of participants and adaptability of the process based on the continual evaluation of practice.

In this PhD study, GLMS stakeholders' commercial training needs transcend teaching and learning modes, which can be looked upon as an ecosystem. The study of these groups 'educative ecology' involves placing the learners, the teaching/training organisations, the teachers, the trainers, and the employers of the graduates to create a useful analytical framework (Tacchi *et al.* 2003). For this study the ethnographic approach allows for making sense of the complete range of social cultural and educational relationships in which the project is functioning. This exposure to and collection of rich data include:

- the immediate participants

- the wider social extent of the project e.g. social divisions among student participants, language issues and the power of the institution;
- and the wider social structures and processes impacting on the project itself e.g. international and national legislation governing the context.

By using active participation to involve those who should benefit from the research, the action research approach allows these stakeholders to participate in defining the project's aims and direction and interpreting the findings in order to draw conclusions from it. Its action based methods allow for the actions and experience of the participants to generate data that may be interpreted by the researcher into themes. These themes were then evolved to become action points and the project validated on the catalytic properties of these themes. Should the project be deemed to have catalytic influence on the stakeholders then it will also demonstrate that it has adapted itself sufficiently to local needs and stands the chance of being put into place in reality. Its catalytic value also demonstrates a project's sustainability value, in that having stakeholders involved at each step ensures its relevance and generates a degree of ownership and involvement helping to ensure a project's future (Tacchi *et al.* 2003). By maintaining an action researcher in situ the project can be continually evaluated in terms of what level of empowerment has the new syllabus brought about, other than greater exposure to relevant vocabulary, and how does this relate to the wider educational ecology for Chinese MET?

4.5.4 Collaborative possibilities of action research

As with any collaborative action research (Miles and Huberman, 1994), in this genre of research approach action is undertaken in a social setting and that action is collective in its nature. In order to approach collaborative social research, researchers may seek out others who are prepared and comfortable with accompanying the process in 'real time' (Miles and Huberman, 1994:8). The researcher seeks local help to design the process of fieldwork, with the redesign of a certain operational function of the research setting at its centre. In this instance the redesign of the approach to teaching and learning is the field experiment being proposed. The aim is to collate data and to present these to the research setting's actors in preparation for the next stage of the research. Potentially, this data is most useful in the form of feedback (Miles and Huberman, 1994). The researcher aims to join as closely as possible with the participants of the research setting from the outset. The objective is the transformation of:

...the social environment through a process of critical inquiry – to act on the world rather than being acted on.

(Miles and Huberman, 1994:9)

Miles and Huberman (1994:9) discuss the similarities of collaborative action research with those of 'critical ethnography' and 'action science'. By taking an analytic approach to everyday occupational tasks, the educational practitioner and the researcher are able

to work towards emancipation. This collaboration is achieved through the researcher's participation in the day- to-day setting, in order to carry out observations, and the 'unpacking taken-for-granted views' (Miles and Huberman, 1994:9) that goes on to detect what might be visible or invisible structures acting as oppressors of innovation and change in the setting.

4.6 Systematic analysis: grounded theory

A potential problem with ethnographic studies is seeing data everywhere and nowhere, gathering everything and nothing. The studies world seems so interesting (and probably is) that the ethnographer tries to master knowing it all Mountains of unconnected data grow...but they do not say much. What follows? Low level description and, if a bit more sophisticated, lists of unintegrated categories. Ethnographers who leave data undigested seldom produce fresh insights and, sometimes, may not even complete their projects, despite years of toil...Enter grounded theory.

(Charmaz, 2006:23)

There are different methods that can be used to make qualitative research a systematic process and the one used most commonly is 'Grounded Theory' (Bryman, 2004:401). This method is used to 'build an explanation or to generate a theory around the central core or central theme that emerges from your data' (Saunders *et al.* 2009:509).

However, there are warnings this approach carries the risk that significant findings might not emerge Saunders *et al* (2009). Significant in this situation meaning, directly related to the research objectives. Saunders *et al.* (2009) consider data collection and data analysis as part of an interactive process, which through grounded theory is carried out using systematic analysis procedures.

Glaser and Strauss' influential text from 1967 'The Discovery of Grounded Theory', articulates the research strategies for studies of patients in hospitals. The grounded theory approach originated in the 1960s from these hospital based studies in the United States. The quantitative research paradigm was dominant at the time and they were seen as successful in offering an alternative. Grounded theory advocates interrelating concepts to create new theory rather than testing existing theories. It is clear that because of these characteristics it fits within an interpretive research philosophy. Representativeness and statistical generalisability are not its aims, and instead grounded theory seeks to explain phenomena based on empirical data. At times it is also possible to predict phenomena on this basis also (Miles and Huberman, 1994).

Another area of variation between this study and that of grounded theory is that data collection typically encompasses in-depth interviews. However, it can also include other sources of data such as existing research literature and quantitative data. The general guidelines that grounded theory presents for data collection and analysis is that it should consist of coding, comparisons between data, memo writing and theoretical

sampling. This research study has many characteristics of having taken a grounded theory approach. In this research study, classroom and teaching observations were used as an opportunity to provide data for coding. Much comparison takes place between the results of surveys and the existing literature. Quantitative data is also collected from standardised and improvised language testing and features in the analysis. During the participant as observer/researcher phase of the research there is great reliance on the keeping of research diaries and memo writing. Theoretical sampling also takes place based on the initial findings.

If someone wanted to know whether one drug is more effective than another, then a double blind clinical trial would be more appropriate than grounded theory study. However, if someone wanted to know what it was like to be a participant in a drug study ..., then he or she might sensibly engage in a grounded theory project or some other type of qualitative study.

(Strauss and Corbin, 1998:40).

The essence of Strauss and Corbin's (1988) text on grounded theory is captured in this quotation, indicating when it is best to use a grounded theory approach. Grounded theory provides useful tools to inform about individuals' perceptions and feelings regarding a particular subject area. For a larger sample, quantitative data may be useful in measuring attitudes. Grounded theory is most powerful when the aim of the study is to learn about individuals' perceptions. Perceptions are one aspect of this research study, and as such there are elements of the research that have dipped into the advice given in research methods texts relating to adopting a grounded theory approach.

However, there are also a number of other aspects, other than the participants' perspectives, that make up the study and grounded theory alone does not provide all of the resources and analysis techniques that are required.

According to Miles and Huberman (1994) grounded theory has the following characteristics that correspond to those of this study. It focuses on everyday life experiences, participants' perspectives are given great value and the inquiry is regarded as an interactive process between researcher and respondents. However, where these values differ to those of this research study is on the matter the results being primarily descriptive and relying on people's words. While the emphasis on some aspect so of this research rely on the perceptions of the research participants (the students, teaching practitioners, academic institutional leaders, and industry stakeholders), the first hand observations made in the classroom and in day-to-day interactions also form part of the study. For this element of the research it is necessary the naturalistic paradigm provides a platform for the research, but there is not enough guidance on sampling, data collection and analysis techniques.

Charmaz (2006) posits that grounded theory is essential for ethnographers. The opening quotation to this subsection encapsulates this belief on her part. Expressions like 'everywhere and nowhere' and 'everything and nothing' are very true emotions for the ethnographer, which have been felt by the researcher who tried to 'master knowing it all' and risked 'not say[ing] much'. At one point there was the greatest risk of all of not

completing the project, despite many 'years of toil' (Charmaz, 2006:23). In her practical guide to qualitative analysis, Charmaz (2006) posits that the conventional approach of gaining a complete picture of the whole setting is the cause of these risks associated with ethnographic research. Instead, she recommends that the ethnographic researcher should focus on a 'basic social process... to gain a more complete picture of the *whole* setting' (Charmaz, 2006:23). By doing so ethnographers can make connections between events by using grounded theory as a way to study process. Because of its emphasis on comparison, grounded theory enables an ethnographic researcher to compare data from the beginning of the research, to compare emerging categories, and to illustrate any relations between concepts and categories. In doing this, the ethnographer can become more involved in the inquiry instead of giving in to the pressures they may face to participate fully in the research setting.

This dispels what positivists believe should take place, which is that passive observers absorb their surroundings, waiting for data to emerge. If a grounded theory is applied to an ethnographic study, then the researcher can select what they will observe and take a more directed focus while observing. Control can be maintained through grounded theory, as it helps the researcher to focus, structure and organise their research.

Grounded theory can help an ethnographic researcher to develop theory also. This is done by raising their descriptions of phenomena to abstract categories and theoretical interpretation (Charmaz, 2006).

4.7 Deciding a focus for the inquiry

Deciding the field and focus of an ethnographic study is particularly important as it provides the opportunity for the research problems to emerge from the context and assist the researcher in 'determining a focus for the inquiry' (Lincoln and Guba, 1985:141).

As summarised in the list 1-10 below based on Cohen *et al.* (2000:140), the concepts of LeCompte and Preissle (1993); Hitchcock and Hughes (1989:57-71); and Bogdan and Biklen (1992) regarding the stages of naturalistic inquiry are amalgamated. Each of these authors is supportive of carrying out a problem framing visit, or similar, prior to entering into the 'regular interaction' (Bryman, 2004:303) with the research setting and its actors that is characteristic of an ethnography. In this amalgamated view, such a problem framing stage is essential in fulfilling the following specific aspects of naturalistic inquiry and the rest of this chapter is organised into subsections as follows:

1. Locating a field of Study
2. Addressing ethical issues
3. Deciding the sampling
4. ~~Deciding~~ Finding a role and managing entry into the context, finding informants, developing and maintaining relations in the field
5. Data collection *in situ*

A further four steps complete the process of naturalistic inquiry:

- Data Collection outside the field
- Data Analysis
- Leaving the Field
- Writing the report

(Cohen *et al.* 2000:140)

4.8 Case reporting

Lincoln and Guba (1985) propose that for naturalistic inquiry the mode of reporting of choice is a case study. Due to the unique requirements of an ethnographic account, this thesis contains a chapter dedicated to research strategy and methodology is also very much discussed throughout its other chapters. After all, in ethnographic research data reduction is not separate to the analysis nor is the evolution of methodology to suit the research setting and its actors. The decision to have this dedicated chapter to research strategy satisfied Dunleavy's (2003:72) suggestion to combine approaches to explanation in thesis writing, in order to achieve 'more articulated organizational structures for neatly organizing eight or so chapters'. He terms this combination of approaches to explanation 'matrix patterns' and stresses that a candidate can combine the three main approaches into four possible pairs. The pair chosen upon which to model the presentation of this thesis is from his recommendations, and is the combination of the 'analytic plus descriptive' (Dunleavy, 2003:73) approaches to

explanation. The fact that methodology is given mention throughout the other chapters of the thesis is also down to Dunleavy's (2003) influence. He outlines three models of thesis structure 'the focus down model' (Dunleavy, 2003:55), the 'opening out model' (Dunleavy, 2003:59) and 'the compromise model' (Dunleavy, 2003:61). Each of these models are characterised by the positioning and length of the literature review, methods and core chapters in relation to each other and the chapters of analysis and discussion. The focus down model was appealing as it offered the chance to provide comparatively more detailed discussion of methods, but it was unappealing as it had a large breadth of literature review and at times there was the fear that this would detract from and take up too much bulk of the thesis in place of the important core matrix pattern chapters of ongoing description and analysis. On the other hand, the opening out model was appealing in its bold delivery of a large core section through which this ethnographic account could potentially present its continual discussion and analysis as it had occurred in the field. However, this model of thesis writing was a cause for concern as it broke from convention and included such a brief literature set-up. It also offered a potential lack of opportunity to justify certain choices made concerning of methodology at an early stage, which would be to the disadvantage of the effectiveness of its overall explanation. Because of these factors, a compromise model (Dunleavy, 2003) was opted for, comprising of a focussed literature review, which was divided into disciplinary literature and methods literature; a core of three chapters, to represent each research phase; and analysis and discussion sections at its end.

4.8.1 Locating a field of study

In the context of Chinese MET and as discussed earlier in this thesis, the research by academics in this field relates to: supply and demand factors, the multi-cultural environment and human resource management (Wu, 2004). In particular, their focus on the multi-cultural environment stands out as a particularly prevalent issue. The role of English language ability in inter-group relations, and attempts to improve it through Chinese MET, is a specific concern within the area of research interest of the multi-national environment:

An attempt to improve inter-group relations has to face a wide variety of tasks. It deals with problems of attitude and stereotypes in regards to other groups and to one's own group, with problems of development of attitudes and conduct during childhood and adolescence, with problems of housing, and the change of the legal structure of the community; it deals with problems of status and caste, with problems of economic discrimination, with political leadership in many aspects of community life. It deals with the small social body of family, a club or a friendship group, with the larger social body of a school or a school system, with neighbourhoods and with social bodies of the size of a community, of the state, a nation and with international policies.

(Lewin, 1946:203)

In the quote above, Lewin is referring to resolving social conflict in a conventional society in a fixed geographical location. Chinese seafarers are a social group and have been the subject of numerous research projects from SIRC and its former research staff. Unlike in the Philippines, Chinese seafarers are spread across China and are not living in local seafaring communities, whereas in the Philippines, communities of

seafarers, their families and a micro-business culture has evolved. With the majority of Chinese seafarers coming from Henan province, this may change and seafaring communities may appear in the near future. When onboard in the multi-cultural setting that is the shipboard society, Chinese seafarers become a clearly identifiable social group, faced with the challenges of inter-group relations. In this context, Chinese seafarers face the same concerns that Lewin (1948) lists, just as any other social group when it comes to inter-group relations.

Lewin (1952:205) stated that ‘we are beginning to see that it is hopeless to attack any one of these aspects of inter-group relations without considering the others’. Those factors within Lewin’s (1952) sphere of tasks to be faced when addressing inter-group relations that is exposible through this study is that of the larger social body of a school or a school system.

Table 9: Enrolment of students in Chinese MET institutions 1996 to 2005.

Level	Total	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
4 Year Degree		1325	1521	1560	1912	2067	2637	2855	2955	2869	3271
3 Year Non-degree		1211	1353	1563	1933	2813	2225	3453	5280	6401	7959
3 Year Technical School		1910	1544	1590	1381	1373	1051	1387	1468	1153	1462
Totals		4446	4418	4713	5226	6253	5913	7695	9703	10423	12692

Source: Amalgamated from CMSA (2006) and CMETRG (2007)

This phase of the research brought with it a number of sources of secondary data otherwise unavailable (CMSA, 2006; CMETRG, 2007). Table 9 shows that the most frequent category for recruitment of maritime students was for the three year non-

degree (higher and medium) vocational programmes. Data for this table are amalgamated from a China MSA (2006) publication and from enrolment statistics obtained during the problem framing stage. There was no differentiation between the 'higher' and 'medium' vocational categories in these data from the China Maritime Safety Administration (China MSA, 2006). As the two categories of 'higher' and 'medium' were not presented separately, it is difficult to ascertain the popularity of one over the other. At the time, more transparency of these data was desirable for the purposes of decision making regarding 'locating the field of study' (Cohen *et al.* 2000:140) and 'determining focus for the inquiry' (Lincoln and Guba, 1985:141). Further data sourced from a departmental draft report from the host institution during the 'further fact finding' (Lewin, 1946:205) stage, which showed that 2006 enrolment figures for university level courses had risen consistently over a ten year period from 1996 onwards (CMETRG, 2007). Each of the institutions experiencing such growth offers four year degree programmes. This was a rise of 62 students from 2491 the previous year in 2005 and followed a consistent pattern of similar growth annually for the ten year period.

The growth figures relating to increased entrants into higher education maritime programmes between 1996 and 2005 were very attractive and strengthened the case for carrying out regular interaction at a higher education institution. An additional factor in support of choosing a higher education institution, was because of this background in learning and teaching. Prior to the problem framing stage of the study, three years had been spent in gaining experience as a teaching practitioner in Higher Education.

Throughout this time, continuing professional development had taken the form of working part time towards a Postgraduate Certificate in Learning and Teaching in Higher Education. At the point of locating a field of study, it was felt that this background and the continued professional studies referred to above would assist in aiding understanding of a university level situation and interpreting its meaning more accurately. This confidence was not felt with regards to a vocational institution, in which setting no teaching experience had been gained.

Out of the six main universities, the institution selected finally for the case study has at least twice as many students enrol each year than the second place institution. The second place institution saw recruitment of 490 students in 2006. The third place university saw similar figures of students to the one in second place, with recruitment reaching 468 in 2006. What was compelling about the institution chosen for the study was the growth in enrolment numbers year-on-year. In 2006 877 students were set to graduate from the case study institution's maritime programmes, after four years of study, out of the 900 recruited for this cohort in 2002. In ten years the programme had 175 more students enrolling annually, whereas other institutions had seen a steadier increase of between 20 and 40 students each year. The exception to this was one newer university, whose intake had grown from 95 students in 2002 to 212 in 2006, however this institution only saw its first cohort of graduates in 2006. The course being run at the newer university was on a much smaller scale than those at the three largest institutions and was relatively juvenile when compared with each of their over 90 year histories at that point in time. The remaining four universities all had much lower student

numbers overall. Due to their scale of operation and time in establishment, the choice of institution was narrowed to the first and third largest institution prior to the problem framing visit, with the introduction of the possibility of the second largest institution being the setting for the case study as a result of this initial period of time 'locating a field of study' (Cohen *et al.* 2000:140) or as Lincoln and Guba (1985:141) refer to it 'determining a focus for the inquiry'.

4.8.3 Maritime Vocational Schools

Although the role of maritime vocational schools was acknowledged by the CIIPMET, no 'high school' level case institutions were referred to directly (WMU, 1998). Post problem framing, the following institutions were identified as high school level institutions in Northern China (China MSA, 2006):

- Harbin Shipping School
- Tianjin Mariner School
- Yantai Marine Vocational High School

Initially, access to information regarding maritime high school education in China was sparse. Internet searches did not reveal any English language websites or contact details for these institutions, whereas contact with the larger Maritime Universities was facilitated by their English language websites. Further research into the staffing and the management of these institutions led to the decision that they would not be appropriate

for inclusion in this PhD study. These institutions had a very low frequency of English speaking staff that would make access to the research setting problematic. Carrying out research involving children was also a great ethical consideration, as this had not been accounted for in gaining ethical clearance prior to the research taking place. A further barrier to pre-eighteen education was that the study had been planned around adult learners. At a later stage, the research questions emerging *in-situ* did not call for data to be collected in this pre-eighteen education setting and the decision to exclude it from the sphere of observation could be justified by the general focus research questions. It would also have raised some ethical issues as dealing with human participants under the age of 18 requires a different level of approval from the Research Ethics Committee.

4.8.4 Maritime Colleges

Potential alternative vocational 'higher' level case institutions were referred to explicitly in the CIIPMET Report (WMU, 1998):

- Shanghai Marine College
- Dalian Maritime School (later renamed Dalian Fisheries University)
- Qingdao Ocean Shipping Mariners College

Potential alternative vocational 'higher' level case institutions identified independently (China MSA, 2006) include:

- Cheng Yi College of Jimei University
- Naxu College of Jiangsu University of Science and Technology
- Qingdao Ocean Shipping Mariners College
- Jiangsu Maritime Institute
- Guangzhou Maritime College
- Zhejiang Institute of Communications
- Shanghai Maritime Academy
- Guangdong Communication Polytechnic
- Nantong Shipping College
- Wuhan Navigation Polytechnic
- Xiamen Ocean Vocational College
- Fujian Communication Technology College
- Zhejiang International Maritime College
- Hebei Jiaotong Vocational and Technology College

Aspects of the emergent research questions could have led to the need for brief periods of study to be spent at a 'higher' vocational colleges, but doubts remained regarding

their suitability for 'regular interaction' (Bryman, 2004:301) when compared with university level institutions.

4.8.5 Maritime Universities

A two month visit to an overseas Maritime Training and Education (MET) institution served as an opportunity to gain further literature relating to crew supply and demand with a focus on China. This has been in the form of papers previously unobtainable, collected in the overseas institution's English language collection housed in their International Conventions Library and those composed in Mandarin. Access to the relevant contents of Mandarin articles was aided by teaching staff and researchers active in the field of MET at the institution. This visit also provided the opportunity to make preliminary observations of Chinese students – seafaring and non-seafaring - using English in the classroom and everyday environments.

Potential university level case institutions referred to in CIIPMET (WMU, 1998) were:

- Wuhan Institute of Technology
- Shanghai Maritime University
- Jimei University
- Dalian Maritime University

Potential alternative university level case institutions identified independently (China MSA, 2006) were:

- Ningbo University
- Guangdong Marine University
- Tianjing University of Technology
- Yantai University
- Chongqing Jiaotong University

4.9 Deciding the sampling

An issue that was given great consideration in between problem framing in phase A, was ‘determining where and from whom the data will be collected’ (Lincoln and Guba, 1985:141).

4.9.1 Criteria based sampling

In this instance confirmation that the field of study met the research questions being formed was of utmost importance in this process. Criterion-based selection (LeCompte

and Preissle, 1993) was used also in confirming the choice of case study institution, in which the following factors were key criteria:

- Number of persons trained annually.
- Relations with national education system.
- Language spoken at institution and surrounding community (Mandarin Chinese)

During the institutional visit data to satisfy the following criterion were collated and analysed in comparison to alternative institutions:

- Employment per sector of graduating students.
- Employment of graduates on international vessels.
- Manpower going to EU fleet.
- Manpower going to other global fleet.
- Entry criteria for Navigation courses.
- Types of training offered.

Some of the perceptions discussed earlier related to the research culture at the institution and some related to the perception of outsiders entering the research setting based on the past experiences of its actors. The initial key informants held the view that the role of the researcher was so very non-interactionist and they were quite rejecting of interpretivism in that they had presumed the researcher had arrived armed with a pre-prepared questionnaire. This expectation was so striking from one individual that he requested to see it for approval upon arrival at the institution. Upon explanation that this wasn't how the research was going to be approached, their understanding was that help was needed gaining exposure to the field in order to develop and finalise a questionnaire. As a result, they agreed to grant the requests that had been made for access to perform classroom observations, and to interview students and teachers.

In the pursuit of *naturalism* (Woods, 1992) this arrangement went ahead; staff at the university's understanding was that *hanging around* was to be facilitated. However, some of them saw it as pointless as what was possibly of most interest would probably never unfold unless an instrument to extract the data (a questionnaire) being looked for was created. On the contrary, this period was a success as it sought to establish the 'right to witness and take part in slices of other people's lives' (Woods, 1992:370). This right was earned during the initial six weeks in the research setting. During this time, two schemes to earn this right were employed in parallel. On the one hand the University's suggestion for managing my entry into the context to collect the data through a questionnaire was followed up. After all they were more familiar with the research setting than I and this insider knowledge should be respected. After the requested

period of two weeks of carrying out observations was over, an outline for a survey was discussed with one of the key gatekeepers. His suggestions was that a number of student volunteers could help with its administration. This perception that the research could be administered so quickly and by just anyone was quite a barrier, at first, to interacting to a sufficient degree within the research setting.

Despite these difficulties, a commitment to earning the right to observe every-day activity had been made. Doing the groundwork to earn the right to enter the setting and to gain enough trust from participants, so that they could go about daily tasks and as symbolic acts occurred, these could be recorded into this interpretation of their situation and recorded at a later date. The realisation by the research setting's actors, namely the teaching practitioner gate keepers, that this degree of seriousness about research approach had been adopted and that a long term orientation to the study was planned, came when they accepted that it was the intention to come back to the research setting again and again over a further period of 9 months.

The problem framing visit continued in this vein of performing observations in order to inform the development of a survey instrument. A survey was developed, but pilot activities revealed limitations when self completion was taking place. It was a valuable decision to continue with use of the questionnaire, but to administer it face-to-face. However, reflecting on the reasons why there must be stages to naturalistic inquiry was reassuring and limited the mistake of attempting to satisfy too many objectives during

the period of just six weeks. This was only the first stage (locating a field of study) and those to come were: addressing ethical issues, deciding the sampling, finding a role and managing entry into the context, finding informants and developing and maintaining relations in the field, and attempting to collect data *in situ*.

Once out of the field and post problem framing, initial interpretations of the research setting could be explored further through a rich set of data to inform the problem framing process. There was also the chance to have built an awareness of the depth of interaction necessary for subsequent phases by considering a wealth of methods literature. One particular realisation from the further consideration of methods literature was that subsequent periods of field study and observations would need to be carried out within a closed setting overt ethnography approach (Bryman, 2004). Having made note of the expressions of key informants and subjects regarding the research at each stage in research diaries, this acted to inform the process of framing an educational problem, conceptual modelling and the adoption of a research approach for subsequent phases of the ethnography, which would also incorporate action research.

4.9.2 Theoretical sampling

Early analysis of data indicates issues that need exploration; hence the sampling process is guided by the on-going theory development. Grounded theory uses a form of purposive sampling, known as *theoretical sampling*, where participants are selected

according to criteria specified by the researcher and based on initial findings. The process of developing theory involves a starting point (the classroom observations at the host Chinese MHE institution), further data collection (language testing, interviews), coding (axial, open and focussed), memo writing. For these reasons the development and identification of variables does not take place prior to data collection but instead as part of the data collection process. Consequently, the variables or concepts are initiated by the interviewee and further developed and conceptualised by the researcher. Data collection and analysis may take place in an alternating sequences. This is an iterative cycle of induction and deduction, consisting of collection of data and constant comparison between results and new findings in order to guide further data collection (Miles and Huberman, 1994). Again where this research breaks away from the grounded theory approach is in that data collection did not cease upon reaching theoretical saturation, but instead focus transferred to a new phase of research, with its design intent on action.

Lincoln and Guba's (1985) reflections on the nature of their work into naturalistic inquiry have identified its uniqueness in one particular dimension, 'the source of theory' (Lincoln and Guba, 1985:339). At the time of its application by Glaser and Strauss (1967) the constant comparative method was a means for grounding theory in the data. It was not their focus to consider the processing of data. Instead, they set out with the aim of 1. 'comparing incidents applicable to each category', 2. 'integrating categories and their properties', 3. 'delimiting their theory', and 4. 'writing the theory' (Glaser and Strauss, 1967:5). What is most attractive about this technique is the notion of a 'continuously

growing process' (Glaser and Strauss, 1967:5), in which each phase of the research is able to provide guidance for the next and that this principle is continuous throughout the inquiry (Lincoln and Guba, 1985).

During the problem framing visit, potential sources of information and key informants were identified. This was facilitated further as time progressed, and as the organisation of the institution became clearer and contacts were made. During this stage, much attention was given to Bogdan and Bilkin (1992:2) that in ethnography the research questions are continually being formed during the time '*in situ*'. Having entered the research setting at this early stage the research topic was open for exploration in its most complex form. The research questions emerging already at this stage and the level of interactionism that was becoming apparent would be necessary to answer them, brought about two other deciding factors when 'locating a field of study' (Cohen *et al.* 2000:140). It had been part of the initial research design to study Mandarin Chinese and improve the existing speaking ability in this language for the purpose of '...managing entry into the field' (Cohen *et al.* 2000:140). The proximity of each of the potential institutions to Beijing had to be considered also, to ensure that staff at the Maritime University all spoke standardised Mandarin Chinese without cause for deviation into the local dialects. Therefore, language was a significant factor in finally ruling out the second and third largest institutions in favour of the first.

Political factors were of interest also in the decision making process when ‘determining a focus for the inquiry’ (Lincoln and Guba, 1985:141). The governance of the chosen case institution is quite unique in that it is under the direct control and financing of the Chinese government’s Ministry of Communications (MOC). It transpired from the problem framing visit this institution also has responsibility for the country’s International Maritime Conventions research and has direct links with the IMO. Staff from its IMCRC are regular representatives of China at IMO meetings, including those relating to Manning and Training. Although, the MOC has responsibility for all MET institutions in China, for other institutions its input is not so direct in their affairs nor are they able to feedback into the policy making structure so fluidly.

The visit to the overseas institution, for the purposes of problem framing, was made at the end of the first year of MPhil study. This visit served to provide the opportunity to talk to professionals and other participants in the field, to source relevant documents unavailable outside of the field and to carry out preliminary observations. In the first instance, the choice of institution was motivated by the CIIPMET Report (WMU, 1998). The CIIPMET team carried out their research using both qualitative and quantitative means to explore the standards of operation of the key MET institutions of Asia in light of the STCW 95 Convention. What was later to become the case study institution for this PhD research was featured in the CIIPMET Report as a key institution for the working group’s research in China. Key members of the CIIPMET team from the WMU, were consulted for this study prior to the overseas institutional problem framing visit being made. These key research team members, seven years on in 2005, still

expressed their concerns relating to China's export of seafarers being affected negatively by English language ability issues.

The visit to the proposed overseas institution, for this PhD study, aimed to explore further those elements identified in the CIIPMET. Instead of approaching the research setting with a set of *a priori* research questions and hypotheses, the intention was to initiate naturalistic inquiry in the form of an ethnography. In addition to the areas identified above, prior to the visit it was unclear which of these were deemed the most significant, which other categories may emerge and how to obtain the data on each of these.

4.10 Data collection

The following research tools were used in phases A, B and C of the research:

Classroom/teaching observations

- Surveys
- Standardised language testing
- Improvised language testing
- Interviews

During phase D, the ethnographic nature of the research limited the use of clear data collection instruments. The sections hereafter describe the data collection process for this study. Details about the findings and their analysis will be provided in the following two chapters, chapter 5 and chapter 6.

Due to the extensive and in-depth nature of this research and that fact that it was carried out while in the field, at times it is challenging to delineate the research activity from what was ordinary day-to-day activity as a teaching practitioner. In its initial stages and whilst acting as an observer as participant, this was a simpler task. The research tools used during these phases included classroom observations, standardised language tests, improvised language tests, discussion groups, surveys and interviews. However, when the role of the researcher evolved from being an observer to being a participant the difficulty in delineating the research tools occurred. Although improvised language testing continued and teaching observations were undertaken whilst being a participant as observer/researcher, other observations were recorded. Documenting these observations was through a research diary and memo writing.

From a mechanical perspective, computer assisted data processing was used as a means of processing data. The computer assisted qualitative data analysis software (CAQDAS) NVivo platform was used to retrieve, modify and transform data. This aided the process of data reduction and structuring the information into 'units' (Lincoln and Guba, 1985:340) as presented in this form for interpretation. The function of NVivo

remains mechanical and not interpretive (Lincoln and Guba, 1985), as it serves the function of modifying the data rather than interpreting. In other words, CAQDAS helps in the 'making sense' (Lincoln and Guba, 1985:203) of the data independently of the researcher.

4.11 Classroom and teaching observations

4.11.1 Rationale

Researchers are the instruments of research (Eisner, 1991); researchers generate rather than test hypotheses; researchers do not know in advance what they will see or what they will look for.

(Choen *et al.* 1994:137)

The use of classroom observations as a means of monitoring the classroom interactions between teachers and students, and students with each other can be both quantitative and qualitative. A qualitative example being that which is descriptive, which aims to give a rich account of the research setting, from which to search for meaning through interpretive means. An example of a quantitative study could be one that resembles content analysis and seeks to account for the number of times a particular behaviour is observed. Classroom observations can also have a variety of functions, from promoting development and enhancement of teaching practices, to simply being a managerial tool used to ensure standards are being met consistently. In its quantitative form the focus is on how often a certain event or behaviour might occur and the researcher recording its

occurrence. There may also be some measurement of its duration. On the other hand, as a quantitative means of observation there is less emphasis on a pre-determined system of observation and more attention paid to what new information the observation can reveal about the behaviour of and the interactions between teachers and students, and students with each other.

Hatzipanagos and Lygo-Baker (2006) refer to the purpose of performing classroom observations as being both a developmental tool and a way for managers to monitor standards. What is evident from their discussion is that while some forms of observation promote 'deepening of understanding, critical reflection and enhancement of teaching practice' (Hatzipanagos and Lygo-Baker, 2006:421), other summative systems merely serve to measure and quantify quality, which may sometimes result in simply 'ticking boxes'. As this study has used classroom observations as an exploratory tool, without any predetermined quality framework within which to operate, then it was not possible to carry out quantitative observations. Nor was it appropriate to use quantitative means, as the aim of the observations during phase A (problem framing) was to provide qualitative data in support of the first of the general research objective B. The emphasis being to *describe* the local teaching practices. During phase B (further fact finding), the classroom and teaching observations served to satisfy the refined phase objective i.). During phase C, which is reported in chapter 5 also, the regular interaction that took place as a participant-observer allowed for the use of teaching observations as a tool to work use in achieving refined phase objective ii). This mode of practitioner research continued in phase D in pursuit of refined objectives iii) and iv).

The act of performing a classroom observation differs from a teaching observation, in that the observer is concerned with the whole classroom setting and the focus is not necessarily on how the teacher performs in the setting. With a teaching observation, it is necessary to communicate with the teaching practitioner on session aims and learning objectives prior to the lesson taking place. After a teaching observation, the observer and the observant will meet to discuss the various aspects of note recorded during the process. This was not the case at this stage of the research and classroom observations were made without this additional step of contact with the teaching practitioner to establish aims and provide feedback. This was due to the differing roles of the researcher at these times and the migration towards participant research from observer status.

4.11.2 Participants and timeframe

Classroom observations were carried out during a total of 15 lessons being attended during the four week visit, which amounted to 22.5 hours spent observing ELT classrooms. Teaching observations took place at a later stage and when the researcher returned to take part in the research setting as a practitioner as observer. During this phase of observation, 24 hours of teaching practice was observed. The observations were carried out with the express permission of the Dean of the Navigation College and the Dean of the Foreign Languages College. Requests to observe specific classes were

made through the course administrator and teaching staff were notified of the observation at least three days in advance. For formal teaching observations they were supplied with a teaching observation form (see Appendices 14 and 15 for examples).

4.11.3 Analysis techniques

An MP3 device was used as an aide memoire and each observation was recorded. This was not a covert recording as the participants had been asked for their permission in advance, and they were asked once again before the device was switched on and placed in clear view. Due to the practicalities of observing a group of over 30 people in a classroom at one time, recording observations is a helpful practice. Bryman (2004) states that making recordings is beneficial as it allows more detailed and accurate analysis of what is said and limits the effect of bias on the part of the researcher. Instead of transcribing each observation, notes were also made during the process. These notes were then transferred to a research diary. A review of the MP3 file was made after the initial observation and the notes in the research diary were enhanced with anything of note that had been overlooked. These notes were then imported into the NVivo programme and coding took place. Complete transcripts were not typed up as the researcher concentrated on searching for general understanding of the research setting, as opposed to producing a word-for-word account. with searching for a general understanding of the research setting, and was not intent of providing a word-for-word account.

Saunders *et al.* (2009:491) describe 'summarising data' as the process of compressing longer statements to produce a summary of the key points that were discussed allowing relationships between themes to be identified. It was a condition agreed between the head of the ME teaching group and the researcher that the MP3 recordings, or their exact transcripts, would not be shared with third parties or published in the final PhD thesis. This agreement was made in order to protect the professional integrity of the individual teaching practitioners. The head of the ME teaching group relayed this information to her staff before observations took place, which proved to be an essential was an important tool in gaining the trust of the research participants. Being able to observe the activities of the classrooms with the teachers reassured reassured that they were not being 'checked-up on' was of great importance. All of the participants were satisfied that the MP3 recording was an aide memoir, only to be used by the researcher to capture the nuance of the setting and to clarify understanding and avoid bias. Although Bryman (2004:330) advocates recordings to aid understanding, he also considers that the practice 'may disconcert participants, who become self-conscious or alarmed at the prospect of their words being preserved'.

Coding is an example of one of the systematic procedures that legitimises and gives credibility to the data produced through qualitative research. By systematically analysing this data, so as to build theory, the researcher can provide transparency as to how they have established their theory. Coding is the procedure in which data is broken down into component parts and named. Traditionally, coding is used where interviews are recorded and transcribed (Saunders *et al.* 2009). In this instance, coding was used to

establish what was common and unique between classroom observations based on the notes made in the research diary. The first stage of coding is known as 'open coding' (Bryman, 2004; Saunders *et al*, 2009). One potential issue with this strategy is that context can be lost when data are broken down in the analysis process. Subsequent steps can vary depending on the purpose of the inquiry, but the strategy of data reduction to the extent of carrying out content analysis is often criticised as it can result in a focus on what is measurable rather than what is actually significant (Bryman, 2004).

Open coding where assigning a code line-by-line provides produces a list of themes of importance in the context of the situation being observed (Miles and Huberman, 1994). A second phase of coding took place, which served to choose the most telling codes to represent the main crux of what was being observed. This type of coding is known as focussed coding or selective coding. Focussed codes are applied to several lines or paragraphs in a transcript and require the researcher to make a choice. Because of the role of the researcher in making a judgment, this process is more abstract than open coding. Using open codes as a starting point, the process of focussed coding helps to verify the adequacy of the initial concepts developed. When it came to the stage of carrying out teaching observations, the initial coding frame used for the teaching observations was not advanced enough to apply to the classroom observation data. In addition, the focus of this phase of the inquiry had changed since the classroom observations had been carried out. The original coding frame developed through analysis of classroom observations in phase A (Appendix 1), was incorporated into teaching observation instrument, and became obsolete as a standalone coding frame.

The coding frame developed through the teaching observations carried out during phase C of the research is considerably more extensive as during the analysis focussed codes were applied and therefore 'tested' on further classroom observations. Where it was found that they were insufficient and did not cater for the observation in question, the coding frame was modified and coding was repeated (Appendix 2).

Axial coding was performed to add depth and structure to the existing categories that originated from the focussed coding. Defined by Strauss and Corbin (1998) as 'the act of relating categories to subcategories along the lines of their properties and dimensions' (Strauss and Corbin, 1998: 123). Charmaz (2006) warns that axial coding can be too rigid and the frame that it imposes to the data analysis is too formal. Instead Charmaz (2006) recommends the less formal approach of reflection on categories, sub-categories and to establish connecting links between these to make sense of the data. The most abstract level of coding is *theoretical coding* (Strauss and Corbin, 1998), which explores the relationships that have been established between categories. Theoretical coding was foregone in favour of conceptual modelling.

For this study, open coding was used for the classroom observations with the help of qualitative analysis software NVivo. These observations served to provide categories for observation in the later round of teaching observations. Focussed coding was utilised for the teaching observations, which used the initial codes as a basis. The criticisms of Charmaz (2006) in relation to axial coding and theoretical coding being too prescriptive

at times are shared by the researcher; therefore the analysis concludes with reflections on each coding category being discussed in a comparative light given the researcher's own experiences of classroom teaching, both inside and outside of the research field. The additional information provided by the teaching practitioners during reflexive discussion also added value and insight to this process. Their statements were interpreted freely without being restricted to operate within a framework of properties and dimensions.

4.12 Navigation student surveys

4.12.1 Rationale

As discussed earlier in the methodology chapter, the use of a survey as a data collection instrument came about by way of compromise between a key gatekeeper and the researcher. Despite this, much attention to detail was given to the design of the survey in light of the discussions that had taken place with groups of students. A conventional approach to carrying out survey design was followed. During phase A, visits to the research setting were made to carry out problem framing, part of which was to engage in discussions with groups of students and teachers around a series of general topics.

Group discussions took place on a voluntary basis, after classroom observations and during the break between teaching. The aim of these group discussions was to put forward the understanding of the research setting to the students in question through a series of themes. These themes were derived from earlier discussions with the students and using key academic literature as a starting point. These are referred to deliberately as discussions, as opposed to focus groups, as they were less formal. In addition, the development of the survey was still as an exploratory research tool, and not one with which to test early stage hypotheses that may have been derived from such discussions. Focus groups are a predominant feature in research that seeks to follow an iterative cycle of induction and deduction (Miles and Huberman, 1994). As this research is entirely inductive in its approach, so focus groups were not a necessary or appropriate step in survey design. Development work continued on the survey while outside of the field in preparation for use when returning to the field during phase B (see Appendix 4). If returning to the field had not been possible, then executing the survey online would have been considered as an alternative option. However, this would have not provided the valuable opportunities for face-to-face interaction and discussion that subsequently took place. The survey was piloted with 17 students during phase B.

4.12.2 Participants and timeframe

Out of a class of 30 students, 17 final stage Navigation students returned valid self administered pilot surveys. These self administered surveys were followed up with a face-to-face interview so as to qualify the responses given. A further 20 final stage

Navigation students took part in face-to-face surveying during a two week period at the beginning of phase C. This mode of face-to-face surveying was adopted in preference to self administered surveying, as there were some errors and misunderstanding in the self completion surveys. The face-to-face surveys were carried out with the help of a volunteer masters students acting as a research assistant. Attempts were made in English to clarify any misunderstandings and if this failed, the research assistant would translate from English to Mandarin. A total of 37 surveys were completed with final stage Navigation students, 35 of whom also took part in face-to-face discussion with the researcher and the research assistant. As stated previously, the aim of the surveys was not to collect a mass of data for statistical analysis, but to provide a platform on which to ask students about a set of themes for discussion.

4.12.3 Analysis techniques

Survey responses were entered into the statistical package for social science (SPSS) software as a means of recording, organising and analysing data. Frequency information is presented in the form of charts and tables, which are compared with individual comments made during face-to-face discussions.

4.13 Standardised industry approved language tests

4.13.1 Rationale

This research activity served to satisfy general focus research objective A and to explore refined objective i). Specifically, standardised testing of students was carried out

in order to explore the *status quo* in terms of their language level. In the promotional materials, Marlins state that ‘the test can be used to assess the language level of any rank and any nationality of seafarers’ (Marlins, 2007:n.p.). This claim is backed by the International Shipping Federation (ISF) and the UK Maritime and Coastguard Agency (MCA). The Marlin test was selected for this research activity as it is the one amongst its competitors to have this backing.

The Marlins test does not assess oral English proficiency and a separate face-to-face standardised interview must take place at a designated test centre. The level of proficiency in English and the extent to which this is to be proven depends on the flag state issuing an STCW 78/95/2010 certificate of competency (CoC), or certificate of equivalent competency (CEC) for seafarers who have not undertaken their training under the jurisdiction of the flag state. The UK MCA requires that both the computer based Marlins test of English for seafarers and the face-to-face test of spoken English (TOSE) are satisfactory in order to issue a COC. With the requirements of the UK MCA being used as a benchmark, the testing carried out for the purposes of this research took three forms; testing using an equivalent of the Marlins computer based test of English for seafarers, face-to-face interviews and task-based language testing, which are all outlined in this chapter of the thesis.

4.13.2 Participants and timeframe

The participants in the test followed the same on-screen prompts as the computer based test and each completed a series 95 questions addressing the skills areas shown in Table 10. The recommended maximum time for taking the test is 60 minutes. The timing was duplicated when tests were carried out for research purposes. As with the computer based test the final score was calculated as an overall percentage. The purpose of collecting this information was to ascertain how many of the students tested could pass a recognised language test in light of the language skills under assessment. The survey interviews that followed the tests were a more insightful indicator of the communicative competence of each candidate. Ten pilot tests were carried out during a two week period in phase A, by using the computer based programme.

Pilot tests yielded very interesting results as they showed that each of the ten volunteers who took part had the English language level appropriate for being a junior deck officer. What was of specific interest and required exploration was that seven of the participants in the pilot study scored above 90%, giving them an English language competency level of that required of a senior deck officer. Repetition of this testing with a larger group was needed to explore this further and a total of 100 navigation students took part in the Marlins testing over a one month period during phase B. This test is designed to be used in conjunction with passing a face-to-face interview, or gaining an equivalent IELTS score of 6 overall. As such, when returning in phase B, carrying out

face-to-face interviews with students who had taken the Marlins test was factored into the visit.

Normally, an individual will take the Marlins test while logged on to a computer, but this offers no record of the questions that were answered correctly or incorrectly. Secondary to this would have been the great expense to carry out the 100 tests with Navigation student participants as each test cost US\$5. After an initial pilot revealed the lack of transparency of the test results, permission was sought from Marlins to adapt the test usage for the purposes of research and a number of test licences were provided free of charge by the company. Instead of participants taking the test on a computer and carrying this out individually, hard copies of answer sheets were created for each of the possible testing frames (Appendix 5) and tests were taken collectively in a group by displaying a computer based test projected onto a screen. Students recorded their answers on the answer sheet, so as to allow for analysis by language skills and, if desired, to break this down question by question.

4.13.3 Analysis techniques

The test scores were translated into a percentage compared with the required threshold of the UK MCA for the Marlins test. These are reported as a percentage and as pass/fail against the minimum level required (80%) (MCA, 2010) to give an overall pass/fail rate. The specific level required for each rank is as follows:

- Senior deck officers 90%
- Junior deck officers 80%
- Senior engine officers 80%
- Junior engine officers 70%

Table 10: Marlins computer based test of English for seafarers breakdown.

Language skills being tested	Number of questions	Percentage weighting
Listening comprehension	40	42.1
Time and numbers	10	10.5
Vocabulary	10	10.5
Different sounds and pronunciation	10	10.5
Grammar	20	21.2
Reading	5	4.2
Total	95	100

4.14 Improvised task-based language testing

Task based speaking tests were recorded as MP3 files and have been rated retrospectively against the IELTS and ICAO language descriptors, which the researcher has been certified to examine since 2008 and 2010 respectively. A further rating scale that is currently under development (Cole and Trenkner, 2008; Trenkner and Cole, 2010), the YME, has also been applied to the voice recordings. The purpose of this

rigorous language testing exercise was to measure the ability of the students against two established rating scales and to explore the relevance of a third.

4.14.1 Rationale

In addition to the Marlins Test of English for Seafarers (TES), the UK MCA (2010) require that a Navigation officer passes either the Marlins test of spoken English (ToSE), or a test of an equivalent level. An acceptable alternative is IELTS, providing the individual achieves an overall score of 6 (MCS, 2010). Based on these criteria, the IELTS speaking band score of 6 was used as the pass threshold for the task-based speaking test.

As already discussed, the nature of the industry approved language testing carried out already led to the need for a further language testing frame for oral English to be developed. In particular, a number of students achieved to gain high scores in the equivalent of the computer based tests, but during face-to-face surveying it became evident that some of the same students were not adept at the level of spoken English required of them in the real world of work. This was ascertained by analysing a sample of voice recordings made when carrying out surveying and grading against the IELTS, ICAO and YME descriptors (Cole and Trenkner, 2008a;2008b). These level descriptors were subsequently used for assessing all of the task-based speaking tests.

4.14.2 Participants and timeframe

Groups of participants varied in terms of age and educational level depending on the timing of the research activity. In total there were five rounds of testing: third year Navigation students, fourth year Navigation students, master mariner/chief engineer CMSA civil servants, graduate CMSA civil servants, and cadets enrolled at a private MET college. The first round consisted of 25 third year Navigation students with a mean age of 21. The second round was with 17 fourth year Navigation students, some of whom had already participated in round one, with a mean age of 22.

Round three participants consisted of 32 civil servants working for China's MSA, who held master mariner/chief engineer certification and had sailed in the post of at least Chief Officer/Chief Engineer, and sometimes captain, with a mean age of 38. The fourth group comprised a younger group of 32 civil servants also working for the MSA, who had studied either Maritime Administration or Navigation prior taking the civil service examinations, with a mean age of 26. The final group were a combination of high school leavers and students who had transferred from other college courses, and who were undergoing their cadet training at a private MET college. This group were much younger than other cohorts with a mean age of 20 years old.

Table 11: Third year Navigation students participating in first round of task based language testing



Permission sought for publication.

Table 12: Final stage Navigation students participating in second round of task-based language testing



Permission sought for publication.

All participants were Chinese nationals from Mandarin speaking regions. Participants from rounds one to three, and five were all male, but group four was an exception with a 9:25 balance of females to males. Groups three and four had all taken the civil service entrance examinations and been selected to work as government employees in the various branches of the CMSA from across China's coastal, and some upstream, harbour cities. Group four also contained a number of former Navigation students and a handful of these had served time at sea. Those from group four who had not studied Navigation, or been to sea, had studied Maritime Administration and their knowledge of the commercial, safety and pollution aspects of the industry was very strong.

Participants from group one had no experience of serving time at sea, other than a month onboard the university's training ship. Group five had no sailing experience at all, but they had been undertaking a CLIL programme for the previous three months. Unfortunately, it was too early in this programme to judge its effectiveness and this is mentioned in the suggestions for further research in the conclusion of this thesis. On each occasion task-based testing was carried out with these pre-requisites in mind in to as to select appropriate scenarios within the test taker's knowledge range to ensure fairness to each participant. In each incidence, testing was innovative in its scope and the format and was designed to provide a voice recording for analysis of the ways in which language is used in appropriate contexts, and was intended to reflect the use of language in the real world of work for maritime professionals.

The task based testing with group one/two took place in phase B and early on in phase C of the research with a sample of 25 third year students. This group were selected as they would be graduating in the next year and were potentially going to be working as trainee Navigation officers within a 12 month period. Two rounds of task-based testing were carried out, with a second round featuring 17 fourth year students nine months later. Out of the group that participated in the second round, 13 students had taken part in the first round and four students were taking part for the first time. Three of these students had previously taken part in the TES.

Interactions with groups three and four took place at the beginning of phase D and access to this student group was facilitated by the requirement for each to prepare for sitting the IELTS examinations at the end of a three month period of intensive CLIL study. The researcher was acting in the role of class tutor to both these groups in the subject of International Maritime Conference English. The researcher had accepted this role on the condition of being able to include the students in pedagogical research activities. With the agreement of the Vice Dean of the Foreign Languages College, this involved a one-to-one appointment with each student once per week for four weeks, during which mock IELTS speaking exams and improvised task-based testing was carried out. This was accompanied by four hours of timetable lesson time following a CLIL syllabus of the researcher's own design. The Vice Dean had invited the researcher to manage the teaching of these two groups, following the success of a pilot activity

using CLIL with a previous group of students who had been preparing to take their IELTS as a requirement for joining the WMU joint MSc programme in Maritime Safety and Environmental Management.

Testing of group five took place during a two day visit to a private MET training establishment. Access to this establishment was gained through an industrial stakeholder, who had become a member of the development group for the new ME syllabus. The training centre was jointly owned and run by this individual and a maritime manning and training organisation with a 6% share in China's seafarer export market. This testing took place much later during the project and was an attempt to ascertain the current level of the students enrolled as cadets. The collaborative ME syllabus being designed was to be aimed at cadet and junior officer level students who need to develop their English to an operative level.

Contact with groups one/two and five was much more limited than with groups three and four. For group one the number of interactions and participants were limited by having to ask for volunteers to come forward to attend specially arranged testing sessions that were outside of their timetabled classes. For group five, the time constraints of visiting the private MET training establishment and the desire of the key stakeholder to have his own teaching staff administer the test on the researcher's behalf meant that these testing activities were not as flexible as the arrangement with the two

groups of civil servants. However, groups one/two and five were of most interest as these students would go on to become Navigation officers in the near future.

This repetition of testing in the fourth year of study was desirable as at the time of the first round of speaking testing those in their third year of study were still undergoing formal ME classes. As such, they may not have benefited fully in terms of vocabulary learning when compared with a student that had completed this course in full. The second round of testing was carried out one month prior to the group taking the CMSA CoC examinations and graduating. This offered a timely insight into their ME level upon graduation as well as revealing if the term of dedicated ME classes completed since the first round of testing had affected their communicative competency in general English, and ME.

During a later stage of the research spoken English testing was also carried out with a group of 32 Chinese holders of master mariner unlimited CoCs and 32 civil servants fulfilling various roles within the CMSA, including port state control officials, coast

For groups one/two and five their ages limited experience of the real world of work, and their willingness to participate in a 'test' that they assumed they would fail, this meant that format of testing needed to be adjusted to suit each audience. For the final stage Navigation students in group one, it was desirable to interview each participant face-to-face and to record a sample of their speech. This, however, proved impossible as initial

participants were unwilling to be interviewed one-by-one and preferred to carry out tasks in pairs or small groups. By responding to this early request, many more participants came forward, and volunteered to take part in group task based activities. It was devised not to appear as a test and more of a group discussion.

The first round of task-based interviews with Navigation students lasted approximately 60 minutes and these consisted of a series of activities carried out in small groups. The initial intention had been to carry out individual interviews, but pilot activities had revealed that students weren't keen to volunteer to take part in one-on-one interviews and felt happier carrying out group tasks. By reacting quickly to this at an early stage, it is anticipated that many more participants came forward and volunteered to take part in group task based activities than would have done so otherwise. In each group five to six Navigation students would have a turn to answer basic questions about themselves before selecting a topic card from the desk (see example photographs of participants in Table 11). These task based activities were based on sets of cards that featured navigational topics that had been studied by these students throughout the duration of their course. The intention of the cards was as social actor to motivate them to talk and to respond to prompts, but that speech should be relatively natural and fluid. Topic cards included images of collision regulations, day/night navigation signals and the international buoyage systems. The student would then attempt to talk about each card during their turn for approximately 1-2 minutes. This was followed by some questions relating to the card and a brief discussion. These cards were selected as they contained examples of navigational topics that had been studied by these

students throughout the duration of their course to date. The intention of the cards was as social actor to motivate them to talk and to respond to prompts that would result in their use of both maritime terminology and test their use of every-day English. These group discussions lasted for one hour and were filmed on video in order to allow for detailed retrospective analysis, with a voice recording made as a back-up.

Most of final stage Navigation students from group one had already taken part in the industry approved language, but as convenience sampling was the means by which participants had been selected for the task-based testing then this was not necessarily the case. As this testing was not intended to compare the scores of this group in the task based testing with their performance in the earlier industry approved language testing on a case-by-case basis, this did not pose an issue for the analysis in this respect. However, all participants in the Navigation student round of the task based testing had already taken part in the surveying (either self completion or face-to-face), making sure that certain demographic and other perception related data were comparable for each participant if desirable at the analysis stage.

For groups three and four they were already preparing for a compulsory IELTS examination at the end of their respective programmes of study and they stood to gain a unique chance to practice their English in mock tests with a qualified IELTS speaking examiner. As a result, an IELTS style one-on-one interview on a maritime topic was easy to execute and was welcomed by these participants. One-on-one tests took

between 12-15 minutes and involved voice recordings only as video was no longer needed to aid the identification of the speaker.

For group five, a standardised interview was used so that the English teaching staff from the private MET college could assist in executing the testing during a short time frame. As these students were at an earlier stage in their studies than the third and fourth year Navigation students from the host academic institutions, reduced the likelihood that these students would be adept at conversing on the topics of collision regulations, night/day signals and the international buoyage system. In previous groups with undergraduate Navigation students, much reassurance had to be given that the answer given was not being marked on its accuracy in terms of the card selected, but upon the language used. As the researcher would not be present to execute all of these tests because the anticipated level of the students was much lower, a selection of images depicting maritime scenarios onboard were offered as a stimulus for discussion instead of the cards used with previous groups. This was very effective and all students were able to produce a rateable example of language for analysis.

4.14.3 Analysis techniques

The forerunner to the task-based testing developed for use in this research was the International English Language Testing System (IELTS). In particular, IELTS has been influenced by communicative language learning and English for specific purposes (ESP). Such testing is able to be innovative in its scope and format, reflecting changes

in language learning and teaching theory, and developments in language testing (IELTS partners, 2010). Cole and Trenkner (2008a;2008b) have developed a set of English language competency descriptors, which are the combination the IELTS level descriptors and those of the International Civil Aviation Organisation (ICAO) for airline pilots. The result is the *Yardstick of ME Competency for Ships Officers* (Cole and Trenkner, 2008a;2008b).

The grading of task-based tests, for the purposes of this research, are based on an analysis of the ways in which language is used in MET contexts and it is intended to reflect the use of language in the real world of work for ships officers. The scale used is that of Cole and Trenkner (2008a;2008b), in its most up-to-date form (Appendix 9)¹. In each incidence the MP3 voice recording of the interaction with the participant was analysed against the IELTS and ICAO speaking descriptors, as well as against the YME. For the reasons stated already, while the research instruments used with groups one/two were similar in design, they differed from those used with groups four and three and four.

¹ The researcher works freelance as a qualified IELTS speaking examiner and second marker for an aviation English testing company that apply the ICAO descriptors.. YME is not a testing frame that is in use at present, but the researcher consulted its developers and has maintained contact with them for the purposes of gaining their advice during this research.

4.15 Interview with Dean of Navigation College

Having carried out classroom observations, student surveys, industry approved standardised language testing, and the initial two rounds of task-based language testing, it was desirable to find out the perceptions of the man is quite possibly the most influential of all in the internationalisation of Chinese MHE.

4.15.1 Rationale

Much interpretation had already taken place and the researcher was keen to come back to the research setting for a further visit that would, if possible, involve working alongside the research setting's actors as a teaching practitioner. This interview served not only to have the chance to ask some important questions of this participant in his role as Dean, but also as the primary gatekeeper for the study. The researcher had been granted initial access upon his invitation and the return visit had also been with his permission. The chance to discuss his students and their learning was paramount in confirming the researcher's understanding of the local teaching and learning ecology and to gauge his attitude and openness towards some form of collaborative educational development research.

4.15.2 Timeframe

The interview took place in the fifth week in the research setting. A request had been

had been made at the very start of the field visit to interview the Dean of the Navigation College, but due to his busy schedule this appointment kept being delayed. Soon before departing the field after this sojourn the Dean made time to see me and to answer my interview questions. The interview itself lasted approximately an hour and a full transcript is featured in Appendix 13.

4.15.3 *Analysis techniques*

As with the analysis of other sources of data, a constructionist grounded theory approach was taken to analysing the interview. This interview was coded to allow for comparison with other sources of data. This coding took the form of open and focussed coding. Specific comments are also discussed at length in the analysis, as much of what the Dean had to say was compared with the findings of the other data sources and shaped the future direction of the research considerably. A number of themes are drawn from the comparisons made and are expressed in a conceptual model at the end of the results section in chapter 5.

4.16 *ME perception survey*

4.16.1 *Rationale*

The survey was used as an icebreaker when trying to establish formal contact with the teaching practitioners responsible for ME. Some of whom had already

participated in the classroom and teaching observations, but it was desirable to move the level of collaboration on to another more in-depth level during this phase of the research. The survey was not of the researcher's own design and it was taken from the Yercan *et al.* (2005) paper. Although this paper has been criticised for the hypotheses it reached based on its analysis, the data collection tool that was used was of interest in terms of repeating the study and comparing findings. It was also a matter of interest that the survey had been distributed to many institutions, but that in many instances only one recipient had completed the survey. This meant that each institution was judged on the opinion of an individual, which is inferior to the opinions of a group of relevant respondents.

4.16.2 *Participants and Timeframe*

The survey was distributed at the first of the MEPLC formation meetings. Once a week ELT staff have a departmental meeting for dissemination purposes. After this, groups of staff wishing to discuss matters with one another, or to engage in development and research activity, will break off into smaller groups. An invitation to participate in the research activity had been communicated via the Vice Dean of the Foreign Languages College to the 20 teachers who are responsible for ME. Of this group, From this group 11 teachers chose to attend the session.

4.16.3 *Analysis techniques*

The MEPLC perception survey is reported in chapter 5, as it is an example of a stakeholder perspective. The survey contains a series of is a Likert style questions (see Appendix 4). This survey allowed for the collection and creation of quantitative outputs, much like the student survey. Certain aspects of the data are discussed in terms of frequency and any relevant correlation between variables. Discussions with individual teaching practitioners took place once the analysis was complete to qualify some of the results of the survey. Comparisons are made with the findings from the problem framing stage in chapter 5 to evolve the further evolve conceptual model. Comparisons are also made with the original research from whence the survey instrument was obtained (Yercan *et al.* 2005)

4.17 Interviews with GLMS stakeholders

4.17.1 *Rationale*

The rationale for carrying out these interviews stems from two visits that were made during phase C to further education institution in Nanjing where a collective of GLMS stakeholders were running a raining event. The researcher was made aware of this event as one of the student cases from phase A/B had been recruited by one of the many manning agents whose new cadets were participating in the event. This type of activity has become common with recruits from China's MET institutions. For a period of

three to six months, students participate in what is termed *enhancement training*, the aim of which is to prepare them for their time at sea.

The activities observed in Nanjing at the annual Singapore Maritime Officer's Union/Wavelink *Cadet Plus* event gave some insight into the new recruits' participation in a one month intensive residential enhancement training programme. The programme is funded by the subscriptions paid to the SMOU by the shipping companies that employ its seafaring members. During the first visit, some classroom observations took place as well as informal discussions with students and staff. During the second visit, the researcher had been invited back as a guest of the primary organisers for the graduation ceremony. The invitation formed part of recently initiated discussions about possible collaboration between the researcher and this key stakeholder on ME course development. During this two day visit it was possible to meet and talk to the various manning agents and training managers from each company whose cadets were taking part in the event. These discussions and observation opportunities offered much anecdotal evidence which inspired a number of memos to be written and researched, but the need to have something more concrete for coding gave rise to a number of topics to explore further with GLMS stakeholders through interviews.

4.17.2 *Participants and timeframe*

Each year the host academic institution will hold a series of job fairs for students. These events last a matter of days and are attended by a variety of organisations interested in recruiting graduates from the institution. As it is a maritime university, many companies come from the maritime industry. The civil service is also represented by the various CMSA branches who are interested in high level students to take the entrance examination. Many of the companies attending the recruitment fair are manning agents seeking to interview and appoint cadets. In 2007, the researcher had accompanied a group of students to this event, which posed a unique opportunity to gauge industrial stakeholder's views on the preparedness of Navigation and Marine Engineering graduates gain employment with the organisations being represented at the employment fair. Data were collected a year later at the 2008 employment fair, which was attended by 137 organisations.

During the second afternoon of the employment fair, and when it had quietened down as most students had already visiting the various stands to distribute their CV, a research assistant from the IMCRC helped the researcher with approaching the companies to participate in an interview. During the 2007 employment fair, the researcher and the accompanying students had chatted to a number of manning agents, few of whom could speak a sufficient level of English to take part in an interview. Prior to the even a list of organisations and their stand location was obtained to assist in targeting suitable participants. Out of the 137 stands, 16 were identified as of interest as they would be recruiting Navigation, or Marine Engineering students. Acting as a translator, the research assistant approached potential participants asking for a 5 –

10 minutes of their time for an interview. Of those approached, 7 were available and happy to participate. Some others were still busy in recruiting activities and these were followed up over the phone in the following few days. In total 13 companies participated in the interviews. The three that declined did so on the basis that they were not involved in recruiting Navigation or Marine Engineering students. This misunderstanding had occurred due to ambiguity in the company name, which made it unclear if they were a potential recruiter of the students in question. In general, all the participants were very happy to talk to the research assistant and many of them offered additional insights through the discussion that ensued.

4.17.3 *Analysis techniques*

The interview was based on a set of open questions, which can be viewed in Appendix 7). The constructionist grounded theory approach was continued, but this time the text being analysed was not a full transcript or a set of notes from an observation or research diary. The research assistant had made rough notes in Chinese during the interviews as well as an MP3 recorder being used as an aide memoire. The research assistant then reviewed each interview, reducing the responses of the interviewees to a set of possible answers for each question. This was done partly as a time saving measure in translating the interviews, and also as an analytical approach to the task. As this research assistant had helped the researcher before, she was aware of the context and nature of the work being undertaken and she was well informed in her processing of the information. Once this stage of identifying the key responses had been

undertaken, the researcher was left with a set of open codes, which could be refined for use as focus codes when analysing further data.

4.18 Cross-cultural collaborative syllabus development

4.18.1 *Rationale*

Armed with a wealth of data by this point in the research, and having witnessed the catalytic effect of the study, it was a desirable stage to act on the need for change through collaborative innovation. In terms of research, by seeking to achieve tactical authenticity through this process of trial and error the values and viewpoints of all stakeholders could be tested. The triangulation of the stakeholder viewpoint, the teaching practitioner viewpoint, the institutional leadership viewpoint and the academic researcher viewpoint were all aired in an organic and natural way as each party collaborated on the common goal of designing a new syllabus for ME teaching. It was not the predetermined position of any of the parties to the collaboration that the outcome should be a CLIL syllabus, but this outcome was drawn from the process of collaboration.

Kang *et al.* (2011) identify a number of elements that are important for making cross-cultural collaborative educational projects succeed in a Chinese context:

- Recognition of local contexts
- Leadership from principals
- Support from government
- Guidance from local and international academics
- Natural respect and genuine dialogue

4.18.2 *Participants and timeframe*

Of utmost importance in achieving these elements is establishing a key gatekeeper who can negotiate access, which includes recruiting key players to the project. For this study there were three such persons, without whom this research project would not exist. Their roles in the research and the elements that they brought to making the cross-cultural collaboration work, in light of Kang *et al.*'s (2011), are outlined below.

The first and most important was the Dean of the Navigation College who at the time of the project, it transpired, was going through the very lengthy process of being promoted to the institutional leadership level of vice president of the host university with responsibility for teaching and learning. Because of this and his own direct interests in the learning of Navigation students, he was a significant help in setting up the project and he maintained his input throughout its duration. This individual is also China's envoy to the IMO on MET and head's the IMCRC housed at the case institution. Under the authority and direction of China MSA, the host academic institution is drafting a new

teaching and examination system for MELT, 'giving full consideration to practical English reading, professional writing, listening comprehension and oral expression in actual work' (IMEC, 2010: 14). This meant that he was able to give support in the roles of principal, local university academic and to represent the government on matters of policy and implementation.

The second key gatekeeper at the early stages of setting up the project was the deputy director of the host university's department for international cooperation and exchange. He was fundamental in facilitating the initial stage of the research and the transfer of role from observer as participant to participant as observer/researcher (Gold, 1958) to allow for the period of regular interaction. He was also in control of all visits by international academics and sojourn arrangements. His involvement became significant again at the point of involving an external industrial stakeholder as it was necessary to negotiate and sign collaboration agreements, which also led to formal contractual arrangements for which he was the signatory.

The third key gatekeeper was the Dean of the Foreign Languages College, who played the roles of principal and local university academic. Locally, he heads a 20 strong team of MELT practitioners. It was from this team that the MEPLC was formed. He has carried out extensive pedagogical research of relevance to internationalising Chinese MHE. His research sheds particular light on Chinese HE and globalisation in the 'WTO era' (Luo, 2007:62). He was an ideal local supervisor and action research facilitator, as

he possess and in-depth understanding of English language education reform in contemporary China; from the theoretical debates within ELT and globalisation field, to the practical reshaping of ELT in China in response to the 2004 CECR policy.

During the continuation stage of the project, this individual became responsible for heading China's reform of MELT. As part of the host academic institution's drafting of a new teaching and examination system for MELT, the Dean of the Foreign Languages College has been appointed by the CMSA to lead a national group revising and updating the CoC ME examinations (IMEC, 2010). One of the most significant acts for which this individual was responsible came at a very early stage of observations. His experience of Australian HE and the teacher as researcher concept, had led him to invite a visiting international academic from Australia to liaise with his staff on developing MELT. The pair ran joint sessions where they presented different aspects of their own research projects into MELT.

Participants, who were themselves university academics and teaching practitioners from various disciplines, would then interact and have discussions about their experiences of MELT, the challenges they faced and possible solutions. This example of mutual respect and genuine dialogue was very clear from this activity and was of great interest. It was discovered through subsequent phases of the research that this activity had been quite unique and that it was not part of the usual Chinese HE experience for visiting academics. Attracting participants and sustaining momentum for such an activity was

hard for the researcher when trying to duplicate such sessions. Significant support was needed from this principal to facilitate discussion sessions through which to build mutual respect and genuine dialogue among partners. This was increased further by formalising collaboration arrangements and working towards common project goals during the final stage of the research that involved an industrial stakeholder.

4.18.3 *Analysis techniques*

So rich was the data from being immersed in action that it was not possible to encapsulate meaning from any of the data collection tools employed so far already. In this stage of the research the action itself became the focus of the inquiry. Through the process of collaboration, and constant discussion and comparison on the varying pedagogical challenges and solutions posited by each contributing party to the MEPLC, these different perspectives are triangulated in the innovation process (Figure 8). This section of the analysis documents this process of collaborative innovation. The research stays within the interpretive paradigm, and a functionalist philosophical position is adopted. The functionalist perspective is concerned with providing a rational explanation of the behaviours in terms of the functions that are performed.

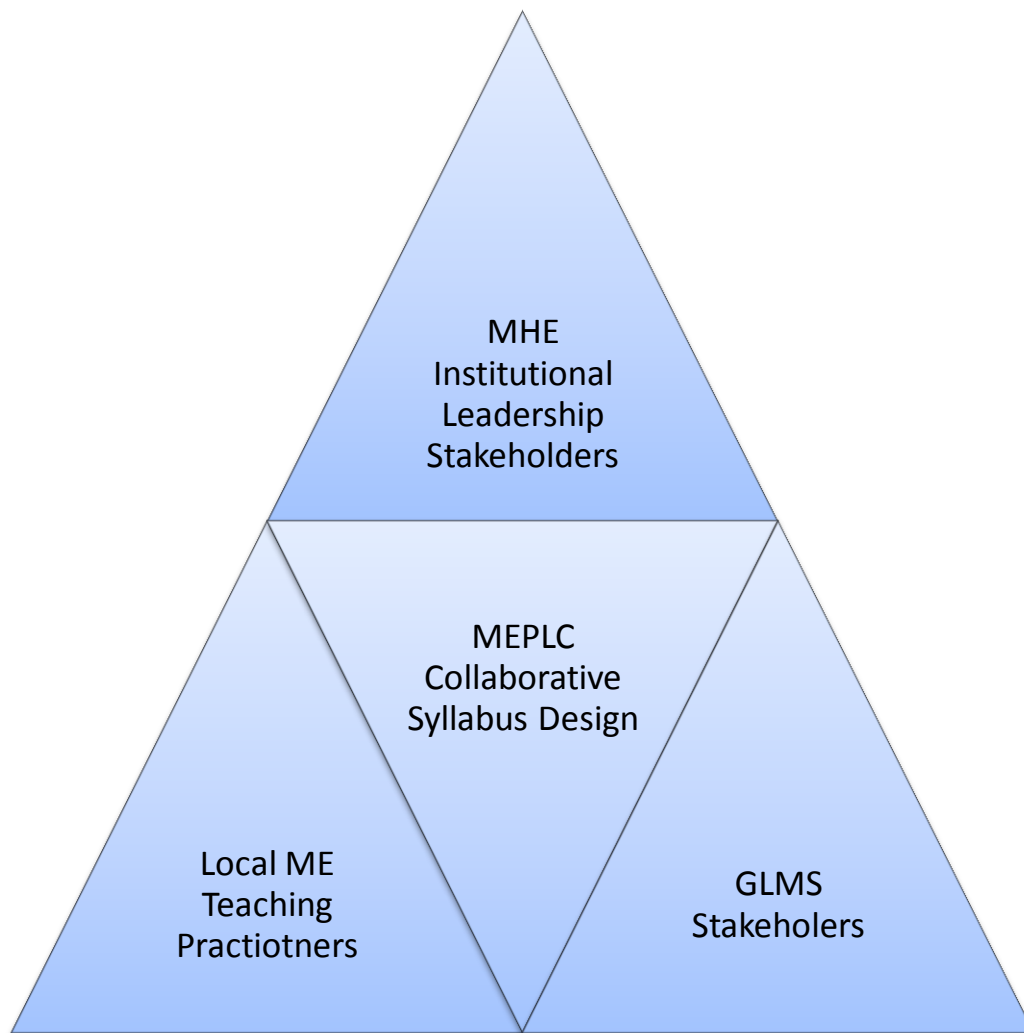


Figure 8: Triangulation of stakeholder perspectives

With the role of all three of these key gatekeepers in mind, although the driving ideas about goals and process originated with the researcher for the purposes of executing this PhD, the project was led and directed by its Chinese partners. It is relevant to note that the researcher did not arrive to take part in an established project with the funding that is associated with such ventures. Kang *et al.* (2011:51) highlight that for their own study Western project partners:

...did not 'arrive' with substantial (any) funding for which they would be accountable. Had this been the case, the way early decisions were taken may have been different in ways that would probably have been detrimental.

As a result, the design and growth of this project, much like that of Kang *et al.* (2011), was organic and was based on a set of general common intentions, rather than a strict proposal. The initial reaction of local partners was to ask for advice on direction, and even solutions, from the researcher. Such advice and suggestions were avoided, as the intention was to engage the participants in the local teaching and learning context in identifying the needs for change and innovation and to collaborate in dissemination and action. It was not until a later stage when funding was secured from an external source that an element of shared control began to emerge and that the project's goals became more concrete.

4.19 Research ethics

The literature review served to highlight that the impact of previous attempts at driving innovation and change in Chinese MET needed to be assessed. In particular, projects with the aim of driving innovation and change as seen from outside the research setting (WMU, 1998; Benton, 2003; Yercan *et al.* 2005), seem less likely to permeate the existing organisational structures than those as seen with empirical insight from within (Guo *et al.* 2008; Hu, 2008). This lack of understanding of the local settings and the

social, political and cultural environment in which it operates could possibly be the greatest challenge to any initiative with the objective of bringing about innovation and change in Chinese MET.

Due to the need to be present in the research setting and having close day-to-day contact with the participants, this brings with it certain ethical considerations. At the outset of the research ethical prior approval was sought by the Faculty and University Human Research Ethics committees. At each stage of the research all instruments and data collection activities were discussed with the Director of Studies at the university of PhD registration, and locally with the two professorial advisors. Before the actual conduct of each phase of the study, approval was obtained from the relevant local college administration (the International Cooperation and Exchange Office). This was accompanied by specific requests to the heads of colleges and teaching departments, so that access to students and teaching staff was acquired with express permission and a clear understanding of the research purpose.

This research is in compliance with the requirements of the University of Plymouth Research Ethics Committee. Research participants included 120 undergraduate university students from the host academic institution, 65 MSA administration civil servants who were attending a training course at the host academic institution at the time, and 47 cadets enrolled in a private training programme, whose ages range from 18 to 45.

Interviews and task based testing were conducted in the classrooms and meetings rooms belonging to the Navigation College, and observations took place in the classrooms belonging to the Foreign Languages College. There were all considered places that the subjects felt suitable and comfortable. The data collected was kept in the researcher's apartment on campus or in a locked drawer in the desk in the IMCRC office. As required, each participant was given a statement about the research to explain the purpose of the study and how the results were to be used and that his or her involvement in the study was voluntary. Although this was in English, a Chinese research assistant distributed the statements and was on hand to answer any questions.

Prior to the commencement of the study, each recruit signed an informed consent form, which the research assistant had translated into Chinese (Appendix 3). Therefore it is reasonable to believe that each student participant was well informed of the nature of the research and that anonymity and confidentiality were retained when presenting the information collected in the process of the research. The researcher recorded the group interviews and classroom observations using an MP3 device. Prior to these activities, participants were asked if they were comfortable to be recorded (either directly by the researcher or by their teacher). Participants were informed that they were free to leave the group interviews at any time and that they also can request the exclusion of his/her data from the research project anytime after the interview was conducted and the

researcher would do as requested. However, all the interviewees were very cooperative and helpful and no special request was raised during and after the interview.

Task based testing, when carried out in groups, was videotaped as well as an MP3 recording made. This was in order to allow for non-verbal communication to be captured as well as making sure that each speaking candidate was easily identifiable from the group. These recordings were treated in the same way as the MP3 files. As to the dissemination of research results, participants were informed that the results would become part of a PhD thesis and would be presented at conferences and might be published. To ensure confidentiality, everything has been done to make sure that their identities would be excluded in the final thesis, presentation and publications. A summary of the findings would be available to every participant after the project was finished upon request.

For students who participated in the first round of language testing, they were offered a copy of their test and its results. However, no students requested this document during the first round so this was discontinued due to time and resource constraints. On the original informed consent forms students had been assured that files would be deleted, but it was realised at a later stage that this data may have some value in further research and possibilities for a longitudinal study. Those students affected were consulted on this matter and they all consented to the MP3 and video files being kept for use in future research.

None of the undergraduate student participants were the students of the researcher or in any formal power relationship with the researcher. Postgraduate professionals who took part in the research while attending a training course came under the instruction of the researcher, but no formal assessments were involved; therefore a formal power relationship did not exist. The teaching practitioner participants were colleagues of the researcher while employed as a part time visiting lecturer by the host academic institution. The subjects were invited to participate in the study by the researcher. At this stage assistance were sought from other colleagues who have acquaintance with the possible subjects. The researcher made contact with the potential participants using email, telephone and face-to-face meetings and made detailed explanation the nature of the research. None of the subjects were in a vulnerable or dependent relationship with the researcher. Participating in the project caused no potential risk to subjects beyond what they might have in the normal course of a day. Language testing and interviews were designed so that no physical risk was involved. Prior informed consent was sought and the personal freedom of the participants was highly respected in the course of the research.

There is one undesirable outcome to report in relation to how the researcher's presence in the field affected a student participant. As well as being supported by three masters students who acted as research assistants at various points throughout the study, this researcher was assisted by a handful of key informant students. These students played

a fundamental role in recruiting participants for tests and surveys at the project's early stages. In addition, these students helped with other practical elements of coping with daily life in a foreign country. The time spent with each of these students offered very useful insights into their own educational experiences, which for some extended to maintaining contact after graduating and while undergoing initial training with their new employers in the GLMS. Unfortunately, contact with one of these students was ended because of concerns over their behaviour, which became inappropriate and harassing towards the researcher. These concerns were voiced to a colleague as soon as the researcher had started to feel uneasy. The colleague was very helpful in contacting the student's personal tutor, who counselled the student and gained his agreement that he would withdraw from the study and not attempt to contact the researcher anymore. The student's personal tutor confirmed that there had been behavioural issues with the student before. Although the researcher's presence in the setting had an obvious affect on this student's behaviour, the fact that he was prone to irrational reactions limits blame on part of the researcher. Data relating to this student that had been collected through the survey and language testing exercises was removed from the study.

With confirmation from the potential participants that they were willing to take part in the project, the researcher provided student participants with a statement about the research and an informed consent form (in Chinese). Participants were reminded of their rights and freedom to withdraw from the project anytime and were assured that personal information would be kept confidential. Contact details of the researcher, the

supervisor as well as the faculty ethics chair were provided to the subjects so that should they expect to raise any issues about the project, they can do so at their free will.

4.19.1 *Addressing ethical issues: presenting oneself in the field*

In addition to all the considerations discussed in the former section regarding ‘determining a focus for the inquiry’ (Lincoln and Guba, 1985:141), or as Spradley (1979 *cited in* Cohen *et al.*) simplifies it as ‘selecting a problem’ (Cohen *et al.* 2000:140), there is the necessity also to determine ‘fit of paradigm to focus’ (Lincoln and Guba, 1985:141). Experience in the Chinese university setting had revealed that the research subjects had their own very positivistic perceptions of research. The first experience of this in the research setting was that researchers are expected to be complete observers. In Gold’s (1958:221) definition of the role of ‘complete observer’, the researcher does not interact with the subjects of the research. Those people, in turn, do not interact with the researcher or give consideration to their presence (Bryman, 2004). Existing understanding of the proposed research setting was through the very specialised and limited literature available (WMU, 1998; Zhao and Wu, 2002; Zhao and Amante, 2005; Yercan *et al.* 2005). In the literature review chapter, the main criticism of each of these studies was their remoteness from the research setting and where time had actually been spent in data collection, that there was a lack of extent of time spent in interpreting the setting. This lack of saturation of data of earlier studies was so significant that it led to the desire to commit to pursue an inductive research approach and to carrying use naturalistic research strategies. In particular and as discussed at

length in chapter 3 'research strategy', an ethnography was seen from the outset as the means through which to achieve as prolonged an exposure to the research setting as practicable.

Due to the prolonged approach of ethnography, the 'complete observer' status defined by Gold (1958; Bryman, 2004) cannot be attempted in ethnography; as the researcher becomes part of the setting and, therefore, must interact with it. Within one week of the problem framing visit the role being played as a researcher had migrated from being a of 'complete observer' to the role 'observer as participant' (Gold, 1958:221). In the former role the observer acts mainly as an interviewer (Gold, 1958:219). Whereas, with the 'observer as participant' (Gold, 1958:221) observation occurs, but involves little participation. In this setting the researcher can concentrate on gathering two types of data: Firstly, naturally occurring inter-subject talk, and secondly detailed descriptions of how subjects handle their role in the research setting as a result of interviews (Bryman, 2004).

4.19.2 *Ethical defence of pretence*

The decision to carry out research from a naturalistic perspective forced data collection into the natural setting at an early stage. Having applied to the funding body to make an overseas institutional visit in order to carry out a problem framing visit, it became evident upon leaving the field how this stage of the study had shaped the view of how to

target subsequent time in the field. Specifically, it became evident immediately after the problem framing visit that this research, for a number of reasons, needed to adopt a greater level of interactionism. Not all ethnography is interactionist and not all ethnographers are 'interactionists' (Woods, 1992:369). However, it became evident that interactionism was necessary in order to achieve a degree of involvement in the research setting to allow for the research process to succeed in answering the research questions that were being formed during the time *in-situ*. The following all describe the benefits to research of adopting an interactionist approach: Glazer and Strauss (1967); Lofland (1971); Shatzman and Strauss (1973); Goetz and LeCompte (1984); Burgess (1984); Woods (1992); Strauss (1987). According to Bogdan and Biklin (1992) it is necessary to enter research settings at an early stage in order to investigate research topics in the naturalistic context 'in all their complexity' (Cohen *et al.* 2000:141). Subsequently, during the problem framing stage great effort was made to establish a set of research questions that may be satisfied by the situation in question. This process itself was to inform the choice of the research setting and its appropriateness. Should a research question that had emerged *in situ* not be answerable fully by the scope of data obtainable from that setting, then supplementary data collection outside of the field would have needed to be taken into consideration. Moreover, if the research questions emerging were predominantly of a nature that could not be satisfied by the research setting through which they had emerged, then an alternative setting would have had to have been considered also.

Lincoln and Guba (1985:141) include after 'determining fit of paradigm to focus' 'determining fit of the inquiry paradigm to the substantive theory selected to guide the inquiry' (1985:141). In this interpretation, at the problem framing stage this could include the defence of research strategy. This is of particular relevance to this phase of 'selecting a problem' (Spradley, 1979 *cited in* Cohen *et al.* 2000:140) as shortly after the arrival to commence the problem framing visit, the relations in the field that had been made to date were quite upfront about their expectations of the research approach. As a result, there was the need to defend the chosen naturalistic research approach. They were of the opinion that hypotheses should have been established *a priori*, and questions like 'so what's your advice for us to improve our teaching then?' and 'do you have any suggestions for us?' were common place. The general expectation was for the research being carried out to involve the development of a questionnaire in order to collect the data needed to perform analysis. Evidently, the positivist paradigm era is still widely accepted in such a research setting and it later came to be realised that it was particularly prevalent in the Chinese educational research setting; where teaching practitioners are under enormous time pressure to produce papers featuring tests of 'Truth⁴' (Ford, 1975 *cited in* Lincoln and Guba, 1985:14) and are not afforded the luxury of the time to carry out qualitative work. Yet, from an epistemological perspective it couldn't possibly have been the case that any such *a priori* theory or advice for the research setting's actors could exist at such an early stage in the research. As an ethnographer, convinced of the 'fit of [research] paradigm to focus' (Lincoln and Guba, 1985:141) there was a desire to formulate 'ethnographic hypotheses through writing the ethnography' (Spradley, 1979 *cited in* Cohen *et al.* 2000:140). Any notions had of theory

while still finding out the problem would have been based on literature only and would have been too premature. This was particularly so, as the literature review chapter feature titles of which are highly criticised of the lack of interaction with the research settings involved in the research process, and as such these would not have been a sound basis for offering up theories in the form of advice. As a result, when such questions were asked in the research setting they were met with polite excuses until those posing such questions gave up trying. Each time, reaffirming the role of being a visitor wishing to observe and soak up the setting in order to understand its strengths and weaknesses was offered as the explanation. It was only after each period spent in the research setting that any interpretations and the working towards theorising could take place as findings were written up. Eventually, this dispelled any expectation that the role being assumed was of any kind of saviour in an advisory role. In the end this continued excuse had the desired effect of enabling *hanging around* (Lincoln and Guba, 1985) as was desired. This was desired so that interjecting in a controlled manner when seemed fit and asking questions of the research setting's actors was necessary for an explanation for someone's behaviour or further details as to the *whys?* and *hows?* of the organisation of the situations that had been observed.

The student research informants were also just as blunt as regards their expectations of the role of a 'researcher'. The students had been told in advance of the observations of their classes that would take place and that a researcher would be visiting the institution. The students were quite open in expressing their understanding of 'research' upon our meetings *in-situ*. In many of the students' opinions, 'research' involves

questionnaires, a significant sample size of 'the more the better' and that it should all wind up with statistical analysis. This resulted in students asking when questionnaires would be distributed and if they could be of any administrative help. They were also keen to hear of any recommendations for improving their learning. After continually failing to provide them with any preconceived hypotheses, both the teachers and the students relaxed back into their 'natural' forms, but this took a matter of a number of interactions over a number of weeks, and when meeting new research subjects the cycle started over again. This initial constraint led to one of the most significant decisions of which role to assume in the research field during subsequent research phases. This decision was to act as a practitioner as observer (Gold, 1958).

4.20 Validity and reliability

Denzin and Lincoln (1994) argue that all analysis or interpretation is implicit in its claim to be authentic. In other words, it makes no sense to carry out an investigation and analysis and to then label it as being invalid. In order to make an explicit claim as to validity, Lincoln and Guba's (1985) perspectives on naturalistic inquiry have been followed through each of the research phases of this project. In addition, their philosophy of using *authenticity* as a measure of credibility in establishing the trustworthiness, or validity, of any one particular research approach is adhered to also. The following outline of the aspects of judging authenticity is that of Lincoln and Guba (1985):

- fairness
- ontological authenticity
- educative authenticity
- catalytic authenticity
- tactical authenticity.

This research set out to achieve 'fairness' by attempting to represent fairly the viewpoints of a number of different groups among the social setting being observed, so as not to exclude documenting the perceptions of a certain group of key stakeholders over another. This meant including as members in the sampling:

- the students
- the teachers
- the manning agents
- and the training organisations.

Sampling an incomplete range of perception data is Nystrom and Starbuck's (1981) main criticism of studies that exclude representations of potential stakeholders. In this research, only interviewing the training organisations, for example, would exclude the

perceptions of those on the front line with interaction with the customer and end user, which is why the manning agents' views have been considered throughout as well.

In terms of 'ontological authenticity' this research, indeed, allows each of these stakeholders to arrive at some kind of better understanding of their own social situation. In turn, its 'educative authenticity' allows each member of the research to gain a greater appreciation of the other members' perceptions. Of most significance is the 'catalytic authenticity', which was experienced during the problem framing stage involving the teachers and the students at the case institution, and subsequently with other stakeholder groups having interaction with this institution. This apparentness of impetus to members to engage in action to change their circumstances led to the decision immediately after the problem framing visit to adopt an action research aspect to the research by combining the original plan to execute an ethnography, with an action research strategy.

As a result of the action research aspect of the research strategy, in more recent activities this research achieved a level of 'tactical authenticity':

- the teachers
- the students
- the manning agents/training organisations

have each been empowered to take steps towards engaging in action based on the research findings. Some of this action being within the given timeframe for data collection and is, therefore, included in this research report.

Yardley (2000) proposes four criteria for assessing how the use of qualitative research methods should be assessed. Although discussing their application within the discipline of Health research, Yardley (2000:215) argues that there is a 'problem posed by the novelty and diversity of qualitative approaches'. In particular, her paper focuses on the means by which to assess the validity of qualitative analysis. She concludes that the following are recommended principles of qualitative research:

- 'sensitivity to context;
- commitment and rigour;
- transparency and coherence;
- impact and importance'

(Yardley, 2000:215)

In terms of the first of these criteria for assessing validity, *sensitivity to context* includes being sensitive to the social context of the setting and to theoretical and ethical positions that may be relevant (Yardley, 2000; Bryman, 2009). In relation to the second of these criteria, *commitment and rigour* concern engaging with the subject matter through refined skills in data collection and analysis (Yardley, 2000; Bryman, 2009). The

third, *transparency and coherence* refers to the importance of having clearly specified methods, arguments articulated clearly and adopting a reflective stance (Yardley, 2000; Bryman, 2009). The fourth, *impact and importance* relies on the level of importance for the research practitioner of there being some impact on the community upon which the research is carried out (Yardley, 2000; Bryman, 2009). In the final chapter of this thesis an assessment is given of this research in relation to the authenticity criteria of both Lincoln and Guba (1985) and Yardley (2000). As was done with Lincoln and Guba's (1985) authenticity criteria above, it is important to give consideration as to how each of these criteria has relevance in the context of this research.

Firstly, the category of *sensitivity to context* is of key concern when attempting to explore the social setting in question to an in-depth level of detail. Getting inside the research setting in order to explore the 'interwoven aspects of the topics or processes' (Yardley, 2000:215) to an in-depth degree requires great awareness of the context of the research setting and to be sensitive towards its ethical issues. Achieving this *sensitivity to context* can be achieved through an gaining an understanding of theory. The conventional way to do this is through the existing literature on the context of study. By studying the existing literature, a new researcher to the context can gain an understanding of the interpretations made by investigators who have come before them. The literature explored should be from a pool of research on a similar topic or research that employed similar methods. Of course, the need for an awareness of existing empirical work is not exclusive to qualitative research, but Yardley (2000:220) highlights that 'in much qualitative research the sophistication of the interpretation of the data is

particularly crucial'. In this study, not only was the existing literature consulted for understanding, but its contents were analysed using critical discourse analysis. Interestingly, Yardley (2000:220) makes specific mention of critical discourse analysis when she is outlining her first category of *sensitivity to context*:

Moreover, in QMs [qualitative methodologies] as diverse as critical discourse analysis and phenomenology, a central objective is to highlight and query the common-sense concepts and assumptions which shape our naive observations and explanations (Harding and Gantley, 1998). For these kinds of research it is therefore desirable to have a fairly extensive grounding in the philosophy of the approach adopted, and the intellectual history of the categories and distinctions that have been applied to the topic, since awareness of the different perspectives and complex arguments that can be brought to bear on the subject provides the researcher with the scholastic tools to develop a more profound and far-reaching analysis.

To borrow Yardley's (2000:220) expression, the 'central objective' of ethnography, when considered as one specific stream of qualitative methodology, is to progress to there being a degree of complete participation (Gold, 1958). As a result, as an ethnography progresses towards achieving 'complete participation' (Gold, 1958:219) great importance become attached to the interactions between the researcher and the person(s) being studied, and as this relationship grows there are ethical issues generated by the 'potential for mutual influence' (Yardley, 2000:215). This too is an area where the existing literature can be consulted in order to prepare the researcher for the sensitive issues that the social context might present and how to go about selecting a research approach. In this respect, a series of works of methodological

relevance that were the product of UNESCO projects were consulted (Haveleock and Huberman, 1977; Tacchi *et al.* 2003). The reason being for the choice of UNESCO related literature was down to the influence of Hayden, Levy and Thompson (2007), who have provided the definitions used to represent historical and current interpretations of *international education* in an earlier part this thesis (Hayden *et al.* 2007), specifically refers to UNESCO in its description of the historical routes of international education. Between them in 1985 and 1995 respectively, UNESCO and the Council of Europe began to find common ground in their objectives for international education (Marshall, 2007).

According to Bryman (2009), Yardley's inclusion of the fourth criteria of *impact and importance*, provides some affinity with Lincoln and Guba's (1985) authenticity criteria. Within Lincoln and Guba's (1985) authenticity criteria, it is their concepts of *catalytic authenticity* and *tactical authenticity* that correspond with Yardley's (2000) *importance and impact* factor.

Lincoln and Guba's (1985) principles of *catalytic* and *tactical* authenticity are applied to gauging the authenticity (success) of this qualitative piece of research. The first of these principles is about assessing the extent to which action is promoted by the research process. In other words, have the constructions offered up through the research process been deep enough and sophisticated enough to move the participants to action or decision-making about themselves or the research setting? This differs from tactical

authenticity in that action is not the key measure of impact, but it is the reflection upon self or setting and having the desire to act that is being assessed when referring to catalytic authenticity. The third objective of this research involved collaboratively identifying opportunities for innovation and change in teaching and learning. The fourth objective was targeted at empowering the research setting's actors to implement such change and this was only added to the study after an opportunity presented itself for a collaborative teaching development project to take place. Catalytic authenticity does not require the research participants to act, but it makes it a notable success that the research process causes a desire to make a decision or to act. Achieving catalytic authenticity is to reach a common set of goals; if the objectives of the research are to educate the research participants about their practices and, ideally, affect innovation and change, so too should these be the goals for the participants. This research would have been successful, in terms of meeting its third objective (which was its final objective at an earlier point in time), should it have only reached the stage of catalytic authenticity and goal sharing:

It is quite possible to want, and even to need, to act, but to lack the power to do so in any meaningful way.

(Lincoln and Guba, 1985:5)

However, this PhD research is emergent in scope and a fourth objective was developed *in-situ* (Bogdan and Biklen, 1992). The research project was fortunate to have had the eventual outcome that the research actors (the teaching practitioners, key institutional

management gatekeepers and the industrial stakeholder) were able to consummate their curriculum development desires and were empowered to both make decisions and to act upon them. Individual changes were made to classroom teaching, and a new curriculum was designed and implemented collaboratively. This action in direct response to the research process is termed *tactical authenticity* (Lincoln and Guba, 1985).

What is of note is that a study that achieves tactical authenticity is not necessarily superior to one that has achieved catalytic authenticity. Action research does not require the achievement of tactical authenticity, merely catalytic authenticity (Cohen *et al.*, 2000). The timing of the research in light of recent policy developments, the willingness of the research actors, and the positive attitude of the key gatekeepers are all factors that made for desirable social conditions in which to affect change. The decision to move from observational research to participant research was a contributing factor in the success of the project. In particular the extension of the research to include an ethnographic action research phase, which included the establishment and participation in a PLCs for ME teaching and learning, was an important decision in achieving tactical authenticity. According to the authoritative/participatory research model of educational development, the education reform policy environment at the time of the research meant that the teaching practitioners' level of input had gained greater mobility between being authoritative/participatory. Had this not been the case, then this would have resulted in a different set of research objectives and a different measure of success in terms of the meeting the project's objectives.

4.21 Limitations

Qualitative field workers seem to practice democratic pluralism – or chaos and anarchy, depending upon your moral persuasion.

(Lofland, 1974:109)

This study could be criticised by some researchers for mixing methods such as ethnography and action research, and then using the label of grounded theory to explain the analysis of the research findings. Many studies make use of the term grounded theory inappropriately and Bryant (2002) points out that the flexibility of the method can be abused as it is sometimes used to provide a justification for studies lacking in methodological strength. Qualitative research has many complications that can become delimiting factors if not given sufficient accommodation. Grounded theory is posited as a solution to the risk of the researcher getting lost in their naturalistic inquiry during an ethnography, but this approach has limitations like any other research strategy. A key weakness of this methodology is that it is very difficult to realise insights relating to the causes of or processes involved in the phenomena considered. It is not concerned with expressing what is observed as a function of an organisation or society, but more with constructing descriptions of social reality.

Above all grounded theory is very complex and time-consuming due to the arduous coding process and memo writing as part of the analysis. A limitation of grounded theory in explaining or predicting a phenomenon (in other words when building the

theory) that this is a very subjective process. This relies heavily on a researcher's abilities and for a PhD student on their first encounter with an ethnographic study, this can be overwhelming. A saving grace for this research was in following the practical guidance of Miles and Huberman (1994), Strauss and Corbin (1998) and Charmaz (2006) to give structure to the analysis of data relating to the local teaching and learning ecology. In addition, this study has dealt with the lengthy process of coding by using specialised software, NVivo, to help speed up and refine organisation of primary and secondary sources of data.

4.22 Summary

This chapter has introduced and discussed the choice of naturalistic inquiry through ethnographic action research and using a constructivist grounded theory approach (Charmaz, 2006) to handling the data as a suitable research methodology for this study. The data that were collected through the tools described in this chapter can be divided into two groups. Firstly, data that brought about the desire to be innovative. Secondly, data that informed the syllabus design. There is some cross over between the two, but generally data from the catalytic group of research activity (classroom observations/teaching observations, student surveys, language testing and stakeholder interviews/surveys) are presented in chapter 5 of the analysis. Meanwhile, tactical research activity that informed the design of the new syllabus (operating as a PLC,

experimental teaching practice and resources development) are reported in chapter 6 of the analysis.

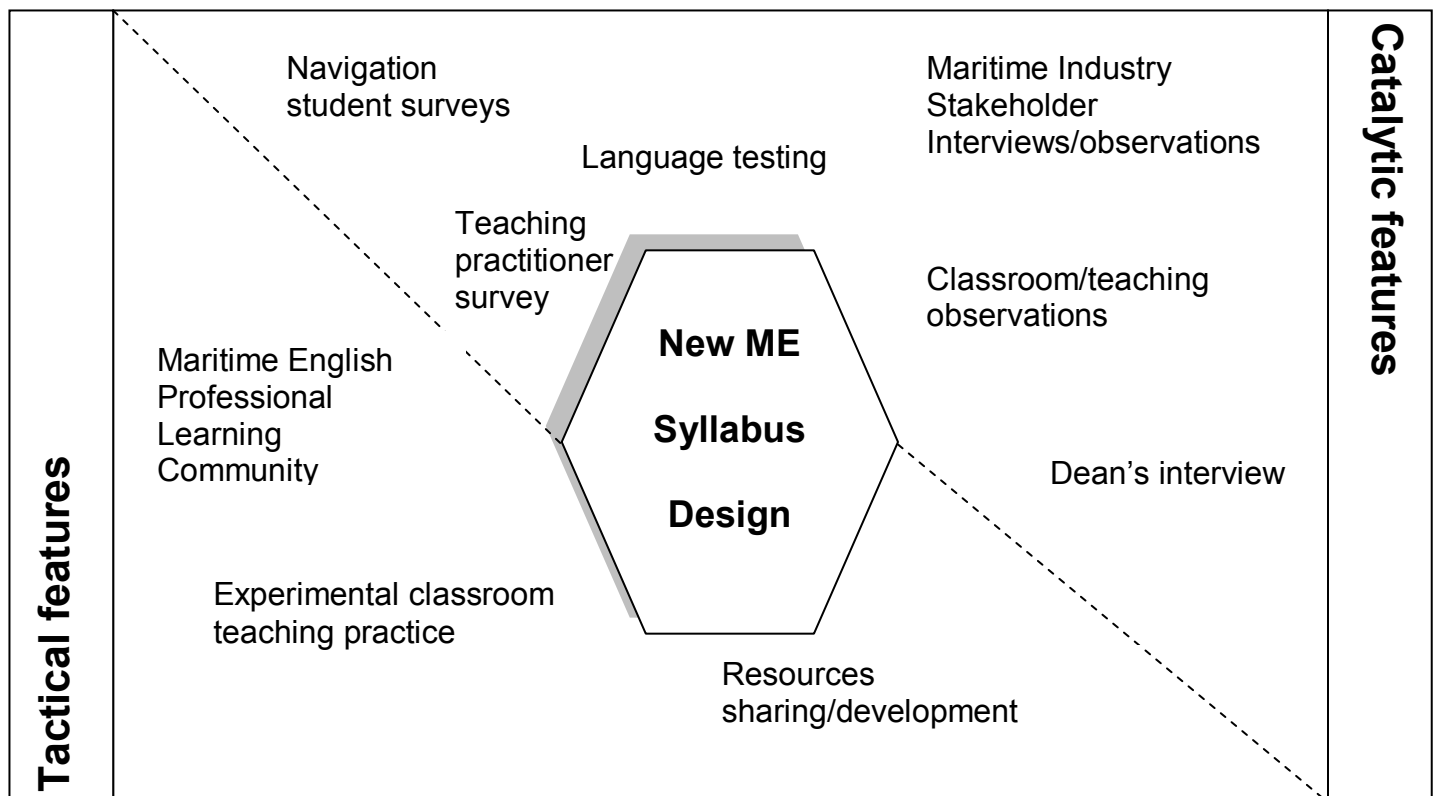


Figure 9: Catalytic and tactical features of research design

It is important to reiterate at this stage that the data analysis procedures followed in this thesis serve the primary function of 'data reduction' (Miles and Huberman, 1994:10) and 'data display' (Miles and Huberman, 1994:11). Miles and Huberman (1984;1994) recognise that this kind of naturalistic study results in a large amount of data. In terms of the practical reasons, continued analysis is needed when carrying out naturalistic

research. In particular, they recommend that beginning the analysis at an early stage reduces the problem of being overloaded with data. The process of 'selecting, focusing, simplifying, abstracting and transforming the data' (Miles and Huberman, 1994:10) from its field notes has been a continuous affair. This has been at times conscious and unconscious, but the decisions made as an ethnographer were '*all analytical choices*' (Miles and Huberman, 1994:11, italics used in original text for emphasis).

While outside the field, time and space were taken to review the 'fit of paradigm to focus' and 'determining the fit of the inquiry paradigm to the substantive theory selected to guide the inquiry' (Lincoln and Guba, 1985:141). Having given consideration to these factors relating to the fit of the naturalistic paradigm to the research investigation, the decision was made to persevere with this research strategy. The reasoning for doing so was influenced greatly by making a second review of some of the existing literature in the field of MET in the Asia pacific region. Much of this research has been performed using positivistic research methods and it did not serve to provide in-depth information upon which to base policy decisions.

Through each of the two chapters discussing the results and findings, an attempt has been made to record each of the decisions made as could best be seen fit, by presenting the challenges and considerations as they occurred chronologically. Before data collection even began, this reduction process was at work. Miles and Huberman (1994:10) describe how 'anticipatory data reduction' takes place as the researcher

makes decisions along the way. At first, data reduction included the choice of conceptual framework, the research themes set out to explore, and which data collection process to use. As the research progresses, data reduction continues and include the writing of summaries, coding, establishing themes, identifying clusters, demonstrating partitions, and writing memos. According to Miles and Huberman (1994:10), in ethnography this reduction process or 'data transformation' continues after fieldwork. The final stage of data reduction is the completion of the final report. In ethnography, data reduction is not separate to the analysis, but it is part of it.

In order to cope with the masses of data produced by the ethnographic nature of the research, then a constructivist grounded theory approach was maintained throughout the analysis. The iterative cycle of data collection and analysis is an essential element of and has helped to shape the on-going data collection. One of the major outputs of this is the conceptual modelling that occurs in each of the analysis chapters. The chapter has described in great detail each of the data collection phases, including sampling and ethical considerations. This chapter also highlights to the reader that the end result of the thesis is a *grounded theory*, which has been developed to provide an explanation for the phenomenon under study: the possibilities for further internationalising Chinese MHE. The theory can be categorised as 'substantive' as opposing to a 'formal' theory, since the collection of data and their interpretation focus on the explanation of a particular area and a particular case study institution.

Chapter 5 - Framing the local teaching and learning ecology

Because a nation seeks through education to mould the character of its citizens and so reflects its aims – political, social, economic, and cultural – a study of its educational system can contribute as richly to an understanding of its aims in general as a direct study of its political policies.

(Kandel, 1955 cited in Chang, 1962:3)

5.1 Introduction

The results of a small number of industry approved standardised English language tests to gauge the English language levels of Navigation students as a pilot activity is the starting point for this chapter. These are analysed and discussed at the beginning of this chapter. Survey development and piloting also took place during the early stages of the research and is discussed herewith. In a further pilot activity, an experimental communicative English language lesson took place with a group of Navigation students. Motivations for carrying out this activity and reflections on the outcomes are also discussed.

5.1.1 Relevant research objectives

i. To build an in-depth understanding of the specific needs of the local teaching and learning ecology from the perspectives of teachers, learners and those in leadership;

ii. To explore the scope for innovation and change in the local teaching and learning ecology through engaging its teaching practitioners and institutional leaders.

The problem framing phase of the process of inquiry described in this chapter was an attempt to observe both students and teachers in the classroom, as well to provide the opportunity for observing day-to-day occurrences in the research setting. The purpose of this research activity was in pursuit of research objective i. and hence the title of this chapter. The various data collection strategies included: classroom observations; industry approved language testing; survey interviews with students; task based language testing; and taking part in discussions with administrative staff and academics (in leadership, research and teaching practitioner roles). Initial visits to the host MHE institution were also aimed at locating a field of study for the ethnographic phase of the inquiry, addressing ethical issues, deciding the sampling, finding a role and managing entry into the context, finding informants, developing and maintaining relations in the field, and to explore the opportunities for and to carry out data collection, while developing research objectives *in-situ* (Bogdan and Biklen, 1992). These visits

consisted of a six week overseas institutional visit and preliminary field work sojourns, which took place during one calendar year. The latter comprised of one sojourn of one month and another of three months. The findings of these initial research visits as well as further fact finding into to explore the various stakeholder perspectives are reported in this chapter, whereas the truly ethnographic, practitioner as observer, phase of the research is reported in chapter 6.

Prior to entering the field for the overseas institutional visit, the key area of focus had already been decided. This had been established based on Wu's (2004) identification of a gap in the research for inquiry exploring the preparedness of Chinese seafarers to participate in the GLMS in terms of their English language ability. During the research visits reported in this chapter, more than 20 hours of observations of Navigation students in ELT classrooms were carried out. In addition, a sample of 100 Navigation students from the various year groups participated in International Shipping Federation (ISF) approved language testing of listening, reading and comprehension skills. 37 of these students took part in structured interviews to reveal key personal information and to explore the relevance of the findings of previous research (Zhao and Wu, 2002; Wu, 2004;2006; Zhao and Amante, 2005). Structured interviews also provided the chance to rate the students' spoken English. To satisfy the demand for assessing the communicative competence of these students, a sample of 26 third year student cases took part in task-based speaking tests. These tests were repeated six months later when the same cohort were in their final year and about to graduate.

Classroom observations reveal great differences between HE in the UK and teaching and learning in Chinese MHE. This activity revealed much scope for targeted internationalisation of the ME curriculum. This led to identifying a significant opportunity for collaboration with teaching staff on a comparative educational research development project at a later stage of the research. Findings of ISF approved language testing give an indication of the general ability of Chinese MHE students in terms of their English language skills. For many overseas firms recruiting from China, passing the test in question is the first step in gaining employment for graduates of Navigation programmes. Over half of the students tested would, therefore, be considered for overseas employment based on the English language ability. Structured interviews with students give insight into the residential status (rural/urban) of Chinese Navigation students, their motivations for studying Navigation, their preparedness to work for overseas shipping companies, their intended length of service, and the rank they wish to achieve during their future career at seas. Some similarities and differences are reported in relation to the findings of previous research (Zhao and Wu, 2002; Wu 2004; 2006, Zhao and Amante, 2005). Task-based language testing carried out in year three, and repeated six months later with a sample of students in year four, gives an indication of the communicative competency of Chinese Navigation students upon graduating and entering the GLMS. This staggered testing also allows for conclusions to be reached about the effectiveness of the ME tuition in the existing system that takes place in the second semester of year three.

Task based speaking tests reveal that IELTS is very often a good measure of communicative competence in all contexts and that there is some correlation between scoring between the three scales applied in analysing the data. However, it was found that in certain cases a student scoring well in IELTS did not necessarily score well using the ICAO and YME descriptors, revealing a lack of ability to communicate using ME vocabulary in a manner appropriate to the rank of a trainee officer cadet.

Table 13: Data collection phase A, B and C

Phase	Description	Duration	Interaction*
A: Problem framing		22 Weeks	
		June 2006 – July 2006	
B: Further fact finding		March – April 2007	
		October – January 2007/8	
	<ul style="list-style-type: none"> Student cases: <ul style="list-style-type: none"> a. Classroom Observations b. Industry approved language testing c. Task-based English language testing d. Surveys Teaching practitioner cases: <ul style="list-style-type: none"> a. Classroom observations 		Observer as participant

C: Regular interaction – Knowledge	16 weeks March 2008 – July 2008	
<ul style="list-style-type: none"> • Institutional management cases <ul style="list-style-type: none"> a. Interview with the Dean of the Navigation College b. Discussions with Foreign Language College leadership staff • Teaching practitioner cases: <ul style="list-style-type: none"> b. ME perception survey c. Teaching observations • GLMS stakeholder cases: <ul style="list-style-type: none"> a. Observations at private training establishment b. Task-based language testing of enrolled students c. Face-to-face and telephone interviews • Teaching practice: <ul style="list-style-type: none"> a. Undergraduate Navigation students b. CMSA Postgraduates/IELTS preparation 	Observer as participant	

* Gold (1958:220-221)

5.2 Student/Teaching practitioner cases a) classroom observations

For reasons explained in the methodology chapter, axial coding and theoretical coding were not deemed to be appropriate for this analysis. This is mainly due to this research being interpretive and centred on taking a discursive comparative education approach to exploring possibilities for internationalising Chinese MHE. Therefore it was not desirable to go as far as to remove all ambiguity from variables so as to operationalise them into a questionnaire or other wider reaching data collection tool. As such, the discussion of results in this section is limited to the analysis of the output from focussed coding.

Appendix 1 shows the categories that emerged from the open coding process and Table 14 shows the results of focussed coding. The general observational categories are listed in the first column. During the first few observations extensive notes were made in relation to all aspects of the classroom observation. Early analysis of the first two days of observations was the start of the development of each category.

Table 14: Focussed coding of classroom observations

Obs. No. Code	LOR	MOT	MOS	UOT	UGM	IMO	SP	SE	SK	TL	TSI	MOD
1	F	MTM	MSL	TM	ON	MCN	PL	EM	SR	TLV	TTS	S
2	FB	MTL	MSL	TE	ON	MCN	PL	EL	SR	TLV	TTS	S
3	FB	MTM	MSL	TE	ON	MCN	PL	EM	SR	TLV	TTS	S
4	F	MTM	MSM	TL	ON	MCM	PL	EE	SR	TLF	TTS	A
5	FB	MTM	MSE	TM	ON	MCN	PL	EM	SL	TLL	TTS	A
6	FB	MTM	MSL	TE	ON	MCN	PM	EM	SR	TLV	TTS	S
7	F	MTL	MSL	TE	ON	MCN	PM	EM	SR	TLV	TTS	S
8	FB	MTL	MSL	TE	ON	MCN	PL	EL	SL	TLV	TTS	S
9	F	MTL	MSL	TE	ON	MCM	PL	EL	SR	TLV	TTS	S
10	F	MTE	MSE	TL	OM	MCE	PM	EE	SS	TLF	SSS	A
11	F	MTM	MSL	TM	ON	MCM	PM	EM	SR	TLV	TTS	S
12	F	MTM	MSM	TM	ON	MCM	PM	EE	SS	TLV	TTS	A
13	F	MTL	MSL	TE	ON	MCN	PL	EL	SR	TLV	TTS	S
14	F	MTL	MTL	TE	ON	MCM	PM	EM	SR	TLV	TTS	S
15	FB	MTL	MSL	TE	ON	MCN	PL	EL	SR	TLV	TTS	S

Table 14 shows the results of focussed coding for the classroom observations in light of the categories identified in the open coding process. It should be highlighted that in the process of focussed coding that the researcher has to make a choice as which of the codes best suits the situation being describes. If coding was being performed on an interview transcript, then the researcher would be faced with choosing a code that best represents the meaning of what their interviewee is expressing. The same occurs for observations, the researcher chooses a code from the open coding frame that best describes what is being observed. This means that some information is not included. For example, in observation 1 for the category of TSI (teacher/student interaction) the codes express the main type of interaction observed during the session stating if this was TTS, SSS, STT, or UMM (teacher talks to student(s), student(s) talk to student(s), student(s) talk to teacher, or use of multimedia). Even though one type of TSI, mode of delivery (MOD) and target language (TL) is dominant in each observation, other forms of TSI, MOD and TL will have occurred also during the session. An indication of these proportions, for the sake of more detailed comparison, is expressed as a percentage in Appendix 2.

5.3.1 *Layout of rooms (LOR)*

The layout of rooms for use in teaching English to Navigation students is invariably a fixed-seating arrangement. During one observation (10) the teaching practitioner attempted to overcome this barrier, and to some point exploited it as a strength. By lining his students up either side of the bench seating, two rows apart, and setting them

a question and answer task, he created a very dynamic situation. Firstly, the distance between students meant that they couldn't swap notes and avoid the oral element of asking questions and giving responses to complete the task. In addition, having all students speaking at once created a very loud environment. The teacher explained his actions as:

'Simulating the noisy working environment of being on deck during cargo operations, or visiting the engine room'.

(Teacher from classroom observation 10)

However, only one teacher attempted to adapt this environment and the majority accepted their surroundings. Rarely did any of them try to increase student engagement by having them participate in role play or other activities that involved leaving their seat.

5.3.2 Movement of teacher/students around the room (MOT/MOS)

During seven of the observations, teacher movement was limited to the front of the classroom. During six of the observations, teachers made a moderate effort to circulate around the room. Only on one occasion, observation 10, did the teacher move around the classroom extensively. This bore a relationship on student movement also. In the same observation (10), student movement was extensive also. In one other incidence, student movement was extensive during the start of the lesson when students were taking part in a vocabulary review and competing to write correct answers on the board.

In other instances (4 and 12) student movement was moderate, but was limited to students standing to answer questions when their name was called from a list. During all of the 11 remaining observations student movement was limited to being seated at their desk for the duration of the lesson.

5.3.3 Use of textbook/own materials (UOT/UOM)

On two occasions the use of the course textbook was limited. On one of these occasions (10) the teacher had devised some specific exercises that were based on the previous lesson of study in which a number of students had struggled with their pronunciation and fluency. In order to facilitate the activity described above, he had created question and answer handouts for use by the pairs of students. This resulted in increased MOT/MOS and a high level student engagement (SE). On another occasion (4), another teacher did not make extensive use of the textbook and this saw moderate SE. On this occasion, the teacher had drifted away from the textbook after having given an example of the use of some of the college English vocabulary in a maritime context. Students had reacted to this by asking him questions and he preceded to talk about his time working onboard ship. After the session, this teacher expressed his frustration at the materials being used, claiming that the textbook is aimed at high school level as a remedial step and that:

'Navigation boys are more interested in hearing about their future life onboard ship'

(Teacher from classroom observation 4).

The first instance of limited use of the textbook (TL) was very deliberate and was accompanied with UOM in pursuit of predetermined learning objectives that had come about from a previous lesson when students had struggled with using new vocabulary fluently. The second instance was by chance and may have suited the teacher's predetermined ideas of what he felt the group of students needed to learn, but it did not bear close relevance to the session's target language (TL), skills (SK), or the learning outcomes of the textbook chapter being studied.

Out of the remaining 13 observations, nine teachers used the textbook extensively (TE) and four used it to a moderate degree (TM). The teacher in observation 10 was the only one to use his own materials (UOM). Qualification of this from discussion with teaching staff outside of the observations revealed that time pressure from the number of classes taught per week and the need to keep to the material in order to prepare the students for the exam were their main reasons for not using their own materials. One relatively younger teacher whose use of the textbook was extensive was very expressive during the mid lesson break saying:

'It is terrible; the conditions here. You learn to be a good teacher in the teacher training college, but the reality is this [teaching from set textbooks geared towards examinations]. I know that you Western teachers are encouraged to be original and innovative. Please don't judge me on this.'

(Teacher from classroom observation 3)

5.3.4 Influence of IMO Model Course (MC)

This variable is included in this analysis, as prior to visiting the research setting the researcher had become aware of IMO *Model Course 3.17-Maritime English* (IMO, 2000;2009). It must be highlighted here that none of the classroom observations included dedicated ME lessons, as the observations took place in the summer term and these classes only run in the spring term. When the second round of observations was scheduled, this was done deliberately to coincide with ME classes taking place. However, all classroom observations were carried out with groups of Navigation and Marine Engineering students during this stage of the research and it was still of interest to gauge if the teaching reflected the IMO model course for ME or not. It is to be expected that this would be low at this stage and to be much higher during the second round of observations.

Generally, and in the case of 9 out of fifteen classroom observations there was no evidence (MCN) that teaching and learning had been influenced by the IMO model course for ME. In the classroom observations for ME specific classes, this was very different. It was clear from analysing the content of the standard textbook that it was based on the IMO model course in terms of content. However, the interpretation of the MoC had been to turn this into a multiple choice examination and teaching that prepared students for this assessment.

Teacher's own comments on being innovative in order to focus on speaking and listening skills were unanimous in wanting to make time in their teaching to address the needs of the group:

'To be aware of outcomes or aims. And design the activity to achieve these aims in a better way. I will be more concerned with student's accents, and create more engaging atmosphere and activities for learning.'

(Comment from ME teacher during feedback on which aspects of teaching to change in the future)

Frustrations were expressed at not having time to be creative as the examination was of primary importance:

'The timing of the class evenly, perhaps, will be improved for teaching in the transition of chapters. For example, how to start with the end of the last chapter and how to continue teaching new chapter are 'smooth' process. In other words, 'gaps' for different content teachings in one class should be avoided. However, it is difficult to handle...then we must finish teaching the old content in the new class hours to pay the price.'

(Comment from ME teacher during feedback on which aspects of teaching to change in the future)

5.3 Student cases b) Navigation student surveys

Table 15: Self administered survey student personal information responses

Variable	Response	
	Count	%
Sample	17	100
Mean age	23	
Rural residence	14	77
Urban residence	4	22
Father professional employment	4	23.5
Father manual employment	7	41.2
Father unemployed	6	35.3
Father retired	0	0
Mother professional employment	3	17.6
Mother manual employment	8	47.1
Mother housewife	1	5.9
Mother retired	2	11.8
Mother unemployed	3	17.6

The first surveys were carried out on a self administered basis and followed up with a face-to-face interview with final stage navigation students. Through this means a number of quantifiable responses were given as a means to make them feel

comfortable with the interviews; they could both see the interview scripts and Likert scales accompanying questions. They were always invited for further comment and engaged in discussion where possible and it was this qualitative content that was used to guide subsequent naturalistic inquiry. However, the survey instrument did bring about a lot of data of interest. Some of it can be correlated to establish relationships e.g. between the residential status of the student and their intentions for the duration of time they wish to work at sea or what proportion of the money they have used for their tuition has been borrowed from family, through a bank loan or been awarded through scholarship.

Table 15 shows the responses of a group of 18 final stage students regarding the variables age, residential status, father's employment status and mother's employment status. Data were collected during phase B during surveys/interviews with students who responded to a request for participants communicated through a key informant. In phase C the same interviews were performed with a further group of 21 students and the following results were found (Table 16). The students for the phase C semi-structured interviews were those who took up the invitation to be interviewed from the group that had taken part in phase B quantitative language assessment exercises. They were also invited immediately after the interview to take part in problem based assessment exercises.

Table 16: Structured interview student personal information responses

Variable	Response	
	Count	%
Sample	20	100
Mean age	23	
Rural residence	14	70
Urban residence	6	30
Father professional employment	2	10
Father manual employment	18	90
Father unemployed	0	0
Father retired	0	0
Mother professional employment	4	20
Mother manual employment	15	75
Mother housewife	1	5
Mother retired	0	0
Mother unemployed	0	0

Following this brief analysis and with the work of Zhao and Amante (2005) in mind, it appeared worthwhile to look for correlation between the residential status and parents' employment variables. It was also of interest to find out if there was correlation between these and a number of other variables. Another interesting set of information collected from this group was data relating to how they financed their studies. It had been gathered from discussions with students that family income and savings, bank loans, scholarships from the university and loans from friends were common ways to pay for study.

It was of interest at this point in time to find out if there was any relationship between their residential status, their parents' employment and the way they financed their studies to see if the research population had similar characteristics to Zhao and Amante (2005). For the sake of analysis the two groups' data were amalgamated as they came from the same research population, just at different time intervals.

A cross-tabulation of their residential status and their willingness to work at sea showed that 6% of urban students answered 'yes' to being willing to work at sea after graduation, whereas 20 rural residents gave the same response. Out of the group, 2 urban and 1 rural student remained undecided and answered 'don't know'. This suggests that the rural students were more likely to have decided whether to work at sea in the final years of study and were more likely to say 'yes' to the willingness to go to sea variable. In a comparison of mean values for the length of time those students

answering 'yes' to this variable, the mean values were 8.6 years for urban and 8.8 years for rural. It seems from this data that at the point of near graduation, although their residential status may affect their willingness to go to sea, if willing to go, then the average intended sea service between urban and rural students is nearly the same. 1.8 cases of urban students and 3.3 cases of rural students deviated from the mean. The range of years expressed by the urban students was from 5 to 10 years and for rural students this began at 4 and extended to 15 years.

From cross-tabulation of parents' employment status and the students' intended sea time, it was interesting to see the spread of responses to the variable that relates to their willingness to go to sea in correlation with their fathers' employment status. Their mothers' employment status did not seem to have relevance to them in discussions and they did not generally seek career advice from them. Qualitative data from conversations held with the respondents during the interviews revealed that the time they expressed in years was related to how long they perceived it would take them to reach a certain rank.

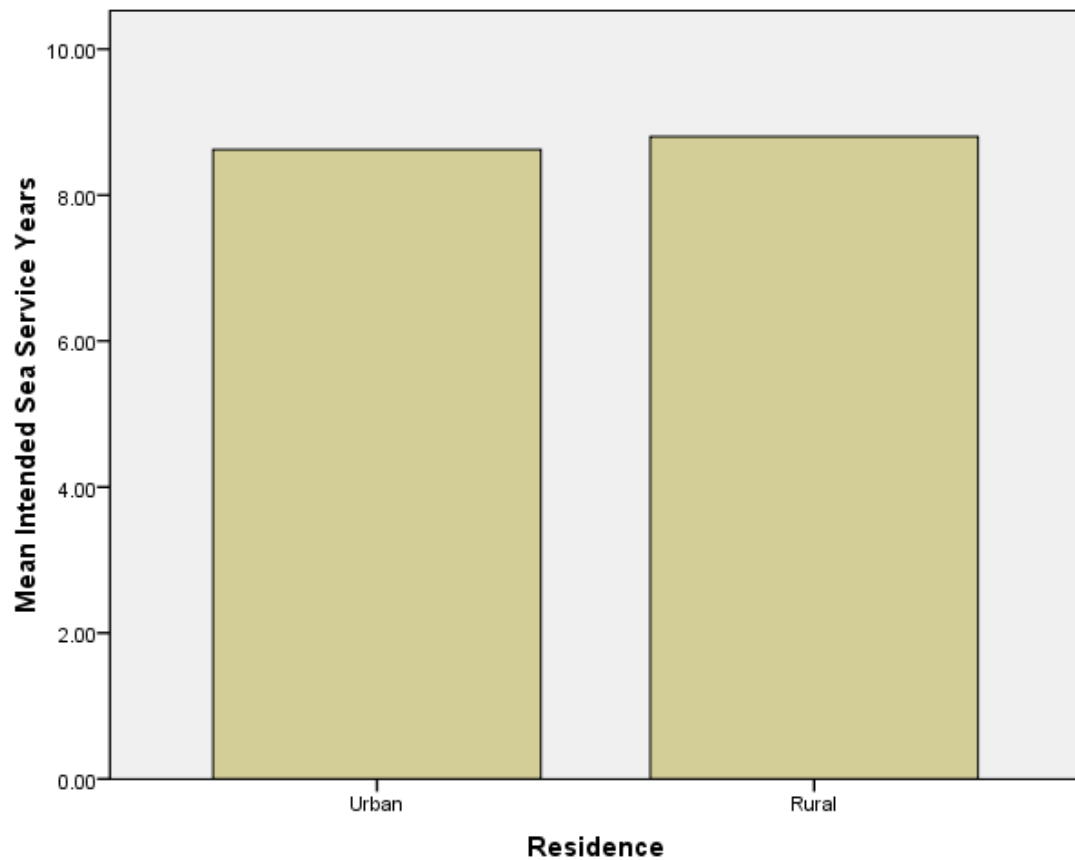


Figure 10: Residential status and mean intended sea service in years

The mean values of 8.6 and 8.8 years coming up was interesting as few students chose this figure, but spoke of hoping for it to take the minimum of 8 years for them to become a captain after which time they would leave the sea and find another job ashore, but that they were resigned to the reality it may take 10 years and this was the most frequent response category from them.

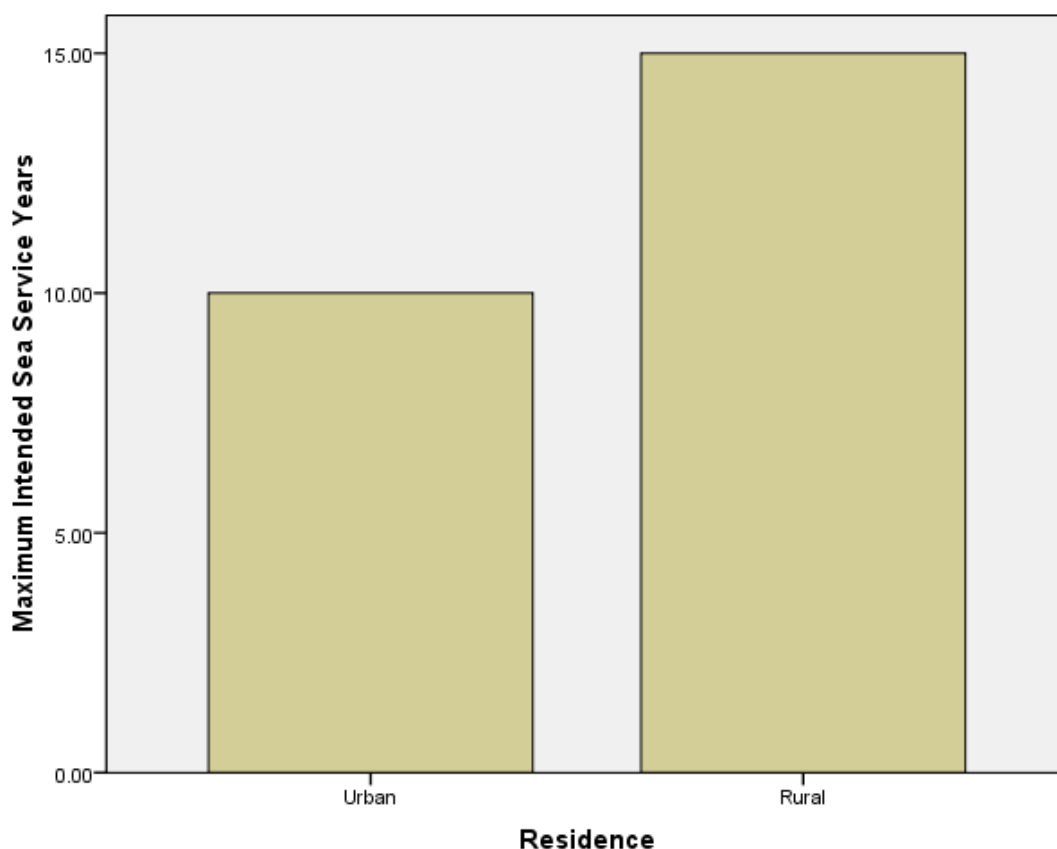


Figure 11: Residential status and maximum intended sea service in years

Table 17: Father's employment status and intended sea service in years

Father	Intended Sea Service Years									Total
	4	5	6	7	8	9	10	12	15	
Unemployed	0	1	0	0	0	0	2	0	1	4
Professional	0	1	0	1	1	1	0	0	1	5
Manual	1	3	2	0	2	0	9	2	0	19
Total	1	5	2	1	3	1	11	2	2	28

One discovery from the empirical data is that rural students are usually hard working and have overcome some form of challenge to reach the institution. In their educational

backgrounds they have done relatively well, but had not been exceptionally high achievers in their high schools. Those from urban backgrounds showed a trend between extremes. Some described themselves as 'lazy' and pre-occupied with other, non academic activities and hobbies e.g. practising and performing guitar music, and that they just didn't study very hard at high school. Whereas, the other extreme were a group of very hard working individuals who were promoted to the top classes and pigeon holed for civil service jobs. For the majority of rural students, getting into a university to study was their key motivation to pursue Navigation and Engineering courses, with fewer Navigation than Engineering students stating that they had any idea prior to arriving about their major or any genuine desire to work onboard merchant ships. Some urban candidates had seafaring relatives and although fewer in number than their rural counterparts, possessed more positive motivations to work at sea. Among those interviewed, there was a subtle difference between Engineering cadets and Navigation cadets, with the former group being more likely to have come from urban dwellings and to have selected their major based on informed choice and a desire to become a Marine Engineer. Some explanation for this was that it is viewed as a profession in China and to be an engineer receives societal praise. For engineering there is a higher score requirement in the 'Gaokao' – the Chinese university entrance examination – and as a result these Engineering students have more choice of university courses upon graduation from highschool (Chang, 1962).

To gain specific insight into certain aspects of this teaching development project, a variety of perception related data was collected. In one particular survey, it was necessary to perform a pilot Likert style survey during phase B, which was refined and

incorporated into semi-structured interviews during phase C of the research. This survey served to provide a plethora of background information on the student research participants and also provided insight into their attitudes to their future careers at sea. In another, the perceptions of a sample of those students for whom responsibility for teaching was held were surveyed; at both undergraduate and postgraduate levels. The aim of the second of the perception surveying activities described above was to evaluate their reception of the new paradigm of content and language integrated learning and teaching at the institution. These results, combined with the observations of students during their classes, as well as the students ongoing comments and feedback during and after classes, gave valuable insight into their perceptions relating to learning and teaching.

5.4 Student cases: c) standardised industry approved language testing

Table 18: Results of pilot computer based Marlins tests

Test	Age	Time	Listening	General	Reading	Overall
1	22	43.7	(38/40) 95%	(44/50) 88%	(5/5) 100%	(87/95) 92%
2	22	24.3	(36/40) 90%	(49/50) 98%	(3/5) 60%	(88/95) 93%
3	21	24.3	(37/40) 92%	(46/50) 92%	(3/5) 60%	(86/95) 91%
4	21	28.1	(39/40) 98%	(48/50) 96%	(4/5) 80%	(91/95) 98%
5	23	34.5	(39/40) 98%	(47/50) 94%	(4/5) 80%	(82/95) 86%
6	21	25.4	(38/40) 95%	(46/50) 92%	(5/5) 100%	(89/95) 94%
7	22	31.4	(37/40) 92%	(45/50) 90%	(3/5) 60%	(85/95) 89%
8	24	26.1	(37/40) 92%	(47/50) 94%	(4/5) 80%	(88/95) 93%
9	21	25.3	(35/40) 87%	(40/50) 80%	(3/5) 60%	(78/950) 82%
10	22	30.2	(36/40) 90%	(46/50) 92%	(4/5) 80%	(86/95) 91%

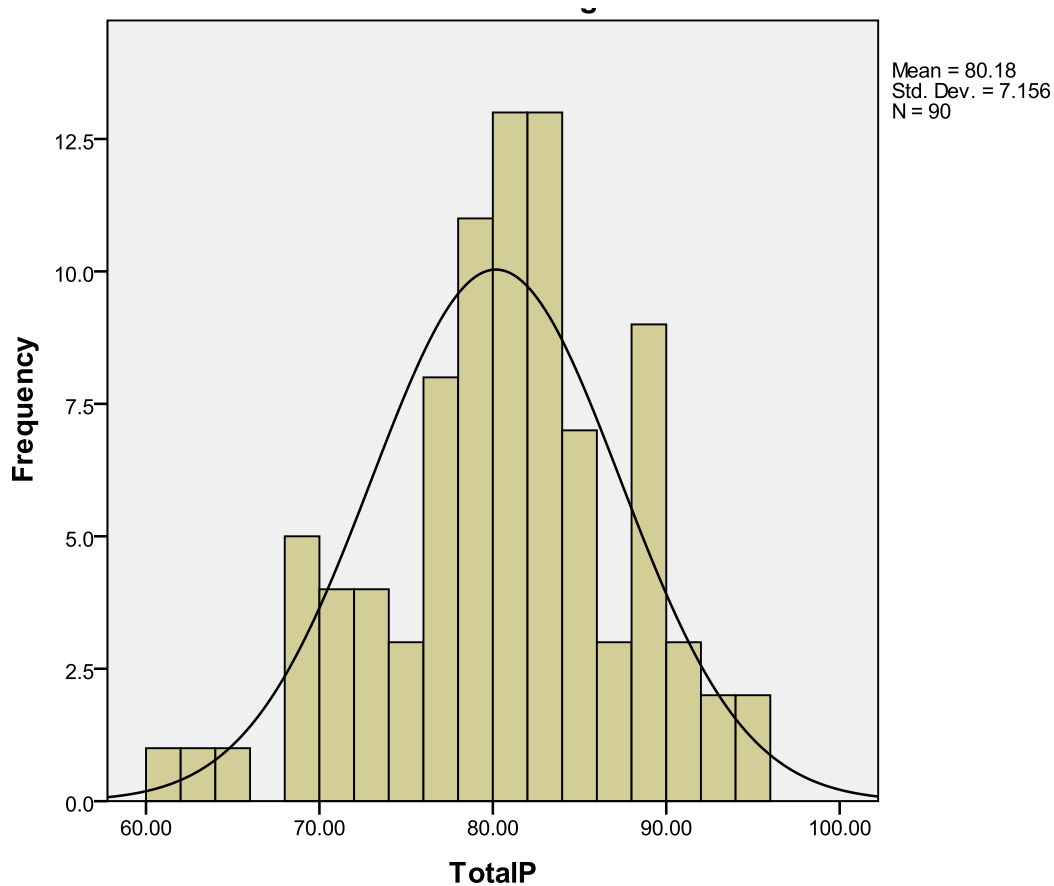


Figure 12: Percentage scores for all year groups

Of the 100 tests that were carried out, 94 were included in the analysis as six cases were excluded from the data set as these students had not completed the test and had noted on their paper that they couldn't see the board clearly. These tests were removed from the data set as missing cases. Results ranged from 61- 95%, with a mean score of 80.81%. Overall, the number of students who passed the test, according to the standards set by the UK MCA of 80% for junior deck officers, stood at 52 students out of 90. For the whole sample, the mean score was 80.18% (Figure 12). So far this

analysis includes all year groups participating in the testing. It is of interest to select only those in the third year of study who were to graduate the following year as a measure of their preparedness to work in multicultural environments in terms of their English language competence.

For this group, the 52 out of 72 test takers who passed did so with a mean of 84.94% (Figure 13). The mean score for the whole third and final year cohort, including the failures, was 81.56%. This was marginally higher than the whole sample's mean score of 80.18% (Figure 12). This was to be expected to some extent as this group of students have experienced a longer period of study and many of them have had some dedicated ME classes during this time. However, there were still 25 failures, but the mean was still quite close to the pass threshold at 74.56% (Figure 14). Eight students from this group scored just below the pass threshold with scores between 78-79%, a further seven had scores of 76-77%, and two scored 75%. Out of the eight remaining failures, only one student showed exceptionally poor performance with 61%. The other seven were grouped within the range of 70-75%.

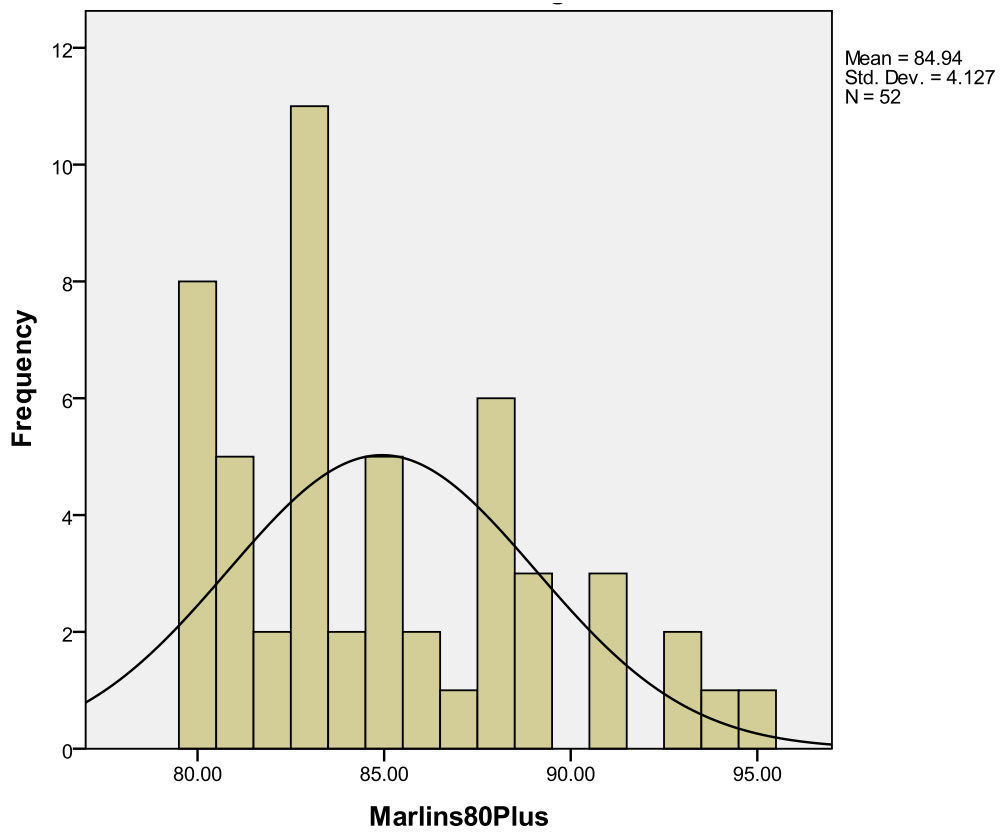


Figure 13: Third and fourth year students scoring above 80% pass threshold

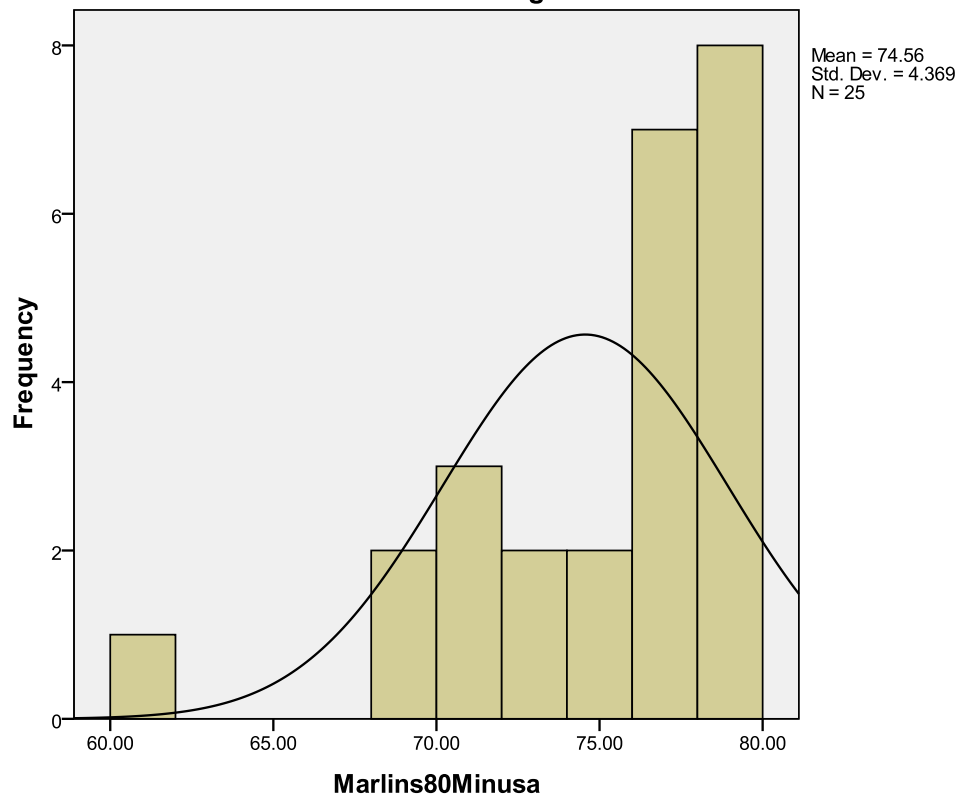


Figure 14: Third and fourth year test takers scoring below 80% pass threshold

5.5 Student cases d) task-based language testing

A full table of results is presented in Table 19, which shows the Marlins score for all skills as a percentage, an IELTS score awarded, as was a YME and an ICAO score with a breakdown into the six descriptors. Each of these ratings is repeated and results are shown for students in their fourth year of study. The IELTS score has not been broken down into the categories of fluency, lexical resource, grammar and pronunciation (Appendix 11) as this rating scale does not include any mention of the candidate's ability to communicate on work related topics. However, the ICAO score has been made transparent in this respect as the vocabulary level descriptor pays particular focus to the candidate's work related lexical resource. It was found that in the majority of cases where an YME score of less than 6 was awarded that candidates also scored at a level below operational (4) on the ICAO scale for vocabulary. All candidates who were awarded a YME score below 5 were also limited to an overall ICAO score of 3. However, within the largest group of candidates who were awarded a YME score of 5 there is more variation in ICAO and IELTS scores. A larger sample size could allow of important exploration of the relationship between level and the significance of their equivalent value.

Table 19: Third and Fourth Year Students' Marlins, IELTS, ICAO and YME

Case ID	Marlins Total %	Year	IELTS	ICAO PGVFCI	ICAO Total	YME	Year	IELTS	ICAO PGVFCI	ICAO Total	YME
301	88.00	3.00	6.00	554445	4.00	6.00					
104	85.00	3.00	5.50	444444	4.00	5.00	4.00	5.50	445445	4.00	6.00
201	86.00	3.00	5.50	443444	4.00	5.00	4.00	5.00	443445	3.00	5.00
008	80.00	3.00	5.50	445544	4.00	6.00					
514	79.00	3.00	5.50	444444	4.00	6.00					
315	88.00	3.00	5.00	554445	4.00	5.00	4.00	5.50	545444	4.00	6.00
102	86.00	3.00	5.00	444444	4.00	4.00	4.00	5.00	445444	4.00	5.00
206	76.00	3.00	5.00	443443	3.00	5.00	4.00	5.00	443444	3.00	5.00
419	88.00	3.00	5.00	443444	3.00	5.00	4.00	5.00	443443	3.00	5.00
422	76.00	3.00	5.00	443443	3.00	5.00	4.00	5.00	444444	4.00	5.00
607	---	3.00	5.00	444445	4.00	4.00	4.00	5.00	444444	4.00	5.00
621	---	3.00	5.00	443444	3.00	4.00	4.00	5.00	444445	4.00	5.00
203	79.00	3.00	5.00	444344	3.00	5.00	4.00	5.00	443444	3.00	5.00
204	83.00	3.00	5.00	444344	3.00	5.00					

(continued from previous page)

Case ID	Marlins Total %	Year	IELTS	ICAO PGVFCI	ICAO Total	YME	Year	IELTS	ICAO PGVFCI	ICAO Total	YME
420	80.00	3.00	5.00	443444	3.00	5.00					
421	78.00	3.00	5.00	443444	3.00	5.00					
001	84.00	3.00	4.50	343443	3.00	4.00	4.00	5.00	444545	4.00	5.00
210	76.00	3.00	4.50	433433	3.00	4.00	4.00	5.00	443443	3.00	5.00
105	76.00	3.00	4.50	333444	3.00	4.00	4.00	4.50	344344	3.00	4.00
212	76.00	3.00	4.50	333333	3.00	4.00	4.00	4.50	443343	3.00	5.00
317	83.00	3.00	4.50	443443	3.00	4.00	4.00	4.50	443444	3.00	5.00
305	89.00	3.00	4.50	433433	3.00	4.00	4.00	5.00	443443	3.00	5.00
209	83.00	3.00	4.50	433443	3.00	4.00					
202	79.00	3.00	4.50	333333	3.00	4.00	4.00	4.50	443343	3.00	5.00
515	80.00	3.00	4.00	433433	3.00	4.00					
207							4.00	4.00	433333	3.00	4.00
Total: 26	Year average: 81.56%		>=6.0:1 >=5.0:16		>=4:8	>=6:3 >=5:13		>=6:0 >=5:12		>=4:7	>=6:2 >=5:14

5.4.1 Undergraduate Navigation student analysis

What was highlighted by the use of the YME and ICAO rating scales over the IELTS is that they complements a CLIL curriculum, in which students learn both subject knowledge and English language simultaneously. Findings reveal that IELTS is very often a good measure of communicative competence in all contexts and that there is some correlation between scoring in each scale. However, it was found that in certain cases a student scoring well in IELTS did not necessarily score well using the ICAO and YME descriptors, revealing a lack of ability to communicate using specialist ME.

Table 20: Third and fourth year task-based language test summary

	Operational					
	Pre operational					
	Non operational					
Level	IELTS 3 rd Year	ICAO 3 rd Year	YME 3 rd Year	IELTS 4 th Year	ICAO 4 th Year	YME 4 th Year
6	1	-	3	-	-	2
5	16	-	13	12	-	14
4	8	8	1	5	7	1
3	-	17	-	-	10	-
2	-	-	-	-	-	-
Total	25	25	25	17	17	17

The results show that from a sample of final stage Navigation students that despite over 80% of students passing the standardised language tests for reading and

listening, that only one out of the group was deemed *operational*, with 16 out of 25 being *pre-operational*. For IELTS speaking, the average score for the final year group is a score of 5.24. This is not too far away from national average in 2009 for the general training category of the exam, which was 5.79 (IELTS, 2010). This places Navigation graduates on a par with other Chinese nationals going overseas to work or taking IELTS to get a job with an overseas company located in China. For ICAO the average was 3.41 and for YME 5.05.

In terms of YME a score of 5 and to be preoperational is acceptable for a cadet, as there will be at least one year during which they develop their skills. Unlike in the European system, Chinese Navigation students take the CoC exam (including the English element) before sailing as cadets. This means that the examinations are based on their theoretical and not their practical knowledge. When they have accrued enough sea time they can be promoted to junior officer level. There may be company training procedures in place, but there are no additional requirements from the CMSA for a cadet to be assessed on their competencies after taking the CoC examinations upon graduation and being promoted to second officer. The next assessment point comes after a potential five to six years at sea when taking the next CoC examination (see Figure 15). This implies that the national CMSA English tests are too removed from the functional language needed onboard at an operational level, as some of the same students who have failed to meet the ICAO/YME and IELTS requirements went on to pass the CMSA exams one month later with just a very low failure rate. This low failure rate occurs despite students having the chance to retake the exam an unlimited number of times in order to succeed. It is a direct result of the academic institution not entering a student for the exam if they

are unlikely to pass, so as not to disadvantage the ranking of the institution. For this reason it is meaningless to quote the pass and failure rates as they are not a true reflection. However, during the two years that the researcher was based at the institution, just a handful of the year group were not entered for the exam, indicating a high anticipation of passing.

It is estimated by an independent Aviation English consultant that to reach an operational level from level 3 on the ICAO scale will take up to 400 hours spent in an intensive language immersion environment. It is a requirement that a cadet will spend up to 12 months gaining sea time before being promoted to junior officer level, During this time, if the onboard environment is suitably multicultural with a sufficient number of users with YME 7 or ICAO level 6 and above with whom the cadet can gain instruction, then they may be able to raise from the preoperational to the operational level. The language levels of Chinese master mariners are explored in Table 23 and the likelihood of the onboard environment offering a sufficient level of immersion is discussed.

Figure 15 is intended to illustrate the progress of undergraduate Navigation students at the host institution against time and the proposed levels of English to be classed as operational. The task-based testing and the results reported in the previous section in Table 20 revealed the number of students that could be classed as *operational* against each scale. This is represented as an average score in blue text in the figure below. In red, the proposed required levels are stated for comparison.

The purpose of this figure is to highlight the time from starting the degree programme to becoming employed and going to sea as a cadet, which is a minimum of four years. From discussions with manning agency staff and the students they were recruiting at an employment fair on campus, it became apparent that many companies that supply the GLMS opt to run their own pre-sea *enhancement* training for new recruits. This is both to orient them before their first sea going sojourn and to enhance certain skills that are considered to be lacking in recent graduates. One of the skills areas addressed by such programmes is ME.

In each case, the student has finished studying in a shorter period of time and they have also accrued sea time so as to be able to enter the GLMS as a junior officer, as opposed to cadet. Chinese MET graduates are still yet to accrue sea time at this stage and face another year before sailing as a junior officer. This puts them at a three year disadvantage when compared with UK and other European cadets.

5.4.2 *Industry stakeholder student cases*

When the chance to visit a private training programme arose at a later stage in the research, the researcher spent four days observing new cadets undergoing instruction that was completely in English, which included both classroom and practical skills.

Table 21: Private MET cadets task-based language test summary

Level	IELTS	ICAO	YME
6	-	-	-
5	13	-	20
4	29	-	15
3	5	41	6
2	-	6	6
Total	47	47	47

A request was made to visit the training establishment of the industry stakeholder who has been referred to throughout this section. The purpose of this visit was to test a cohort of their students using IELTS, YME and the ICAO descriptors and to measure their level. It was necessary to establish if the curriculum under development for intermediate learners was relevant for this group of cadets. 47 students took part in the test with the assistance of four local teaching staff. During the test they were asked to offer a description for one of ten images depicting an onboard maritime scenario. It was not possible for the researcher to interview each student face-to-face due to time constraints, and responses were recorded and analysed while outside of the research setting. In addition, each student was asked to carry out a listening and a reading task to judge their grammar and comprehension.

Table 21 shows the levels of English for this group as measured by the IELTS, ICAO and YME scales. These are lower than for the undergraduate Navigation student

group. Some of this can be attributed to age and that stage of these students in their studies, which varied from first years to final year students. However, as the training programme is only 2 years long, then it is appropriate to have included these students as many of them were within 12-18 months of going to sea as cadets. The average IELTS score was 4.04, which is way below the national general training category average. For ICAO just 2.87 and YME 4.04. This group of students are positioned significantly below other Chinese nationals taking the IELTS general training exam for employment purposes.

'You know, I thought we would be different, but we [MFE and MHE graduates] are all the same. I mean, at first there were some differences and our English is generally better, but now, after one month already, there is no noticeable difference.'

(Case institution Navigation student on participating in enhancement training along with former MFE students)

For this final group the anticipated IELTS scores were higher as these students have come from a more recent higher education system and are generally of a good academic calibre. The starting score including those who dropped out of the final exam was 5.09, which is 5.47 if these five students are taken out of the calculation. Again, one student showed poor exam performance scoring 4.5 I when mocks scored them at 5.5, and they have been removed from the final score analysis. The final score for this group at the end of the CLT teaching was 5.19., ICAO 5.37 and YME 7.56.

Table 22: Graduate CMSA task-based language test summary

Level	IELTS Speaking (1)	ICAO	YME	IELTS Overall	IELTS Speaking (2)
8	-		-	-	-
7	-		11	2	-
6	5	-	19	21	15
5	25	9	1	4	9
4	2	23	1	-	1
3	-	1	-	-	-
2	-	-	-	-	-
Total	32	32	32	27	25

Table 23: Master mariner CMSA task-based language test summary

Level	IELTS Speaking (1)	ICAO	YME	IELTS Overall	IELTS Speaking (2)
8	-		2	-	-
7	-		4	-	-
6	2	1	16	13	3
5	22	12	6	12	18
4	8	15	4	2	2
3	-	4	-	-	-
2	-	-	-	-	-
Total	32	32	32	23	23

This group of master mariners had average speaking scores of 4.8 at the start of the intensive three month course. Out of the group of nine did not take the final exam. For comparison sake to see if the course had any effect on their English level with these nine have been removed to give a starting score of 5.09. The fishing average speaking score is actually marginally lower at 5.04. Two students scored badly getting 4/4.5 in the real exam, when they had a mock performance of 5/5.5. If these two students are removed from the analysis also then the finishing score is 5.14. Surprisingly this is not much higher than the Navigation undergraduate group. However, in terms of ICAO (4.43) and YME (5.69) the scores are quite different and much stronger for this group than for the Navigation students. In addition, there overall scores indicate strengths in reading and listening that are more advanced than the undergraduates 20 years their junior.

It is interesting to discuss Figure 15 in comparison to training programmes in the UK and Europe, MET and MHE is undertaken on a sandwich basis with students sailing as cadets and attending college/university for blocks of time. For further education (FE) students this may mean a six week induction before their first voyage, followed by two college periods of six months for students with A levels, or nine months and six months for direct school leavers. When added to six months of sailing accrued between college phases, this makes a two or two and a half year course of study. Even for degree level courses in Nautical Science students will sail during their four month break from the academic term and graduating with a BSc. (Hons) in three just years.

5.6 Teaching practitioner cases b) ME perception survey

The questions that had been asked of institutional administrators during the original survey, were also asked of the teachers themselves as in this context, as this was deemed more appropriate as these questions related to the institution's students and its teachers.

The majority of teaching practitioners viewed that the teaching and learning provision for ME was 'fair' with 45.5% of responses for each variable. It was interesting to observe that a 23.7% response was given by teaching practitioners who felt that the total time learning ME was poor and only 9.1 expressed a 'poor' response to the time spent teaching. This implies that this group of practitioners possibly feel that they already teach a sufficient programme, but that a solution to this is to call on other teaching resources. Having explored the frequency data for the availability of native English speakers to help students practise ME and the overall availability of native English speaking practitioners, the results are shown in Table 24.

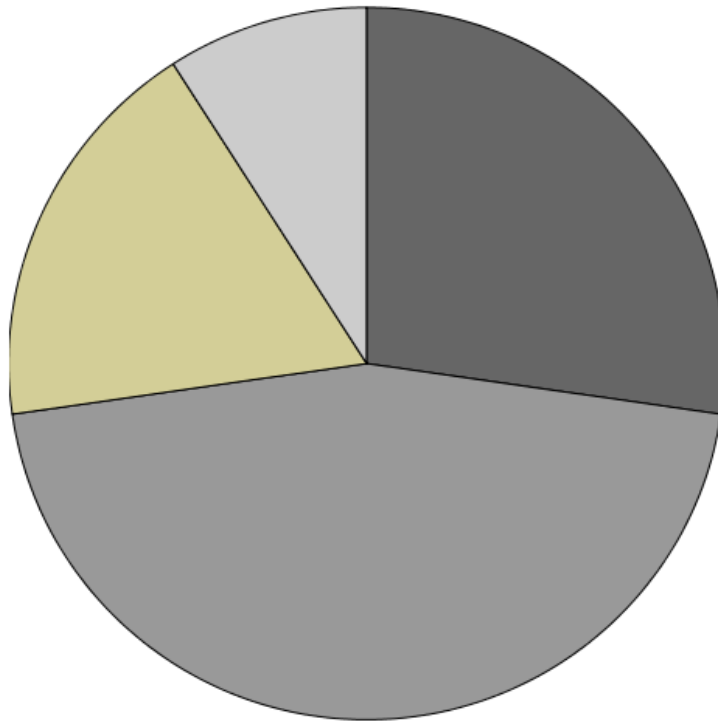


Figure 16: Attitudes to time spent learning ME

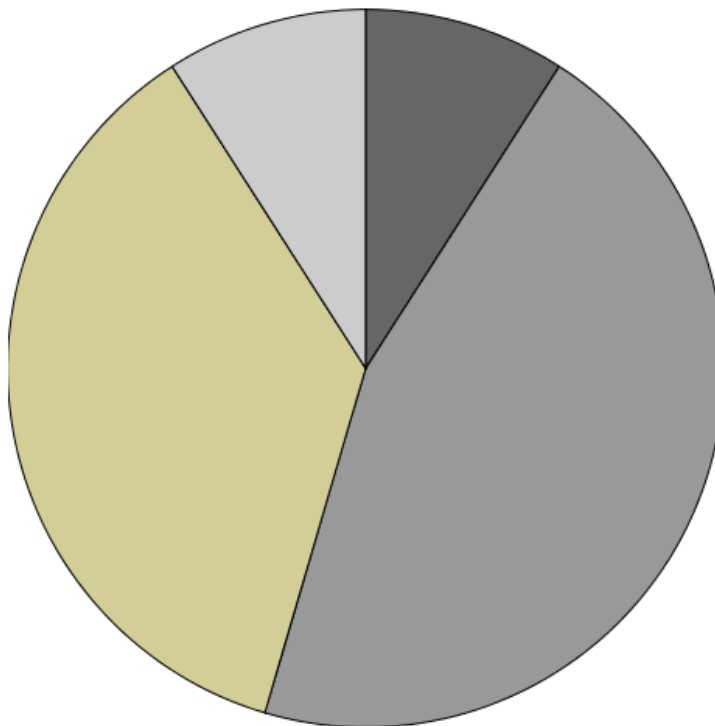


Figure 17: Attitudes to time spent teaching ME

Table 24: The availability of native teachers oral practice and teaching

Native for practice	Frequency	Percent	Native for teaching	Frequency	Percent
Very poor	2	18.2	Very poor	2	18.2
Poor	2	18.2	Poor	3	27.3
Fair	2	18.2	Fair	2	18.2
Good	3	27.3	Good	2	18.2
Very good	2	18.2	Very good	2	18.2
Total	11	100.0	Total	11	100.0

It seems from the teaching practitioners' responses that they feel the availability of native speaking teachers for students to take part in practice is generally 'good', but that their availability for teaching is poor. This could indicate that the ME teaching practitioners would like to see more native English speakers available for teaching ME as a possible solution. Another interesting set of responses are those concerning the level of English proficiency of the instructors of maritime related courses .

Industry stakeholders already choose graduates from the case study institution because in their mind it is exemplary, and one aim is that teaching practitioners would be able to look at this institution as exemplary and also feel they could learn from its practices. Kember and McNaught (2007:13) discuss having carried out a review in 1997 to ascertain if there were any differences between categories of beliefs of teacher about 'teaching conceptions between western universities and those in Asia'. Kember and McNaught (2007) did not find difference between conceptions of good university teaching by discipline or culture. Kember and McNaught (2007:13) found that these two

categories of orientation were 'reasonably consistent' with the 13 studies they carried out in Australia, the UK, Hong Kong, Canada, China, Singapore and the USA, indicating 'international applicability'. Their two main orientations that represent categories of teachers' beliefs are:

- 'Teacher-centred/content-oriented'
- 'Student-centred/learning-oriented'

(Kember and McNaught, 2007:13)

What made the review carried out in 1997 by Kember that is discussed in Kember and McNaught (2007) is that it reviewed a number of studies in terms of their findings and their methodology. A similar review was performed for this study, but on a smaller scale as there are only a limited number of existing studies into Chinese provision of ME teaching (WMU, 1998; Yercan *et al.* 2005). Despite both studies attempting to highlight the differences between Western MET institutions and those in China, it was found that when investigations were carried out, even repeating aspects of data collection from both of these former studies, that Kember's and McNaught's (2007:13) two categories ('teacher-centred/content-oriented' and 'student-centred/learning-oriented') were also characteristic of the findings from teaching observations performed at the case study institution. This implies that there is not such a great difference between the conceptions of good teaching of western university institutions as those in China, providing that these findings can be generalised in the case of other institutions.

By this point in time and as a result of phases A and B, problem framing and observation 1, a number of research questions had been formed based on time spent 'in situ' (Bogdan and Biklen, 1992:2). Some of these research questions could be satisfied in part by documents obtained as part of the problem framing stage of the ethnography, which were otherwise unavailable outside of the field. This was particularly the case, when considering the exploration of questions relating to the teaching syllabus at the case institution and the need to explore the general focus of; how embedded are macro policies for MET at the case institution?

Since phase A, attempts had been made to ascertain the level to which the teaching practitioners in this study were aware of the IMO's *Model Course 3.17 - Maritime English* (IMO, 2000;2009) and to what extent this affected teaching programmes, programme objectives and their individual teaching practice. It was possible through the extensive teaching observations performed in phase B to ascertain that the IMO's macro policy for adopting its model course for ME had reached a number of levels, namely teaching materials. On the one hand the text book reflected directly the contents of the IMO model course directly, whereas, on the other hand in its delivery, the model course's onus on the communicative teaching paradigm had been neglected. This was with the exception of one individual who had attended the IMO's ME Instructors Training Course (MEITC).

5.7 Interviews with GLMS stakeholders

Interviews revealed certain themes in relation to the host academic institution's graduates and recruitment in general. These are summarised in

Question category	Response themes
Attracted to recruit from case institution	Famous reputation Long history Recommended by others Good alumni relations and networking for graduates No special features Good quality for working in management later
Strongest graduate skills	Good theoretical knowledge of graduates Confident graduates Adaptable graduates
Weaknesses of graduate skills	Confidence to speak in ME Likely to switch company regularly Poor practical knowledge
Solutions	Onboard experience as part of training More opportunities to practice oral English

How compare to other MHE/MET (Eng)	The best, but still needs improvement Need to focus on speaking and listening Should be the best, but not sufficient
How compare to other MHE/MET (Subject knowledge)	Better theoretical knowledge Limited practical knowledge
How compare to other MHE/MET (Attitude)	Good quality status manes more choice and likely to change company regularly
Membership of officers union	Yes No
Nationalities onboard	China Philippines European Korean
Quota satisfied	Yes No Limited availability
Other institutions for recruitment	Shanghai Jlmei Wuhan (Tech.)
Case institution first choice	Y N Not necessarily Depends on needs of company Depends on salary company will pay
Preference	4

	3
	1
	Poor quality of 1 year top-ups
	Individual attitude is more important than institution
Residence	Rural
	No preference
Training manager	Yes
	Outsourced
	Recruiter is also TM

Despite being attracted to the case institution by its reputation, historic background, and recommendations of others in the industry, there were negative expressions about their practical skills and the attitude of the graduates in staying loyal to the training provider in return for their investment. Solutions to only one of these issues was offered and a number of recruiters suggested more practical training as part of the course, with one making the suggestion that time should be spent onboard during the degree course and before employment. The most significant strengths of the graduates were cited as their confidence, adaptability and theoretical knowledge. These are desirable skills of any HE graduate and this gives a clear signal that certain transferable skills are developed well through the degree programme. Interestingly English language was not mentioned as a particular strength and neither was intercultural competence.

English language wasn't raised as a strength until the GLMS stakeholders were asked how the case institution graduates compared to other those from MHE/MET institutions. Comments that their English and subject knowledge are the best were quite common. Interestingly a common theme was that more could be done to improve speaking and listening and that even though these students are better than others, it still isn't sufficient for the needs of international customers. Some recruiters confirmed their membership of the SMOU or similar organisations that run enhancement training programmes, while others stated that pre-sea training was outsourced in other ways or dealt with in-house. In all instances, a training manager of some description was responsible for coordinating this and monitoring the cadet.

A preference, or no preference, was expressed for recruiting rural graduates as they were more likely to stay in the job for longer. No GLMS stakeholders expressed a preference for recruiting graduates with urban residential status. Interviewees expressed a preference for graduates of four year degree courses and stated that they would visit the three other main MHE institutions (Shanghai, Wuhan Tech. and Jimei). Had this interview been completed at an FE recruitment event, then responses are likely to have been different. A few expressions of interest were made in three year diploma and one year top-up graduates, but those who had experience of the latter group had some reservations about the ability and the discipline of these graduates as cadets. One particular recruiter who was also going to visit various other institutions for recruitment, which were not limited to MHE, expressed that all graduates were of interest depending on the needs of the employer. Another

expressed that it was the graduate's individual attitude rather than their educational background that was of most importance.

5.8 Interview with Dean of Navigation College

The interview with the Dean of the Navigation College provided much valuable insight for continuing to build a theoretical picture of the local teaching and learning ecology in terms of it's the needs of teachers and learners, the opportunities that are available and the constraints upon the setting. Some ideas had been formed already from general discussions and from having got to know how certain processes operated through firsthand experience. The focussed coding created through previous research activities provided a sound framework for application to this interview transcript. In particular the interviews with GLMS stakeholders, classroom observations and discussions with individual teaching practitioners during feedback were confirmed and given greater depth through this additional analysis. One result of this process is shown in Figure 19.

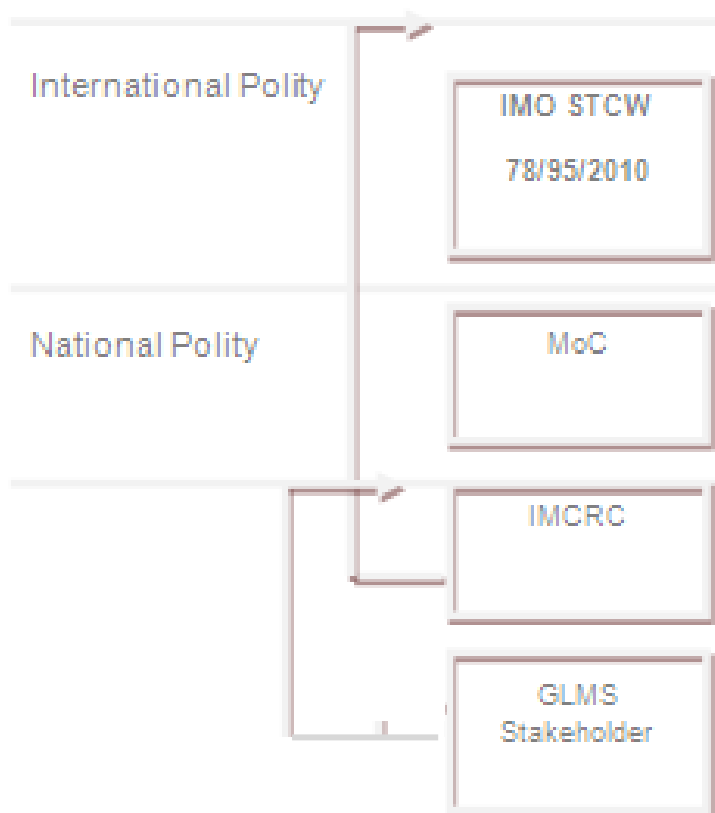


Figure 18: MHE policy environment

One particular area of insight that the Dean of the Navigation College revealed was concerning the attitude of the national policy makers from the MoC (now under the MoTPRC) on innovations in teaching and learning in the discipline of Navigation:

‘They say ‘you are free to set the standard’. So you will find in China that there is a Maritime Teaching and Instruction Committee. The Chair of this committee is our ex president... and I was already the secretary for five years already before I studied overseas, now I am a member of this committee...we are going to set the requirements for maritime education and training.’

When asked about the timeframe for this development or a development plan, he responded that:

'We will make a general curriculum that the university or college can adjust for their own characteristics. We have a standard textbook, every five years we need a new edition. In 2007 it will be renewed [in 2012 it will be renewed again]. But they should have their own reference [materials]. They [should] see the textbook, and then adapt it... Some universities would like to use this basic textbook, but some add their own materials. Technology changes so quickly so they need to add information.'

5.9 Summary

This section of the summary is concerned with summarising the main findings relating Chinese university student participants in light of three main perspectives. Firstly, their current language learning while studying the existing national curriculum and set texts for ME was evaluated through classroom observations, language tests, and through surveying. Observations involving student participants became more interactive during the second phase, when teaching practitioner feedback and student group discussions took place post observation. In the third stage of the research, students took part in experimental ME classroom learning, and small group tasks, which were paired with semi-structured interviews based on the pilot survey.

Overall, Chinese students studying ME as part of the Navigation degree programme felt constrained by their competencies in oral English. Some felt constrained to the extent

that it affected their choice of nationality of potential employer, with both positive and negative correlation with this variable. Qualitative data revealed that the students had positive perceptions of the training programmes on offer outside China for graduates recruited to foreign shipping companies. One company that targets recruits for selection to study overseas from the first year of the degree programme at the case institution was particularly well known and was given a prestigious status among the second and final stage Navigation students interviewed for the study.

The MHE Navigation students interviewed perceived themselves to hold a higher status than those from other institutions. As students at a large government funded institution, many held their job prospects in high regard and believed this was their key to a short period of service at sea, before being able to move into shore based jobs in the maritime industry or to set up their own businesses using funds accrued for between eight – ten years of spent at sea. It is interesting to note that these interviews were carried out at a time of buoyancy for the shipping industry (2007) and that the same interviews carried out in a time of recession may have resulted in different results. At the time of leaving the field in 2009, key informant students with whom regular contact had been maintained, were expressing a change of heart about continuing to work at sea for a potentially longer period due to the economic slowdown and those who were intending not to go to sea upon graduation had found themselves forced into gaining seagoing experience in order to put themselves in a competitive position in the job market.

The final stage Navigation students' results for task-based language testing show that few are at an operational level according to the scales applied (YME, ICAO and IELTS). In the survey, many expressed that they want to work for foreign firms to improve their English, but not always possible and stakeholders indicate they want them to come better prepared from their training establishment in terms of their English language competency. However, master mariner results revealed that even after ten years sailing that some officer's level were only just at the pass threshold, while others showed moderate improvement. It was anticipated that the captains would achieve at least an *operational* level of 4 according to the ICAO descriptors.

Taking a top-up year's study in Navigation or Marine Engineering for graduates of other disciplines has already proven popular. The case institution were able to offer such courses to the surplus of young male graduates who had not found jobs once finishing their original university degree studies. These newly competitive conditions in the maritime labour market are likely to impact on the findings of this study and to adversely affect the treatment and conditions experienced by Chinese graduates of maritime programmes entering the international labour pool. The opportunity to test a sample of these students' language ability did not arise, but stakeholder interviews indicated that these students were not as desirable due to the ability, subject knowledge and attitude.

Concerning the quality of the learning experienced by final stage ME students, instead of being encouraged to study for the sake of loving the subject area or for the sake of studying (Ramsden, 2003), students undergoing ME learning are studying for the sake of their personal career. Popper (1995) has his theory on this phenomenon of too much emphasis in higher education on students being encouraged overly to study only those factors relevant to their future career in so much as:

...he is led to acquire only such knowledge as is serviceable in getting him over the hurdles which he must clear for the sake of his advancement.

(Popper, 1995:143)

In terms of the specific findings of this phase of the research there was one overall conclusion about the *educational problem* facing the research setting. Firstly, there is evidence of great awareness among staff and students of the importance of the English element of the education programme for Merchant Marine Cadets, but at present there is a lack of empowerment for the institution's staff and their students to change the system to facilitate greater depth learning of language through CLT or creating an immersive a CLIL environment. The main conclusion being that the form of the national assessment for ME, which is a multiple choice examination for which students study through memorising answers from a question bank, needs to change first before the teaching and learning environment can change.

In summarising the main findings concerning Chinese university teachers' beliefs about ME learning and teaching, overall this group perceived many constraints in terms of the freedom they had with the curriculum and their teaching approach. However, when the Yercan *et al.* (2005) survey instrument was repeated, this group did not concur with the findings of this research and offered quite contrary responses to the course administrators who had been targeted in the original research. Many positive responses were given to aspects of the programme such as the presence of native speakers for practice of oral English and the time spent teaching ME.

Initially, institutional management level staff involvement was a limited factor in the study. There were many reasons for this, but differences in research culture were a significant factor. Early interactions included a handful of discussions with departmental leaders, but was dominated mostly by contact with the Dean of the Navigation College and his research centre staff. There was also the occasional chance to interact with the Deputy Director of the International Cooperation and Exchange department, but this was not of specific information gathering value, and it served merely to extend friendship and cooperation between our academic institutions.

Overall, there was much evidence that staff and students alike had high regard for the importance of the English language element in internationalising Chinese MHE. However, the bottom line from discussion with both parties was that until the style of assessment changes, the teaching of ME in institutions is stagnant to change. Despite

the students' own desires to manage their learning and to manipulate these learning strategies to their optimum, there is great pressure upon them to learn by rote. Teaching and learning for the current examination system consists of memory cramming for this examination from a question pool. It is recognised widely at the institution, by its teachers and by its students, that this is not a healthy way to examine competence, but that with such high numbers of students and without a change in the exam there is no choice for the teachers and the institution but to continue to foster this approach. This assessment mode is certainly to blame for the rote conundrum; the imposed constraints on the students that causes them to rote learn as opposed to providing a platform for depth-learning. Observation activities at the case study institution raised comments from senior English teaching staff that examinations were necessary in the existing system to 'motivate' the otherwise assumed to be un-driven students:

If students perceive that their learning will be measured in terms of reproducing facts or implementing memorised procedures and formulae, they will adopt approaches that prevents understanding from being reached

(Ramsden, 2003:177)

During the researcher's own training as a teaching practitioner in HE, there was much emphasis placed on carrying out peer observation between teachers. This process was of utmost value for the purposes continuing professional development and is one supported by Ramsden (2003). It allows for the continued development develop of teaching practice, but it can also serve as a tool in comparative educational research.

During the researcher's own teacher training course, such teaching observations were invaluable in making progress with professional development. Due to the high numbers of international students enrolled at the researcher's own academic institution, focus on the development of internationalisation within higher education has been a long standing feature in the home institution's research and teaching agenda (Knight, 1993;1997).

Prior to visiting the host Chinese MHE institution to carry out this PhD research, the researcher had been working predominantly with overseas students and helping them to prepare for studying within the discipline of Business and Management. The majority of the students encountered in the researcher's own teaching practice, both at the time of the PhD research and today, use English as a foreign language. The majority of these students are from China and the researcher's previous experience of teaching this cultural group provided great insight into the Chinese learners' expectations of teaching and teaching in HE.

The findings of interviews with maritime industry stakeholders reported in this chapter revealed a series of issues, each of which were revelations and required further investigation. In particular, the findings in relation to the perceived needs for improvements to the provision of MELT held by the maritime industry stakeholders, were of specific interest for further research in subsequent phases of inquiry.

Once access to the English classes for Navigation students had been agreed, it seemed appropriate to use the same professional development tools as a means by which to establish understanding of the local teaching and learning ecology. In other words, due to the influence from own experiences of undergoing training for teaching in higher education, the means of using teaching observations was transferred to the research setting. However, the observations that took place during the phase of the research that is reported above did not conform to this model entirely. It has already been mentioned that a classroom observation differs from a teaching observation as the latter involves prior communication between observer and observe to establish aims and learning outcomes. It is also followed up by feedback and reflection. Being in a position to carry a much richer set of observations at a later stage, and when a greater degree of participation in the research setting had been achieved, was a clear goal from this point forward.

What remained to be questioned was their mechanism for doing so and their proposed means for achieving their objectives for staff development and institutional reform. Would the reform fit with the perspectives of Havelock (1969) i) research, development, diffusion ii) social interaction iii) problem solving or Havelock and Huberman (1977); i) participative problem solving ii) open input iii) power iv) diffusion v) planned linkages. The research design outlined in the following chapter is one of *participative problem solving*.

Chapter 6 – International collaborative innovation

6.1 Introduction

English learners were not satisfied with the CE [College English] education in universities under the 1999 Curriculum and there was strong appeal for ELT reformation towards the cultivation of practical language skills.

(Luo, 2007:248)

This quotation is taken from the PhD thesis of the academic leader participating in the MEPLC at the MHE institution. The findings of his study mirror much of the academic literature surrounding the emergence of alternative pedagogies for ELT teaching. The general consensus is that the globalised marketplace is seeking graduates who can communicate effectively in *global English* (Graddol, 1995;2006). The GLMS is no exception in the need to meet this demand. This chapter of the thesis documents the joint efforts of MEPLC at the case institution and an industrial stakeholder in developing a new ME curriculum to meet the needs of the GLMS for graduates who are competent in English and who can communicate effectively in a multicultural environment.

6.1.1 Relevant research objectives

iii. To explore the scope for innovation and change in the local teaching and learning ecology through collaboration between local teaching practitioners and an external stakeholder.

iv. To seek to empower the local teaching and learning ecology's practitioners to implement educational change and innovation .

The focus of the first part of this chapter is on evidencing the participatory, educative nature of the collaborative research efforts in identifying opportunities for innovation and change in Chinese MHE (research objectives iii). The focus of the later parts of this chapter is on evidencing the necessity for external influence to effect educational innovation and change in Chinese MHE when it comes to implementation (research objective iv).

This chapter reports a period of regular interaction in the research setting as a practitioner researcher operating as part of a PLC, the MEPLC. This chapter emphasises the importance of forming PLCs (Erikson *et al.* 2005:2008; Ryan, 2011a) and involving local teaching practitioners in the educational development process when carrying out research in China (Bax, 2003; Hu, 2002;2003;2005; Zhong, 2006; Kang *et*

al. 2011). Evidence from this phase of the research is used to present the argument that the project holds a high degree of *catalytic authenticity*. However, certain constraints existed that prevented *tactical authenticity* being achieved and these are given recognition in this chapter. The conclusion reached is that without a change in social conditions that teaching development projects are limited to classroom implementation by individual teaching practitioners. The major finding of this phase of the research is the need to alter the structure of initiating institutional educational change and development. This is necessary in order to empower the teaching practitioners to disseminate their findings and to consummate their desires to implement their innovations outside of the confines of their classroom practice (research objective iv).

Data were collected over a 12 month period during which six months of part time research were spent immersed in the setting to gain depth of understanding while also attempting to engage its participants. The remaining six months were spent operating as part of a PLC consisting of teaching practitioners, an academic research group leader and an external stakeholder representing the interests of the GLMS. This phase of the research was carried out as a practitioner researcher though what evolved to be an ethnographic action research strategy. This chapter focuses on the perspectives of conventional and contemporary educational development theory in relation to initiating and implementing change and innovation in education. This chapter reports a phase of the research that was concerned with exploring the factors affecting the initiation of educational change and development through gaining an in-depth understanding of the

current knowledge-awareness, attitude formation, and decision making systems at the MHE institution in question (Zaltman *et al.* 1973).

This aspect of the research is difficult to report in standalone chapters by themselves. Theoretically what the researcher was trying to achieve can be divided into three main strands i) knowledge, ii) innovation and iii) implementation. The *knowledge* phase (Rogers and Shoemaker, 1971; Zaltman *et al.*, 1973) of building up the PLC (Erickson *et al.* 2005;2008; Kang *et al.* 2011; Ryan 2011a) involved six months of participation in the research setting. During this time the researcher was engaged in part time Mandarin language study, experimental teaching practice and various attempts were made to engage the setting's teaching practitioners in exploring opportunities for innovation and change. While much of the findings of this aspect of the research are reported in chapter 5, it is of relevance to what is being reported in this chapter also. As such the proposal that was made to the institution and the experimental classroom teaching practice are included in this chapter as they complement the reporting of two further stages of educational change and development; innovation and implementation.

The innovation phase involved approximately four months of collaboration on curriculum and syllabus design between the host Chinese MHE institution and an industry stakeholder with the researcher acting as a *critical friend* (Erickson *et al.* 2008). The researcher was then involved for two month of consultation during the implementation phase to begin the development of course materials (Appendix 21). After this period of

collaborative research, implementation continued in the form of 12 months further collaboration between the host MHE institution and the industry stakeholder to produce course materials for the new curriculum and syllabus for ME teaching.

While this knowledge phase is judged on its *catalytic authenticity*, the innovation and implementation phases reported are appraised on their *tactical authenticity*. This choice of analysis framework (knowledge, innovation and implementation) is based on existing educational development theory (Rogers and Shoemaker, 1971; Zaltman *et al.* 1973; Levin, 1974) and the contemporary policy environment for China's HE reform and internationalisation (Zhong, 2006; Leggott and Stapleford, 2007; Morgan and Wu, 2011; Ryan, 2011a;2011b).

This chapter is concerned with positing the thesis statement that international collaboration on CLIL curriculum development, which includes GLMS stakeholders, is necessary for internationalising Chinese MHE. The opportunities and constraints realised from earlier phases of analysis were built upon in this phase of the research in terms of the extent of internal and external influence on effecting educational decision making, innovation and implementation. The outcomes of earlier phases reveal that innovation in ME teaching and learning is largely externally driven by government policy in response to China's increased role in the GLMS. The research so far had been successful in achieving *catalytic authenticity* in so far as the MELT participants were moved to act on the findings of the research, but consummation of curriculum

development aspirations had not taken place due to a lack of meaningful power to act (Lincoln and Guba, 1985). However, earlier phases of the research, and earlier chapters of this thesis, highlight that the balance between superior and subordinates in educational development (Rogers and Shoemaker, 1971; Zaltman *et al.* 1973;1977; Leving, 1974) is altering. This is due to the changing policy environment in China from 2001 onwards, which is targeted at the internationalisation of HE (Zhong, 2006; Leggott and Stapleford, 2007; Morgan and Wu, 2011; Ryan, 2011a;2011b). The resultant ‘reconceptualization of curriculum’ (Zhong, 2006:376) provided the research setting’s actors a unique opportunity for seeking alternative ways, other than educational polity, of effecting their desires for innovation and change in the context of MHE development. Namely this was achieved through industrial stakeholder involvement.

Table 25: Data collection phases D and E

Phase	Description	Duration	Interaction* ₁
D: Regular interaction - Innovation	<ul style="list-style-type: none"> MEPLC collaboration on developing new ME syllabus 	12 weeks June 2008 – July 2008 September 2008 – October 2008	Participant as observer/researcher
E: Leaving the field - Implementation	<ul style="list-style-type: none"> Consultation on materials development 	June 2009 – July 2009	Complete participant

6.2 Becoming a participant as observer/researcher

This ethnographic action research was carried out to aide MELT teaching practitioners to improve the quality of their teaching. The syllabus that was developed by the collaborative research process is not only from this period of regular interaction, but from a total of 15 months of field studies at the case study institution. The thesis underpinning this advice is based on the findings from time spent observing teaching practice, analysing the needs of industry stakeholders and attempting to implement the content and language integrated learning and teaching initiative that is the response to these needs. Teachers who have followed the advice that has emerged from this study went on to improve the quality of their teaching to meet the industry stakeholders' needs.

During the five months since leaving the research setting after phase A-B, it was necessary to work towards the plan to return to the field for a prolonged period of regular interaction. This planning involved logistical steps as well as ideological ones. Through time spent at the host MHE institution in China already, it was apparent that certification and qualifications were very important for acceptance of outsiders into the research setting. As it had been had decided that the approach to this prolonged phase of research was going to be as a teaching practitioner, steps had been taken following phase A and B to prepare for this role, which included completion of studies towards a PG Cert in Learning and Teaching in Higher Education to gain accredited teacher in HE

status with the Staff and Educational Development Association (SEDA) and to become a Fellow of the Higher Education Academy (HEA). The additional step of a one month intensive teacher training programme to gain a University of Cambridge ESOL Level 4 Certificate in English Language Teaching to Adults (CELTA) was also undertaken. All of these activities were to help with being accepted in the field as a teaching practitioner as observer/researcher.

For the researcher, the process of developing skills in teaching and learning in HE were seen in the same light as this PhD; as part of a necessary programme of professional development as a practitioner in Higher Education. Undergoing these studies in LTHE provided great insight for this international comparative education study. The opportunities opened up by being a qualified and active MHE lecturer and being able to share experiences with teaching practitioner colleagues at the Chinese case institution provided invaluable opportunities to compare and contrast each educational system. This assisted greatly in learning more about how they approach their work and their views on Western education. It was also felt that by having completed the certification process prior to the proposed period of practitioner research would make being appointed as a visiting lecturer (*foreign expert* is the term used by the Chinese embassy when issuing visas to overseas teaching) more achievable and ensure success in changing roles from 'observer as participant' (Gold, 1958:221) to 'participant as observer' (Gold, 1958:220). It was also hoped that this would provide the chance of discourse with other teaching practitioners regarding learning theory and their own teacher training experiences.

The case institution's present policy for employing *foreign experts*/visiting lecturers for Navigation programme was to advertise for retired captains from overseas to come to be employed in the task of teaching and to supplement this with preparation for the national examinations in ME with preparation classes from English speaking Chinese teachers from the institution's Foreign Languages College. Based on inquiries made with administrative staff it was revealed that only three retired captains had come to the institution to teach who had all left after one or two terms after having to return to their families or through being dissatisfied with their teaching experiences. As the researcher was not a retired captain, although some sea going experience had been gained ten years previously, it was not possible to be appointed directly by the Navigation department for such teaching. However, it was not desirable to be appointed along with other foreign teachers of English in the role of an oral English teacher. Instead, a special part time research/teaching appointment was made and time was spent shared between the IMCRC and working with undergraduate Navigation students and CMSA postgraduates for the Foreign Languages College. During the first semester of the academic period 2007/8 the role fulfilled as a researcher at the institution was that of a *foreign expert*. At times this could have been classed as a 'complete participant' (Gold,1958:219).

The sources of data that follow are presented in such a way so as to interrelate what each case has to say about the nature of different types of educational problems and

resultant innovations in each of their different situations. They are also presented in relation to the theoretical explanations of (Rogers and Shoemaker, 1971; Zaltman *et al.* 1973; Havelock and Huberman, 1973; 1977) as to why and how innovation and change take place in the setting. This is carried out with the focus of this thesis in mind, which is to present the process of change both as a chronological sequence and as a strategic cycle. In the chronological sequence, plans are originated and then implemented and adopted, or rejected. In the strategic cycle, the appropriate methods of investigating and solving problems in a social situation, in this example within the context of education, are selected in a deliberate fashion. Havelock and Huberman (1977) coined this approach by exploring both the chronological sequence of educational innovation and change and its analysis as a strategic cycle.

One of the merits of this approach is that it 'transcends the false polarity of 'developing' and 'developed' education systems, while taking account of differences between various countries of various forms of in-school and out-of-school education.

(Havelock and Huberman, 1977:10)

6.3 Innovation to solve an educational problem

Havelock and Huberman (1977) describe five strategies for educational innovation in developing and transitional economies. Originally, Havelock (1969 *cited in* Havelock and Huberman, 1977:249) identified just three predominant patterns in educational

development; i) 'research, development, diffusion', ii) 'social interaction' and iii) 'problem solving'. This study is possibly best placed in the *problem solving* category.

The case institution was joined initially in 2006, during which time they were already going through a period of reform in Chinese education through the 2001 and 2006 five year plans and the 2004 CECR. This reform process is still ongoing and is on both micro and macro levels. On the micro level the case institution's attempts to reform teaching and learning were made known during the interview with the Dean of the Navigation College. On the macro level, reference was also made during this same interview to national MHE reform. It became apparent in phase C that the macro education reform policy of the MoE was having noticeable effect. One of the MELT practitioner cases talked of his experiences while taking part in teaching exchange visits to two Australian institutions to take part in a comparative educational study during the previous 18 month period. However, on a micro level the teaching practitioners were frustrated as they felt that internationalisation agenda was not yet evident in the level of freedom they perceived in their teaching practice. Because of this situation the next obvious task of this PhD research was to seek opportunities for action as a driver of innovation.

6.4 ME learning and teaching proposal to the institution

In chapter 5, the outcomes of the institutional management level interview are reported as part of the 'further fact finding' (Lewin, 1946:205) are outlined. This stage of *further fact finding* is necessary in preparation for carrying out action research. Upon reviewing this interview as well as the comments of teaching staff included in a series of research diaries from phase A and C, it was decided that the appropriate role to adopt was as a practitioner as researcher. At the outset and for the first semester, action was performed alone in preparing and teaching communicative lessons in ME. At the end of this period, a proposal was put together for further action. 5 months into the ethnography, during phase C, the Navigation department was lobbied in pursuit of this proposal.

Based on observations during phase A-C of the research, it was felt that that during years one and two of the Navigation programme that there is room to expand the MELT provision in order to enhance the quality of the programme for the students. This is desirable to assist in raising the overall employability of the institution's Navigation graduates in the GLMS as effective communicators, and to motivate students to become lifelong learners and to adopt language learning strategies in developing their communicative competence throughout their seafaring careers.

It was believed at the time of writing the proposal that students were studying a programme that lacked coordination between the Maritime context and the acquisition of English language skills. It was also believed that the Navigation students needed this type of intensive input throughout their programme to strengthen their relatively weak use of EFL, which was revealed through the extensive testing carried out in phases A and B. The proposal submitted to the case institution was formed initially on a desire to work towards implementing the IMO model course and to seek to promote cooperation between the Navigation College and the Foreign Languages College for the wider use of communicative teaching methods as a solution to the observed deficit in communicative competence. It was also hoped that this cooperation would foster relations between teachers in both departments and lead to possible research collaboration.

6.4.1 Stage 1- Resources sharing

The proposed timescale for this aspect of the project was June to July 2008. Work had already been underway exploring the availability of the necessary resources for teaching the IMO model course. The majority of the recommended resources were found to be available on campus and it was recommended that additional materials could be sourced on a purchase and or loan basis to complete the necessary reference list of books and materials. This would involve the cost of purchasing the relevant books from overseas. In addition to this, subscriptions to a number of English language journals of general interest to staff of the Navigation College and for use in teaching were recommended e.g. Lloyds List and Lloyds Register Fairplay. The use of such

materials had been trialled successfully during the previous last semester in some test classes and has since been continued this semester with advanced learners from the MSA. It is believed that these will be of interest also to the WMU MSEM programme and that these resources have multiple applications.

It was proposed that the relevant materials be brought together and kept in the International Conventions Research Centre Library or in the Old Library English language/maritime collection. The IMCRC library is preferable as it will increase the incidence of English teachers from the foreign languages college coming to Hang Hai Lou and their networking opportunities with Navigation College staff. This networking is desirable so these subject experts may answer any ME terminology enquiries of the English language teachers and vice versa. If this is not possible, an indexing system should be set-up and maintained in both of these locations to allow teachers using the resource to locate materials easily.

It was proposed that specific materials for teaching the core hours of the syllabus be put together and are available as teaching units. Teachers may then take these from the resources room and reproduce them for use as class materials. Where possible these should be provided in CD format so that they may be used in classrooms with computers and projectors. This aspect of the provision of materials would involve some printing and photocopying costs and arrangements for a budget to cover this should be negotiated between departments. It was suggested that there is a move away from set

text books in order to promote academic creativity in teaching, provided the syllabus is satisfied.

6.4.2 Stage 2 – Pilot Teaching

It was proposed that classes begin with selected groups of students during the Autumn Semester in 2008. This would involve students attending classes for two periods per week during the pilot project timescale, dependent on timetabling and teacher availability. In particular it is proposed that as a key staff member, personal involvement would be necessary in the project's commencement for a period of up to two months to include instruction to teachers in the communicative teaching style of the model course and the demonstration of the use of materials (which may begin as early as June and July of 2008). In addition to taking on some of this teaching responsibility of up to 12 hours per week, therefore, responsibility for three class sets twice per week would also be taken.

As far as the host MHE institution were concerned, their suggestion to solve the educational problem was to attract English speaking maritime instructors to their existing programmes. However, the hypothesis behind this pilot project was to draw on the existing teaching knowledge and experience of staff and to provide a comprehensive curriculum and materials to be used in collaboration between the Foreign Language College and the Navigation department, and in future the Engineering department, in order to satisfy the objectives of the IMO model course.

6.5 Developing and maintaining relations in the field

Armed with a proposal for a ME initiative for curriculum reform that had been approved by the Dean of the Navigation College, the Dean of the Foreign Languages College was approached for assistance. His reaction when discussing the mechanisms for reform reflected his staff's comments from phases A-C and gave the impression that their feelings were indicative of an institutional attitude. He expressed that although 'staff development and innovation' were encouraged, but that there was very limited time and resources for implementation. He went on to explain the validation procedure for courses and programmes revolving around the proposed core text books, which made innovative moves very difficult for individual teaching practitioners working alone on a subject that may not already have text books.

This discussion revealed that steps had been taken in the academic period 2007/8 to invite teaching practitioners to run an elective course for two hours per week through which they could use experimental means of learning and teaching. The purpose of this was to encourage innovation, but to control it also. According to one institutional management level case during an informal chat on this topic, it was not the intention of the HE reform policy to allow for the teaching practitioners at the institution to experience the same degree of academic freedom that 'you [referring to the researcher] might enjoy as a 'Western academic'. Instead, it was to encourage innovation in teaching practice as 'just one step in institutional reform'.

6.5.1 Cases

In phase A and B there were two groups of research cases i) student cases and ii) teaching practitioner cases. During phase C these cases were expanded to include a third contextual component iii) industry stakeholder cases. In phase C, critical case sampling was performed to find members of the MELT staff who might be suitable members for some form of group problem solving. MELT practitioners were familiar with the researcher already through classroom and teaching observations and surveys performed in phases A and B, and as colleagues in phase C. It was desirable to seek out individuals who could be involved in collaborative problem solving in order to gauge their opinions and attitudes towards innovation.

Having faced difficulties during phases A and B with research informants' attitudes towards the research approach adopted so far and a lack of understanding of participant led research, there was the concern that this process might not be a straightforward. The researcher already had a reasonable level of experience in running seminars and continuing professional development workshops outside the research setting. The intention was to run a series of professional development workshops in order to a) further engage the group in the cycle illustrated in Figure 19 and b) to gauge the group's perspectives on innovation strategies.

In response to the findings of phase A-C and through the assistance of the Vice Dean of the Foreign Languages College it had been arranged for the researcher to run a development workshop with MELT staff. This was aimed at facilitating information and ideas exchange with the relevant group of teaching practitioners responsible for ME. The topic of this workshop was on CLT and the feasibility of the *IMO Model Course 3.17 - Maritime English*. Some aspects of this workshop were successful and it was very insightful in gauging the attitudes of staff towards CLT and the materials available for teaching the IMO Model Course in question. However, it was not successful in engaging the staff in problem solving action. Comments made by MELT practitioners revealed that they did not have the freedom to use their own choice of materials for teaching ME and that the examination system was the most delimiting factor. Some MELT practitioners expressed that it was up to the institutional leaders and the government (MoE/MoC) policy to decide which textbooks would be used. This can be described using Havelock and Huberman's (1977:255) 'power' strategy to explain the difference in organisational culture between the Chinese teaching practitioners and these experiences in Western education. Havelock and Huberman refer to their third perspective on innovation in solving educational problems as 'power' (1977:255). This perspective involves the concept of law, directive or regulation to be 'power coercive' (Havelock and Huberman, 1977:256). In particular, Havelock and Huberman (1977) describe a strong temptation in developing countries to follow a power strategy for innovation with a number of projects still relying heavily on this approach. Some of these characteristics described by Havelock and Huberman's (1977) were observed in the research setting.

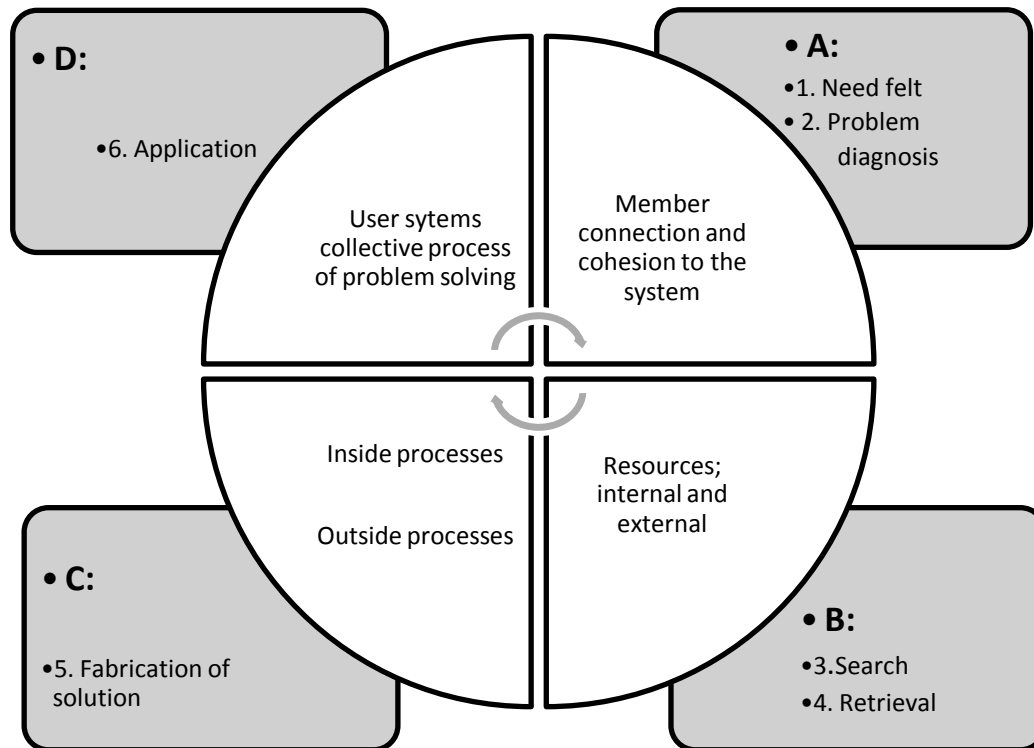


Figure 19: Phases of research inquiry and a user systems collective process of problem solving

Source: Adapted from Havelock and Huberman (1977)

The power coercive innovation strategy seemed to be present in this research setting. Following the first of the professional development workshops it was advised by one of the teaching practitioner cases that approaching the teachers individually for the best response. He used the phrase 'you have to remember that you are not in charge'. Although, on face value, this was a negative response this experience was still of value as it had been intended to gauge the group's perspectives on innovation strategies through heuristic means. By offering the workshop, it provided the first of a number of

opportunities for MELT practitioners to take up a participative problem solving approach and/or the dissemination through a social groups approach (Havelock and Huberman, 1977) e.g. through an LDC.

'there is no best method in the sociology of education only suitable and feasible methods'

(King, 1987 *cited in* Woods, 1992:394).

6.6 Creating and sustaining the Maritime English Professional Learning Community

In terms of leadership for this research project there were several levels. Given the broad spectrum of stakeholders, which ranged from university based Chinese educators, to Chinese academics, to foreign university academics, to international industrial stakeholders. In addition, given the nested design of the project, each level (Figure 20) has different goals and responsibilities.

Because of this complexity it was a necessary part of the design to have communication structures to provide coherence and coordination across these systems. As the project was being conceptualised by the researcher, a decision was made to carry out the research at one institution. Unlike the advocates of the PLC approach to teacher development (Erickson *et al.* 2005;2008; Ryan, 2011a; Kang *et al.* 2011), this research

was being carried out by an individual and not a team of international researchers. Nor did it have foreseeable scope to expand research activities to other MHE institutions.

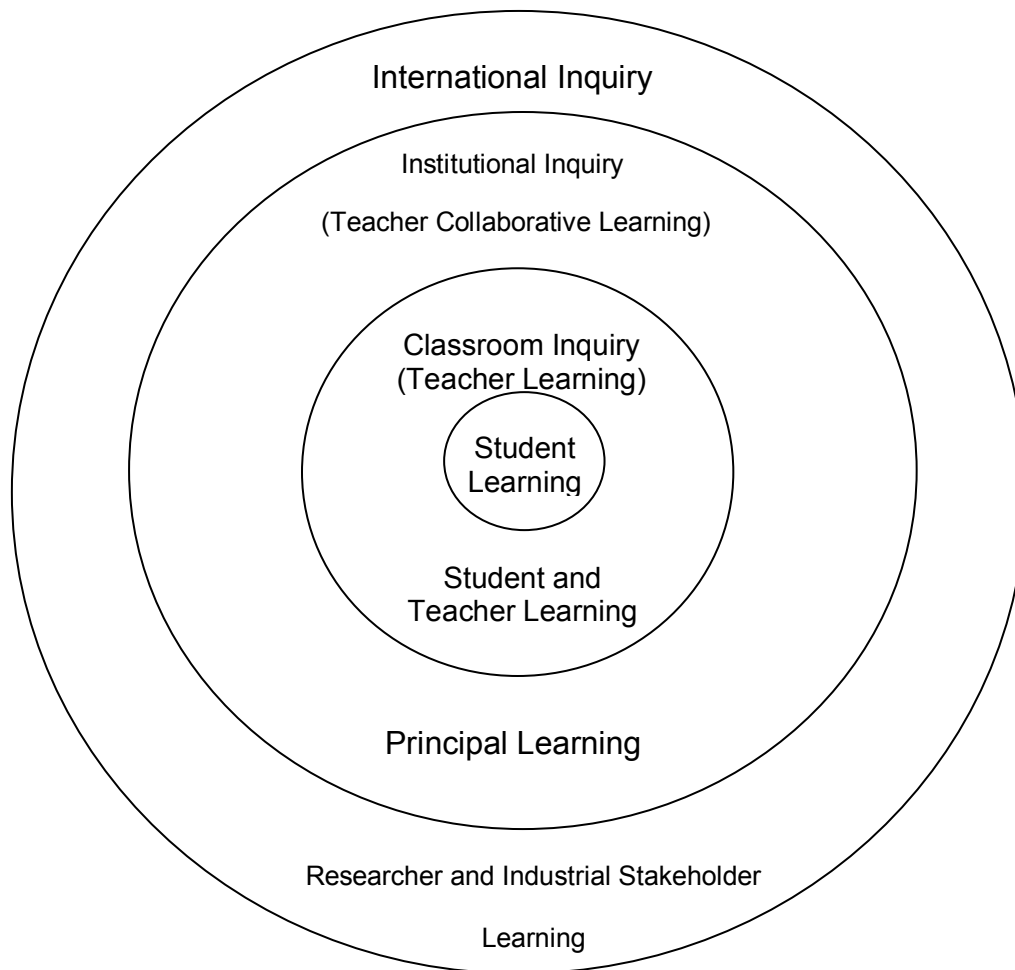


Figure 20: MEPLC educational collaboration model.

Source: Adapted from Kang et al. (2011).

A suitable case institution was selected and access negotiated through a series of professional contacts that have existing relationships with the institution. To achieve objective ii, the desired levels of interaction were at the *classroom inquiry* and *institutional inquiry* levels (Figure 20).

At the institutional level, an existing process of curriculum development was underway and it was possible to set-up this research as a sideline of inquiry to devise a new syllabus for ME teaching and learning. The curriculum development inquiry that was underway possessed a distributed form of leadership between both the Navigation College and the Foreign Language College, which was transferred to the initial stages of this PhD research.

The focus of this phase of the research was in part on the *classroom inquiry* itself, and on the transition from *classroom inquiry* to *institutional inquiry* in light of the project's research design. Kang *et al.* (2011:57) refer to this expansion of learning networks as to 'scale up' the research. This chapter reports on the processes of carrying out *classroom inquiry* research and the process of transition (scaling-up) to *institutional inquiry*.

As the project progressed to the *international inquiry* level, a number of teachers began to take on greater leadership roles within the team. This included collaboration on

conference papers for the IMEC 2008 forum to report on the project to an audience of international MELT peers. When considering making a formal proposal for institutional funding, some MEPLC members were proactive in this process. When the project took the step of involving an industrial stakeholder, these individuals joined the syllabus development team, with a clear chain of communication being established between parties. The *international phase* inquiry phase of the project was underway at the time of writing up this thesis, so these communicative structures were very important as the partners were sometimes together in China, but sometimes located in three different countries (the UK and Singapore). Email and Skype were used extensively. Face-to-face meetings were used to affirm syllabus design and reach agreement.

The majority of the teaching practitioner cases included in this phase of the study are those with whom the researcher had become acquainted through the classroom observations reported in chapters 5. In terms of Lincoln and Guba's (1985) steps of naturalistic inquiry, a relationship with these cases had already been developed and maintained over a period of a six week sojourn. Any new teaching practitioner cases were in substitute roles e.g. a foreign teacher left their job after the first term and another took their place automatically becoming a substitute case in the research setting. As ME was not offered during other research visits, it was necessary to carry out these observations during a visit in the spring term. A total of 24 hours of formal teaching observations were carried out during ME lessons. Data took the form of notes made by the researcher on the aspects of note of the teachers' classroom practice. Data were analysed by coding.

At each stage of the research it has been necessary to leave the field, but previous phases had contributed to a continuous process of research with each complementing and building upon the former phase. In the instance of phase C, it was easy to leave the field as a 'participant as observer/researcher' (Gold, 1958:220) as the end of the teaching term provided such an opportunity. The research setting and its actors very much considered this practitioner as researcher as one of their own. It was a very successful approach to have taken, as if this role had not been assumed it would have been at the sacrifice of being engaged with a number of interactions that otherwise would not have been experienced had the ethnography not been performed in such a manner. It is for this reason that phase D was necessary, in order to manage exit from the context and reverse the step of becoming a 'participant as observer/researcher' (Gold, 1958:220) to return to being an 'observer as participant' (Gold, 1958:221) and to enforce this role through these actions.

An interest-relationship perspective is taken to the analysis of this aspect of the MHE development project. Morgan and Wu (2011:2) refer to higher education expansion as a 'process of new industrial emergence'. When taking this perspective it is necessary to study this phenomenon in terms of 'motivation, dynamics, efficiency, impact and growth trends' (Morgan and Wu, 2011:2). Of importance are the relationships between stakeholders' interests and how their involvement is structured in terms of the 'responsibilities, contributions, challenges and possible solutions' (Morgan and Wu,

2011:3). Analysis is largely qualitative, but some quantitative data feature to provide an insight into certain characteristics of the local teaching and learning ecology.

One of the primary interests in carrying out educational research was to explore how international collaboration on inquiry into China's MHE teaching and learning practices could address the pedagogical challenges being faced by the research participants. As well as setting up and participating in a PLC along with teaching practitioners from the research setting, this research study featured a series of interrelated systems, which required focus beyond the classroom level. Kang *et al.* (2011:52) described their own research into educational reform in China as 'nested learning systems'. They took this language from the field of *complexity thinking*. By framing the study as a series of 'inter-dependent learning systems', it is possible to illustrate the levels of inquiry (Figure 20).

Most importantly the learning system of the student is placed at the centre. This is not just for the sake of illustration, but in actuality the students' learning should be the aim of all educational systems. By conceptualising the research design in this way, it recognises the high degree of inter-relatedness between the various levels of practice. What differs in the case of this study and that of Kang *et al.* (2011) is that their research was carried out in the K-12 (kindergarten through twelfth grade) setting. It is for this reason that one of the concentric levels has been removed in Figure 20. Unlike for the K-12 system, the district level of inquiry is not relevant for the organisation and administration of HE in China.

The communities of practice represented in Figure 20 are based on the PLC model and LDC models. The PLC model has been used successfully in many countries where reform of curriculum and pedagogy has been a desired objective. 'It is a 'bottom-up' model through which teachers carry out action research projects to improve their teaching and curriculum practices supported by university academics as 'critical friends'. The PLC model has proved very successful in assisting teachers to adopt and adapt to educational reform in ways that are 'effective and sustainable' (Ryan, 2011a:125). Throughout all research activities carried out in setting up and participating in the MEPLC, student learning was at the heart of all the means of inquiry and pedagogical activities. During the different phases of the research, inquiry moved between the classroom and institutional levels. At times the outer ring featured when visiting teachers from overseas joined in with the activities of the PLC, and when its members attended international forums e.g. the IAMU's International Maritime English Conference (IMEC). The principal level of inquiry, however, took place at the classroom and institutional levels. At the classroom level, this involved teaching practitioners and the researcher. At the institutional level, more stakeholders were involved including administrators, university academics, and management level academics. Each of these participants brought to the PLC differing concerns and practices. Kang *et al.* (2011) suggest that the teachers would be more concerned with pedagogical issues. Those with administration and management responsibility focus on approaches to enhance teaching practitioners' capability to carry out their work based on local conditions, as well as the possibility of setting up a supportive evaluation system. Academic

researchers are most likely to be concerned with enhancing the teaching practice and dissemination of the findings of the PLC.

The scope and complexity of approaching curriculum reform in Chinese MHE has meant that achieving change is not easy. Implementation of the broader curriculum reforms for HE takes time and a fundamental re-thinking of ideas and perspectives about teaching and learning by both teaching practitioners and institutional management (Zhong, 2006; Kang *et al.* 2011). The creation of the MEPLC for the sake of teachers' professional development must take into account the diversity of interests and practices of the educators and other stakeholders and to recognise that there is a certain amount of inter-dependence among the issues presented and each of their perspectives.

6.7 The innovation process

The industry stakeholder in question shall remain anonymous, but his role in the industry is as an MET consultant. In this role he collaborates with a large Chinese manning agent to provide MET services in China and Singapore. His customers are an international group of ship owning organisations that are employers of Chinese MET graduates.

The expression of need from the industry stakeholder was for a new 'textbook', 'course', or 'course book' for ME. At times he would refer to the need for a new 'test'. This meant that the project faced challenges in reaching the collaboration agreement stage as the needs for innovation were many and decisions had to be made as to which was the priority. In meetings with those he was representing 'testing' was of initial paramount importance. Upon further discussion at project meetings, the development of a course was identified as being the most important aim. The confusion had arisen over developing a test and not a course due to differing pedagogical perspectives. Some of the industry practitioners being represented by the industry stakeholder were of the belief that a new test would be the best way to improve the intercultural communication skills of Chinese Navigation officers. Others saw it that a new course and teaching materials were needed. Later discussion involved the industry stakeholder only as the decision making representative for this group.

During the innovation process the following matrix of trade-offs (Table 26) were given consideration at the various meetings held by the MEPLC with the GLMS stakeholder. The MEPLC and the GLMS stakeholder reached a collective decision to develop a new curriculum for ME teaching and learning. Above all, the reasoning behind this was the desire to promote CLIL as an educational proposal suitable for both employers and Chinese learners, which could be adopted by any MET institution in China offering the intermediate level of instruction for cadets and junior officers. The group also agreed to design teaching materials for the new ME curriculum, which could be used by any Chinese MET institution wishing to implement the curriculum. By creating this initial

curriculum and developing these resources was also seen as a way to invite critical scrutiny and further development through collaboration that would become wider than the institution:

A curriculum is an attempt to communicate the essential principles and features of an educational proposal in such a form that it is open to critical scrutiny and capable of effective translation into practice.

(Stenhouse, 1975:7)

All parties agreed on placing emphasis on communicative competence in teaching, learning and assessment. The current international and national policy environment also showed agreement that teaching and learning strategies should target communicative competence. To be more specific, the proposal to develop a CLIL curriculum for ME stemmed from a combination of the beliefs of the researcher formed from the independent and collaborative research activities reported in chapters 5 and 6 of this thesis; the findings of the previous research of the leading academic on the project (Luo, 2007); Graddol's (2006) concept of *Global English*; the GLMS stakeholder's interest in investing in educational innovation that promotes communicative competence; support from the Chinese MoE's 2004 CECR policy; and the IMO's model course for ME promoting CLT. Based on this premise, a students' ability to communicate should be the ELT priority in Chinese MHE institutions to meet the new communication demands of contemporary globalisation (see Table 27).

Table 26: Decision making matrix

Need	Limitations	Opportunities
Test	Lack of standardised testing adopted by the market. Competition from established tests. Intensive marketing efforts to convince companies to transfer to new test. Test development trialling very time consuming as one-on-one.	Opportunity to standardise testing in the Chinese market, with possibly expansion. Plenty of students available for trial use in development. Creation of demand for preparation courses and materials.
Course	Would require curriculum and syllabus design. Intensive marketing efforts to convince companies to transfer to new test.	Plenty of students available for trial use in development. Trial teaching can be performed in groups. Sale of course licence would create demand for course book.
Course book	Only in demand from those who wish to follow the prescribed course curriculum.	Sale of course licence would create demand for course book. Students following course at collaborating institutions would be in need of this item.
Textbook	Lower market demand than if accompanying a course. Lower unit cost than a course book.	Less intensive to market than a course due to lower price.

A comparison between the components of the collaboratively devised CLIL curriculum for ME, the CECR 2004 and *Global English* (Graddol, 2006) reveals that they have much in common. This strengthens the belief that that the particular model of ELT embedded in the new curriculum for ME is set to meet the demands of the GLMS as well as satisfying government policy. Through the new CLIL curriculum and syllabus, pedagogy shifts from being teacher-centred to being student-centred and focus is turned away from reading comprehension skills towards developing listening and

speaking skills. These are themes supported both by the CLT approach of the IMO model course for ME, and the CECR 2004. The new curriculum and syllabus for ME combine CLIL and CLT, while having been developed by the setting's academic management staff, teaching practitioners and a visiting overseas academic in collaboration with an industrial stakeholder. This removes the danger of it being rejected as an *educational import* (Zhong, 2006; Ryan, 2011a). The collective decision making and the pedagogical factors influencing the choice of a CLIL curriculum are shown in Table 27.

In the conventional model of curriculum development in China, the decision making would have been carried out at the national level of authority. The Chinese government's 'enormous investment in the expansion and reform programme' (Ryan, 2011b:1) commenced in 1999. Subsequent policy, including the 11th five year plan from 2005-2010, has resulted in 1.5% of gross domestic product (GDP) being spent on Higher Education expansion and reform. Foreign involvement is also encouraged for the sake of bringing in additional institutional revenue as so that institutions can benefit from the idea sharing process:

China has had a policy of insisting that any foreign involvement in higher education in the country be in collaborative arrangements with Chinese partners. This is a wise policy as it ensures that Chinese institutions will have significant participation in decision-making at all levels, and also means that Chinese academic institutions can benefit from the ideas coming into the country - and ensure, as the Chinese say, that foreign imports will have 'Chinese characteristics' and meet local needs.

(Baty, 2009:n.p.)

Table 27: ELT pedagogy comparison table

	2004 MoE CECR policy	Global English concept	IMO Model Course 3.17 – Maritime English	New Maritime English CLIL curriculum
Aim	Effective exchange of information through spoken and written modes. Independent study. Improving cultural skills to meet the needs of social development and international exchange.	To enhance domestic employment. To communicate effectively with speakers of English from other countries.	Effective communication for onboard maritime scenarios.	Effective intercultural communication
Target variety	All varieties of world English	Focus on intelligibility internationally over a specific variety of English. Allow for the carry over of some L1 characteristics.	Focus on communication among mixed nationalities.	Focus on communication among mixed nationalities
Skills objective	Developing the ability for all-round effective communication with focus on listening and speaking. Improving intercultural competence.	All language skills (e.g. literary, translation and interpretation). Emphasis on intercultural communication strategies.	Focus on listening and speaking.	All skills with more emphasis on speaking and listening. Focus on genuine disciplinary materials.
Learning environment/ style	Learner-centred; communicative; computer-based; emphasis on both and face-to-face and independent learning.	Classroom recognised as key context, but its insufficiency is noted. Role of private sector and extra curricula tutoring emphasised.	Small groups, communicative teaching. Minimisation of teacher talking time.	Small groups, communicative minimising teacher talk time. CLIL content.
Assessment	Reform of CET. Formative and summative assessment.	To reform existing examination to become task based and to assess knowledge taught in through medium of English.	Formative and summative (Marlins TOE and ToSE).	A test of English for Maritime professionals similar to ICAO tests (using YME or adapted rating scale).
Learner motives	Departure from exam based token system e.g. CET. Desire to develop skills for intercultural communication.	Wider learning education and employability.	To be able to communicate effectively onboard ship.	To be able to communicate effectively onboard ship and meet revised language requirements and assessment arrangements.

Source: Adapted from IMO (2000;2009), Graddol (2006), Luo (2007), Bocanegra-Valle (2010).

For the purposes of improving the practical value of the ME curriculum, it was desirable to attract external involvement from the maritime industry. An industrial stakeholder had approached the research team a few months earlier with a request for staff to carry out some development work on a course for improving the English level of the cadets under his supervision (many of whom are Navigation graduates from the various MET institution is China). The industry stakeholder had approached the host academic institution via the author of this thesis as a result of meeting through a former student. This former student had signed an employment contract with one of the shipping companies represented by the industry stakeholder. At the time of meeting the industry stakeholder, the students had been taking part in an intensive three month training programme aimed at orientation for graduates before their 12 months of sailing time as cadets. The industry stakeholder had agreed that a research visit was made to the training programme to observe, and to meet participants and sponsors. The author was invited back for a second visit to the training programme where discussions to collaborate on curriculum development took place. The industry stakeholder was interested in collaborating with the host academic institution as the level of English of its graduates was perceived, by his customers, as being above that of other institutions and recruiting cadets from this institution was at a premium. In reality, only a small proportion were selected from those Navigation students interviewed for training contracts by the industry stakeholder. His commercial interests lay with extending the employability of the host academic institution's graduates through improving their intercultural communication skills and preparedness to work in the multicultural working environment. By doing so the manning agent for whom he worked as a consultant

would be able to secure more training contracts for Navigation and Marine Engineering graduates with overseas ship owners. The pedagogical interests of the MEPLC were very similar and the chance to involve an industry stakeholder in curriculum development was an exciting opportunity for internationalising the curriculum through focus on intercultural communicative competence as one of a group of transferable employability skills (Leggot and Stapleford, 2007).

Graddol (2006) suggests that Asia, particularly India and China, potentially holds the key to the long-term future of English as a global language. This is a particularly interesting concept that posits those who are its greatest users will determine how English will fare as the global language of industry, commerce and the Internet in the coming decades. It has already been outlined that China currently dominates the GLMS, so if Graddol (2006) is correct in his predictions then China's use of ME could shape how others use it in the future. This claim is not so far from the beliefs of the GLMS stakeholder and those he represents, who feel that China is leading the Asia Pacific region as a whole into domination of the GLMS. Not only is the development of a new curriculum for ME teaching and learning in China viewed by this group as a means to reform ME teaching and learning in Chinese MHE, but also as a model for other developing nations in the region wishing to break into the GLMS. From a business perspective, investment in educational innovation is a sensible step for ensuring supply and quality for the future.

Once the collaboration agreement had been set up to establish the level of investment of time and resources, and the roles of each party, the process collaboration for innovation took place for a further four months. This involved collaboration between the researcher, the host academic institution and the GLMS stakeholder to develop of a new curriculum and syllabus (see Appendix 19 for an example section overview and Appendix 20 for more detail), with the long term aim of creating accompanying materials. This involved the production of some draft course materials for the new ME curriculum in order to aid the project in reaching the implementation stage (Appendix 21).

6.8 Communicative language teaching classroom practice

In this phase of the research it was possible to engage in a prolonged period of action research, whereby a selection of lesson plans (Appendix 18) and materials were developed that reflected both the syllabus of the IMO model course and its intended delivery through the communicative teaching paradigm.

After two periods of previous research activity and sharing an office with the staff of the IMCRC, their trust had been gained and colleague status bestowed. Standard Marine Communication Phrases (SMCP) was the first class for which teaching responsibility was held as a *foreign expert*/visiting lecturer. Despite the title of the class being SMCP, the researcher was given the freedom by the Vice Dean of the Navigation College to be creative in its design and delivery.

As this was the first time teaching this class a request was made to see documentation of what else the students studied. This was so lesson design could draw on examples from subject classes and complement the students' learning. This information was requested directly from a superior member of staff. However there was some reluctance to share this documentation. This was chased up with the help of colleagues from the IMCRC. By this point the researcher was in a participant as researcher/observer role, which was possibly perceived as that of complete participant status by the office staff in question. The member of staff disclosed that 'the problem is that these documents are not for outsiders to see, but you are not an outsider, you are one of us'. The document was subsequently obtained and translated for use by the researcher. This is an example of the phenomena referred to by Gordon (2002:xii) that 'authentic information flows after the establishment of trust'. This confirmed that the additional step of becoming staff at the institution was a necessary step to establish trust in order to gain a level of access that otherwise could not have been achieved.

At the beginning and end of the first semester of teaching self efficacy was an issue surveyed with first year and postgraduate CMSA students. There was both an anonymous survey and a series of semi-structured interviews. The interviews were carried out in Chinese by a research assistant, so as to assist in maintaining student anonymity and to reduce the pressure upon them to provide positive responses to their

'lao shi' (teacher). These findings were discussed with Chinese teaching colleagues in the foreign language department who provided some insight of great importance.

63% of the first year class and 74% of the postgraduate class took part in the anonymous surveys and voluntarily provided answers. From these two groups a sample of approximately 20% also took part in a follow-up interview. During their first and their final lesson the students were asked to rank their self efficacy in the skills areas of reading, writing, listening and speaking. Ranking was on a 5 point Likert scale, with 5 being the highest. Within these skills sets there was also the division into fluency, lexical resource, grammar and appropriateness/pronunciation (the latter for speaking modules only). At the beginning of the month's teaching the first year group reported an average self efficacy score of 2.5, with their strongest skills area being reading. Postgraduate CMSA students expressed higher self efficacy with 3.8 and they also expressed that their reading was strongest of all skills. Both groups expressed that speaking was their weakest skills, with 1.8 and 3.2 respectively. At the end of the one month course both groups showed slight improvement in their self efficacy, which improved to 2.8 for first years and 4.2 for postgraduates. Speaking for both groups showed the greatest perceived improvement with 2.2 and 3.8 respectively. Responses are likely to have their limitations as the researcher was acting as the teacher for both groups. There was no formal assessment, so the students were not under any pressure to please the researcher in an attempt to do well in exams, but there still could have been bias as the students wanted to give higher responses at the end of the course as this may have been seen as being polite.

During interviews the students were asked about their perceptions in relation to their language ability, how they thought the CLT classes may have helped them to develop their skills and what more could be offered by the MHE institution to help them to develop their communicative competence further. Both groups expressed that the emphasis on group work was helpful in improving their speaking and listening skills. The postgraduate group who were preparing for the IELTS exam also expressed that the frequent opportunities for one-on-one speaking practice had been most helpful. This one-on-one practice had not been a feature of the first year course. This was due to a number of factors including the level of communicative competence that these students had at the beginning of the course and that they were not going to be taking part in IELTS exams. They would have likely felt intimidated by having to engage in one-on-one discussion with the researcher and preferred group work in a class setting. In addition, these students most likely felt that reading and writing were more important skills for their success in forthcoming CET-4 examinations.

In mock exams many of the postgraduate group had performed well in reading and writing exercises, but had relatively poorer listening and speaking skills. At the beginning of the programme the monitor for the first year group had opening expressed concerns that emphasis was on speaking and listening, and that the class 'are not learning anything'. In following up this remark it transpired that his concern was that they were not learning anything to help them pass the exam. At first this resulted in

some resistance to take part in the lesson. After a few lesson's perseverance the monitor apologised for making his former remark, expressing that he and his classmates had realised that what they were learning would help them to communicate when working onboard. Advice of Chinese teaching colleagues in dealing with the resistance in participation had been to set an exam in order to 'motivate' the class:

In this view, because students are fundamentally lazy and the bright ones few and far between, assessment performs a vital secondary function of motivating the students; the threat of failure in a competitive situation is required to stimulate them to attend lectures and practicals and to do at least some private study'

(Ramsden, 2003:177)

This quote was noticed during subsequent reading, and it was reminiscent of the conversations had in the first term of phase C, during which time attempts were being made to try to establish a series of classes. Having experienced low attendance at an otherwise busy time of year and it was advised by a key teaching practitioner case that setting an assessment for the class was necessary in order to motivate them to learn. Trigwell Prosser and Waterhouse (1999) attribute attitudes to education to teachers' own experiences of leadership: i) their head of department, ii) those with responsibility for course coordination and iii) the ways teachers are supported.

6.9 The model of change: CLIL as a solution for internationalising MHE

The CECR implementation is confronted with challenges in practice.

(Luo, 2007:250)

Throughout this thesis focus has been on the comparative educational experiences of participants. This has been prevalent in this chapter over any other as three nationalities collaborated together to establish project goals and to work towards these. One of China's leading commentators on education policy and reform developed his international acclaim from 1978 onwards as China opened its doors to foreign educational influences, other than those of the Soviet regime, once more. Those who could read Chinese may have appreciated his works for much longer than the wider academic community, who in 2001 were enabled to explore his thinking when a volume of his most notable papers were published in English (Gu, 2001). Gu was instrumental in setting up the *Journal of Foreign Education Studies* (later renamed the *Journal of Comparative Education Studies*) and in its founding edition he defines comparative education as he feels is suited to the Chinese situation:

Comparative education is concerned with the comparative analyses of education in different countries/regions in the contemporary world, so that we can locate the general and specific principles of educational development. These principles can act as a reference for educational reform in our own country or region.

(Gu, 2001:236)

A project proposal was submitted to the institutional management level and it had support and interest from staff wishing to participate. This proposal (Appendix 17) was based extensive time spent in the field during phases A through to 5 five months into phase C. Yet, despite it having been based on the findings of an in-depth ethnographic study the opportunity to action the research became limited. The proposal was given approval, but this did not come with any great assistance in its instrumentation. This, it turned out, had to be sought in the form of external stakeholder involvement.

A total of 22 hours of classroom observations took place during phase A, including those for non-compulsory courses that the Navigation and Marine Engineering students attended with other students from other disciplines. During observations, many students were spoken to during the lesson breaks and with some key informant students outside of the classroom setting through organised interviews and testing activities. One explanation for this was the learning culture at the case institution in that students worked towards achieving success in examinations and only a minority attended classes fully to learn about broader aspects, which may well be of help to them in performing professionally in a future work context. Another factor possibly affecting the attitude of the students to learning was the changing student demographic. The undergraduate Navigation and Marine Engineering student groups during the period of this research investigation was more likely than a decade or two decades ago of coming from inland rural areas. Interestingly, the 32 master mariner postgraduate CMSA

students, some of whom had graduated from the case institution between the period 1985 to 1995, were all originally from coastal provinces.

There is nothing in the STCW 78/95/2010 to say that Navigation or Marine Engineering students must have grown up next to the sea, but there is a difference between the primary and secondary education standards between the poorer and less economically developed inland provinces in the West and the richer coastal cities of the East. In the coastal cities and in the Eastern provinces of China, the standard of schools is much higher. In addition to this, families with professional parents can afford to pay for the better schooling at junior high schools post the concessionary state education up until the age of 13 (Chang, 1962; Wu, 2003; Hall and Lewis, 2008).

According to the title of the paper by Zhao (2000a), there is question as to whether the young men recruited to study Navigation and Engineering courses in China are going on to be high quality officers and crew or just 'cheap labour'. In 2005, Zhao and Amante followed-up this discussion with the collection of empirical data through an in-depth study of MET institutions in China and the Philippines. They reported that the young men recruited into the MET system in China were not as well educated as those studying other subjects and that support for them in terms of scholarship was inadequate (Zhao and Amanate, 2005). These empirical data from 2006 to 2008 back-up this claim to some extent, but questions the severity of Zhao and Amante's (2005) claims. A paper co-authored in 2008 (Progoulaki *et al.* 2008) concurred with Zhao and

Amante (2005) and report that from a pilot sample of students at China's largest training institution, Dalian Maritime University, the majority have peasant farming parents and as a result could not expect to have had access to the best schools; as a result of having been brought up in the less economically developed country-side. However, Zhao and Amante (2005) reported finding no urban students from the affluent coastal provinces among their survey, but 5% of students interviewed for the Progoulaki *et al.* (2008) study are reported as being from urban backgrounds.

Those students who did the best academically, and admitted to having done so with little effort, were usually from the East and grew up in cities supported by professionally employed parents. When at schools some had had exposure to native speakers as oral English teachers. Those who performed poorly or who have had to put in exceptional effort to succeed are from the West, have peasant farming or unemployed families and are in a lot of debt to have reached university in the first place (Progoulaki *et al.* 2008; Zhao and Amante, 2005). The key informant student himself is from a rural background. He lied to his parents and borrowed money to go to a private school, retaking a school year and graduating at 19 instead of 18 in order to get the chance to go to university.

The results of the self efficacy study revealed that the first year student group experienced benefits in terms of speaking and listening. They did not perceive a great deal of benefit in terms of reading and writing. Through the interviews in particular they expressed a sense of great benefit in terms of fluency and appropriateness/

pronunciation. Similar findings were found with the postgraduate CMSA students. The results were that although both groups placed great emphasis on the benefits they felt in terms of fluency and appropriateness/pronunciation, they did not feel that the mode of learning and teaching necessarily enforced their lexical resource or their grammar and in turn would not help them with reading and writing. It was very interesting to find that the area where both groups of students perceived the least benefit was in their reading skills and that they apportioned this to the teaching and learning programme not having strengthened their lexical resource and grammar.

Much background knowledge on the style of teaching and learning employed at the institution was provided by the previous classroom observations carried out in phases A and B. In addition to these findings, in reading about contemporary education in China, a reference by Qiang *et al.* (2008) also provided some insight. Qiang *et al.* (2008:187) describe a situation in which Chinese university graduates find themselves ‘...functionally illiterate, unable to produce comprehensible oral or written English.’. To some extent the nature of Qiang *et al.* (2008) claims are relevant and gained sympathy, but it was found that their desire to impact on their audience through their sweeping style of writing made their claims sound over the top and unreliable. For example, to claim that all Chinese university graduates are functionally illiterate based only on a study of their own students, gave little credibility to their claims. Despite this unfortunate style of putting across their argument, it was still interesting to read about the study they had undertaken and that interpretations of their findings had been performed with much stricter parameters than the authors themselves. Qiang *et al.* (2008) had a clear

normative agenda when they set out with their project to reform English teaching at Xinyang Agricultural College:

Graduates of Xinyang Agricultural College English Department suffer from the same pedagogy and methodology that has generally failed China for the past 25 years. The graduates are functionally illiterate in that they have studied English for 12 years but are unable to speak or write coherently, at even a basic level.

Qiang *et al.* (2008:187)

Qiang *et al.*'s (2008) claims are very bold given that they are made without clear reference to previous research or data analysis for substantiation. In the discipline of referencing it is usually only acceptable to do so when a matter is common knowledge. Whether or not this is the case for what Qiang *et al.* (2008) are describing is common knowledge, in the Chinese higher education community, it seems to be a similar phenomenon as was explored in chapter 3 when reviewing previous studies in the field of MET (WMU, 1998; Yercan *et al.* 2005). In other words the sentiments of Qiang *et al.* (2008) are very much *argumentum ad populum* 'an appeal to popular opinion in order to gain assent' (Mautner, 2000:39). What cannot be denied is that their sentiments represent a vast number of opinions in this field and there is some value in exploring this perception, despite its lack of *Truth*⁴.

Qiang *et al.* (2008) go on to outline the *status quo* at their institution in terms of English learning and teaching practice. Their descriptions of local practice are insightful in terms of the higher education national curriculum. They describe a situation in which students

are required to learn English through four courses. They also add that these four courses are 'independent and disconnected' (Qiang *et al.* 2008:188). The courses they refer to are the same as those that are on offer at the case institution for this research investigation: intensive reading, comprehensive listening, extensive writing and oral English. The teaching methodology is criticised for being rote memorisation of words or phrases through 'talk and chalk' (Qiang *et al.* 2008:188). They do not qualify this term in any way, but further reading reveals that it is a reference to an old fashioned way of teaching and that it has a negative connotations (Ramsden, 2003; Harmer, 2007). From their mention of 'target language', 'immersion' and 'acquisition' (Qiang *et al.* 2008:188) they are influenced in their judgement of what is effective language teaching by some form of applied linguistics theorem or belief in a certain pedagogy. The conclusion of Qiang *et al.* (2008) is that to maintain this *status quo* is cheating the students. Their forecast is that by continuing to teach in the *talk and chalk* way is going to fail to prepare Chinese students to communicate effectively in English in 'a better-off Chinese society' (Qiang *et al.* 2008:188).

As mentioned earlier, the view of Qiang *et al.* (2008) is one shared and their claims are made without substantive evidence, as they themselves are believers of the *argumentum ad populum* that Chinese students are being failed by the Chinese education system. It is upon this notion that they base their 'new paradigm' for teaching English (Qiang *et al.* 2008:188). Upon closer inspection, it is not a new paradigm, and is greatly influenced by Krashen's (1986) second language acquisition model.

6.10 Maritime industry stakeholder involvement

Success in the MSA exam for a 'Class A' CoC will permit the students who are graduating from the case institution access to much sought after international employment. As a result the exam must feature an English language element in line with the STCW 78/95/2010 convention. However, industry stakeholders continued throughout this research investigation to express that English language competency is still the greatest challenge for preparing Chinese cadets for the global labour market. It is hard to grasp why this disparity still exists with so many years of the same complaint being received. If there was a means of measuring the language ability of the students from the case institution five and ten years ago and comparing their communicative competence to today, it could be expected that there would be some degree of improvement. There have been advances and improvements in teaching e.g. the increase in number of native speaking English teachers at many institutions across China. At the case institution itself 28 foreign teachers of English were employed in 2009, compared with just 20 foreign teachers in 2006. Yet, these discussions with one departmental Dean revealed that the Navigation and Engineering students with the best English rarely go to sea and are among an ever increasing group that are creamed off the top to go on to enter postgraduate education or the civil service. In 2006 this figure for students going on to postgraduate study and entering the civil service was estimated at 10% (CMETRG, 2007). In addition, as the numbers of recruits entering maritime institutions increases each year due to steep industry demand for manpower, sadly the

worst students may have become decidedly worse. Lower entrance requirements have been adopted to allow for higher student intake and more institutions have been approved and have had their status level raised to that of university (CMETRG, 2007).

6.10.1 *Direct involvement*

Industry stakeholder involvement occurred during the action research process, which was part way through phase C. The chances presented to shadow student Z have been mentioned already. These were both on the campus and when he continued his professional training through two visits to a technical training institution. During the second of these visits, which had been facilitated with the help of the student's agent as she thought it may have some mutual benefit, and an invitation was made to become directly involved in their training activities, and possibly visit their institution in Singapore for an extended period. The significant development came when the Managing Director of one of the cooperating organisations, who had been the one acting as gatekeeper for the visits to observe the technical enhancement training, requested a meeting in Dalian to discuss this further. This occurred in the Spring of 2008. During the meeting he said that he was looking for someone to prepare a teaching course for ME that would become part of their Chinese cadet enhancement training package. In response to his expression of interest in collaboration, an outline of experiences from teaching activities in implementing the *IMO Model Course 3.17 – Maritime English* (IMO 2000;2009) was discussed. It seemed that this study was already addressing a number of his needs in carrying out and these attempts at introducing communicative teaching through the IMO

Model Course 3.17 – *Maritime English* (IMO, 2000;2009) syllabus. He responded well to these suggestions of developing teaching units that could be delivered in any order depending on the needs of students, which were fully comprehensive with the IMO's Model Course structure.

In July 2008 a meeting was held in Beijing at the head offices of the joint venture company that the maritime industry stakeholder was representing as a consultant. Further constraints became clear from this meeting. Firstly, the involvement of academics had not gone well in the past for the organisation and it posed a threat on this occasion too. Secondly, the maritime services provider wanted an all-in-one solution that was not feasible. Based on his existing understanding of education, the importance of assessment was stressed heavily, whereas these earlier meeting with this industry gatekeeper had indicated the importance of learning over and above anything else.

6.10.2 *Maritime Industry stakeholder investment in Chinese MET*

This research belongs within a disciplinary department of a business school and as a result, throughout this investigation an interest has been maintained in one particular stakeholder group from the maritime industry; manning agents and training organisations. In the literature review, much reference is given to Wu (2004) and his four dimensions for addressing Chinese seafarer research: supply and demand factors,

the multi-national environment and crew resource management. Each of his dimensions keep this industry stakeholder group in mind also. He refers first and foremost to supply and demand factors and the focus of researchers in accounting for the availability of Chinese seafarers. He then refers to the multicultural crewing environment and how this has been brought about by industry crewing patterns and that the industry itself recognises that this causes problems. When he refers to human resource management factors, which is of particular direct relevance to the maritime industry stakeholder. This group has the chance to input directly into the Chinese MET context, but there is a considerable lack of involvement from this group of stakeholders at the case institution. One of the main constraints on the Chinese higher MET system is the lack of industry stakeholder input into the effective preparation of students for maritime careers, which is a matter that is of great concern to this interest group.

The theory of constraints is a management philosophy (Goldratt, 2004). The aim of this philosophy is to assist organisations in achieving their goals, on a continual basis. There is a process of identifying any number of small constraints that stop a system from achieving its goals. The constraints can be referred to as being small in significance as none of them stop a system from functioning altogether, in the sense of such an externality that is beyond control, but they restrict the desired progress of its managers towards their ultimate goal and achieving optimal level of performance. Like any other industry, Chinese maritime labour supply is a business that needs to concern itself with recruitment, training and retention. Just with any product or service it exists to secure throughput generated through sales (Goldratt, 2004). China is selling its

seafarer labour service to other countries through a network of agencies that are generating revenue from this throughput. Each of these agencies invests its operating expenses (Goldratt, 2004) to keep the operation ongoing in return for their cut of the profit from the turnover. The system as a whole also needs to invest money, inventory, in order to achieve success in selling its services. These three categories of throughput, operating expenses and inventory are the assumptions of Godratt's (1986) theory. The theory assumes that through these three areas the organisation can be controlled and its operations measured. There are also five steps to ongoing improvement given a constraint in Goldratt's (2004) theory: identifying the constraint, exploiting the constraint, subordinating all other efforts to support the exploitation of the constraint, and elevating the constraint.

During discussions while attending the graduation proceedings for student Z and his classmates referred to earlier, the industry stakeholder cases were engaged in numerous conversations over the three day visit. All expressed some form of concern regarding English language as being China's major constraint in maritime manning. Today, it is not stopping their market dominance, but preventing them from achieving more of their goal and optimising throughput. In the literature review to this thesis and in the conference paper (Appendix 25), the supply and demand factors relating to China are discussed with supporting data from the BIMCO/ISF study. In 2005 China took the lead in the supply of ratings, but industry stakeholders want to achieve more of their goal and want to see China's domination not only for ratings, but for the categories of both junior and senior officers. Their own view of this system is that it is affected by

internal constraints (Goldratt, 2004). In this instance the market is demanding more from the system than it is able to deliver. In interviews with industry stakeholder cases and through participant observation with the key informant maritime industry stakeholder cases it came to light that their desire was to be able to supply more seafarers of the standard graduating from the case study institution in order to satisfy demand:

Competency is no problem and they can learn all of that on the ship, it is English that is the problem. They have to be able to communicate or the Captain will send them home.

(Maritime Industry Stakeholder)

Goldratt (2004) would term this a *people* type of internal constraint. In addition to *people* in the internal constraint categories there are also *equipment*, *institution* and *policy* (Goldratt, 2004). The equipment category is hardly relevant in this instance as this category applies mainly to the production of goods, rather than the provision of a service. In this instance a substitution of *institution* for *equipment* as a factor that is being used in a way that limits the system to produce more of the service that is in demand; Chinese officer cadets and junior officers capable of communicating effectively in English to meet the operational and safety needs of the industry. *Policy* is a significant constraining factor of relevance to this research setting in particular.

As referred to by Hargreaves (1995) previously in western education there was an industrial model of education and training professionals to serve industrial needs. What he claims characterises western education today is that it is no longer driven by the needs of industrial organisations and has become 'postmodern' (Hargreaves, 1995:12). The industrial model is characteristic of the system that would exist if China did not engage in maritime labour export. China would operate its MET system as a derived demand of industry to meet its own national demands for manning the ships that are importing raw materials and exporting finished goods. In the 1970s this was the case for China, but as this derived demand for maritime transport increased as China's opening up policy was introduced in 1978 and took hold in 1979, so other nations began to trade with China using their own merchant fleets. As a result of these historical factors the ability to communicate in English became more important for Chinese seafarers.

6.11 Summary

Having completed problem framing in the previous phase of the research, there was no doubt that the specific problem being addressed was an educational one. Lincoln and Guba's (1985) outline of the stages of approaching naturalistic inquiry were followed as the overall framework for the study. At each stage of the research, further insight was sought by periodically reviewing relevant methodological literature in the context of educational research. Addressing this educational problem required the organisation of the knowledge that had been gained through the stages of problem framing and further

fact finding, and then orchestrating the communication of findings within the system (Havelock and Huberman, 1977). The system of institutional organisation and communication flows is illustrated in Figure 20. This organisation and orchestration of the knowledge of the system was gained through time spent as a 'complete observer', and later as an 'observer as participant' (Gold, 1958:221), and is an example of the type of understanding of a system that can be achieved through action research within education.

Having decided that previous research such as WMU (1998) and Yercan *et al.* (2005), was performed in a manner too remote from the reality of the research setting, maintaining a naturalistic approach offered a solution to this issue. Other studies, such as those carried out by Zhao (2000a;2000b;2002) and Wu (2004;2006) were still positivistic in their research approach, but their ability to engage with the research setting's actors due to the common language and culture shared by the participants and researchers overcame this remoteness and led to achieving a certain degree of genuine insight.

It wasn't until the status of 'participant as observer' (Gold, 1958:219) had been achieved and that a term's teaching had passed before a much more open level of reception by institutional management level staff was achieved. Having left the research setting for the duration of three months and having undergone intensive study in Teaching English as a Foreign Language to Adults to gain a CELTA qualification, a return was made at the beginning of the new academic year to take up a post as a *foreign expert*. Through

efforts made in maintaining friendship with the International Cooperation and Exchange department, negotiation was possible to hold a part time teaching role with direct involvement with Navigation undergraduates and postgraduate CMSA students.

During this phase of the research the researcher was seeking to develop a collective problem solving system (Figure 19), however there were a number of challenges that were highlighted from discussions with the MELT practitioners. This phase was instrumental in enabling the researcher to formulate the conceptual model (Figure 21) to show the organisation of the institution in terms of the potential for innovation in MELT. The reliance of MELT practitioners on the *power coercive* process would mean a flow of top down instructions from the MoE/MoTPRC.

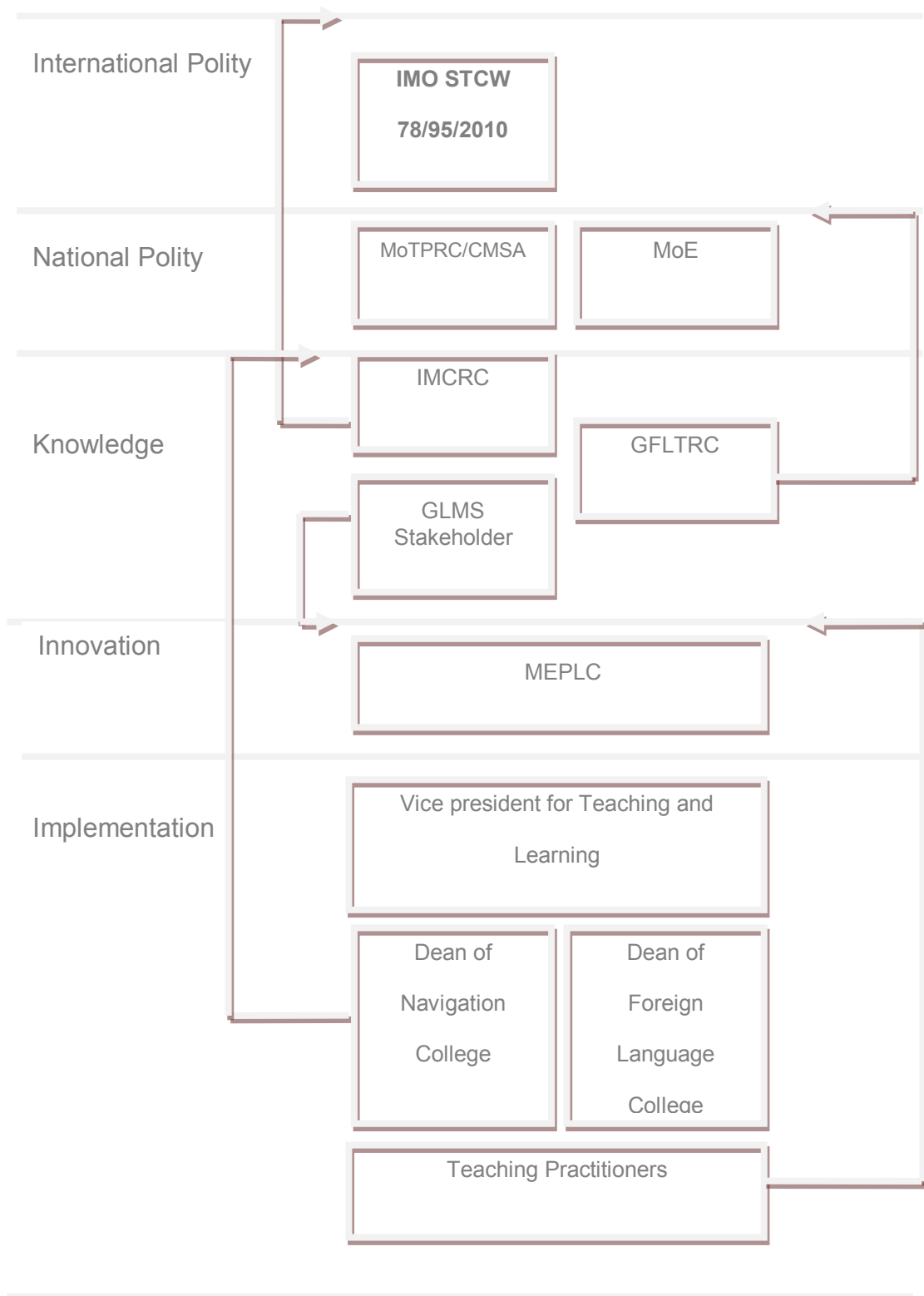


Figure 21: Conceptual model of institutional organisation and communication channels for innovation project

Having proven worth through teaching practice with both Navigation undergraduates and two groups of CMSA civil servants, much favour had been gained with management level staff. Because of this, it was possible to be able achieve a greater level of integration within the institution to the benefit of the research. It transpired that innovation and change were very much management level controlled and often took place in response to government led initiatives. It was found that in light of this management level decision making, that this increased level of integration provided greater access for discussion with staff at this level and to gain further insight into the institution's practices in response to national and international policies. The additional step of attending an international conference at another prestigious Maritime University as a member of the case study institution's delegation, was taken also. As a result of this new found proximity of working to management level staff at the case institution, access was gained to much first hand insight into the government's educational reform policies and how these were being implemented at an institutional level.

This section of the summary is charged with addressing the specific qualitative differences in learning as perceived by the two groups of participants (Ramsden, 2003). The important question for each of these groups was, and still is, *what does each group want the students to learn?*

Overall, in the case of both teaching practitioners and the industrial stakeholders' representative, there was the general feeling that the existing structure of the Chinese

MET system at university level was not adequate in preparing the students to meet the demands of the GLMS. This sense of inadequacy was the catalyst for change and it holds both micro and macro value in so far as there exists a 'public mandate for change' (Havelecok and Huberman, 1977:118) of national and international proportion.

Attempts have been made internationally in the form of the development of the IMO's *Model Course 3.17 – Maritime English* (IMO, 2000;2009). At the national level, the Chinese MoC (now part of the MoTPRC) devised its last curriculum and examinations in 2001 and set the texts to be followed by all Navigation and Marine Engineering students who are enrolled in university level courses. These texts are targeted towards the national examinations administered by China's Maritime Safety Administration and have been criticised in this thesis as being one of the instruments to blame for encouraging surface learning of ME.

In a positive light, the set texts mentioned above, and therefore the teaching programme through which they are studied, reflect the content of the IMO's *Model Course 3.17- Maritime English* (IMO, 2000;2009). It is apparent that when these texts were written they were composed to reflect the units of this United Nation agency initiative. However, their actual use neglects the recommendation of the IMO *Model Course 3.17 – Maritime English* (IMO, 2000;2009), for its contents to be delivered in line with the communicative language teaching paradigm.

This chapter of the thesis reveals that the Chinese MET system at present is characteristic of an industrial model for education and training. The aim of industrial education is to prepare its students for one specific vocation. A conflict occurs, when this kind of vocational preparation produces graduates lacking skills that allow for flexibility and adaptation to the multicultural working environment.

The type of transferable skills promoted in postmodern education systems are much more attune to the expectations of non Chinese (TMN) GLMS stakeholders who are behind the market's demand for Chinese seafarers. The empirical results, derived from direct sensory experience during this research investigation, indicate that despite Chinese MET following an industrial model of education, which is subsequently inflexible in light of the needs of TMN GLMS stakeholders, that manning agents concerned with supplying labour overseas still prefer university graduates over those from vocational routes.

Data reveal that GLMS stakeholders have a preference for university graduates is due to the strict sense of discipline instilled by the university education process and their relatively superior English language ability. However, what industry stakeholders reveal as a growing concern is the lack of professional attitude of university graduates to commit to the industry when alternative shore jobs, at the time of the research, were growing in numbers and looking more attractive. It is important to state that the most recent industry stakeholder interviews were performed in November 2008, prior to the

full effects of the economic slowdown being felt in terms of it affecting the availability of Chinese seafarers in the global labour market. However, the development project itself has continued to involve working closely with the institution's educational practitioners and one particular group of industry stakeholders up until the point of submission of this thesis in 2010.

The study concludes that prior to external stakeholder involvement, the institution was constrained by a number of factors. As a result, it reacted only in fulfilling the requirements of macro level education policies, and it failed to make sufficient micro adjustments in order to obtain the level of innovation and change necessary to attract industry stakeholder involvement. The action research approach sought to assist the setting's practitioners in developing a model syllabus for ME in Chinese MET. This syllabus was designed as part of this research, in order to provide a model to assist one maritime and institution to become more effective in meeting the needs of international maritime industry stakeholders.

Success in bringing the case institution on side was made possible by the potential that these micro level innovations in learning and teaching might also have the potential for macro level change as well. Earlier attempts by the institution at initiating innovation and change to appeal to international maritime industry stakeholders were unsuccessful due to a series of macro and micro constraints upon the setting. This thesis argues that without direct external stakeholder involvement, the setting's practitioners lacked

sufficient motivation, or the sense of being able to act on their motivations, to achieve micro level innovation and change. Whereas, in Chinese vocational MET, the involvement of private ship management organisations providing a service to overseas clients, allows for much innovation and change.

As a result, Chinese vocational MET is recognised as satisfying theories of post modernity in education. In other words, not only are the objectives of such vocational MET programmes to develop professional skills among its students, but to include flexible learning and teaching outcomes and greater overall industry awareness among graduates. Interestingly, the study found that in the centralised industrial model of national education policy present in China at an institutional level, the micro level, there is scope for innovation and change in pursuit of internationalisation. The most unique characteristic of this research is that the occurrence of micro level innovation and change, at a state university level institution, holds the potential to affect national, macro, MET policies.

Chapter 7 - Conclusion

This section of the thesis aims to bring together conclusions on both the significant findings of each phase of the naturalistic research process and the appropriateness of the research approach for driving innovation and change in Chinese MET. In particular, this chapter deals with summarising and concluding the perspectives of Chinese university level ME students, teaching practitioners, institutional management level staff, and industry stakeholders, as they have been reported in this thesis. In addition, this conclusion summarises the significant features of the naturalistic research approach of ethnographic action research that was taken. Finally, this section of the thesis highlights the entrepreneurial potential of the research project and how the tactical authenticity of the study has been confirmed by the ongoing tri-party twelve month commercial consulting contract in place at the time of writing this thesis.

Field data collection was performed through initial problem framing and further fact finding visits, prior to a prolonged case study. The problem framing and the further fact finding visits highlighted a specific educational problem at the case institution, which was then explored further through an ethnographic approach as a 'participant as observer/researcher' (Gold, 1958:220). Through such means, this educational problem has been explored in-depth using ethnographic inquiry while fulfilling the role of a teaching practitioner at a leading Chinese state run maritime university. This period of ethnographic research was also the point when the case study evolved to incorporate action research, which led to a continuing relationship with teaching practitioners and a

consultation project involving a group of industry stakeholders. From this ongoing development project, this thesis reports the findings of initial visits to the research setting for problem framing and data from a nine month phase of regular observations carried out through ethnographic action research. The primary aim of this period of research was to explore in detail the impact of China's macro approach to meeting international requirements for MET, through a micro level case study. In particular, the investigation assesses the micro level impact of the macro adoption of the International Convention for Seafarers Training Certification and Watchkeeping 1978, as amended 1995, (STCW 78/95). To address the issue of multicultural crewing patterns and language difficulties, in the year 2000 the IMO produced *Model Course 3.17 – ME*, which was updated in 2009 (IMO 2000;2009). This publication exists to assist institutions with taking a proactive stance towards internationalisation through the standardised teaching of ME. The IMO's model course became the basis of this research and its resultant development project. The objective of the development project is for the integration of *Model Course 3.17 – Maritime English* into a content and English language integrated learning and teaching strategy at the case institution, as an instrument of greater internationalisation.

7.1 Major findings - Curriculum interventions as a tool for internationalisation

One of the major findings of this research relates to the need for reform of the examinations system as well as the curriculum for ME. This is in order to exert sufficient

pressure on companies and individuals to demonstrate that their seafaring employees possess the necessary level of communicative competence in English. Figure 22 illustrates a proposal for the times when English language level should be assessed formally in order to demonstrate a communicative competence level commensurate with rank.

7.1.2 Implications and recommendations

The ratification of the STCW 78/95 Manila amendments are due to come into force on 1st January 2012 and will apply to new CoCs issued after this date, with full adoption being mandatory by 2017. This offers the chance for academics and institutional leaders to have input into the ratification process during the period up until its full adoption. A change in examination system towards a communicative competency based test, such as that used to rate this skill among pilots and air traffic controllers against the ICAO level descriptors, would mean that those wishing to pass such a test would benefit from following a CLIL syllabus for ME. Results showed that upon graduation the level of English for a graduate from the host MHE institution is likely to range from ICAO 3-4, YME 4-5 or IELTS 4-5. Results also showed that after ten years of seagoing experience, some of which had been spent in multinational environments, that a language level of ICAO 4-6, YME 5-7, or IELTS 5-6 was observed in some cases, but that the majority of test takers failed to reach a satisfactory level for the equivalent CoC they held. If ratification of the STCW 78/95/2010 in China includes the instruction to adopt a measure such as YME, the levels of language achieved by many Chinese

seafarers exiting the current training system are not sufficient to enable them to progress to the equivalent level required as they obtain higher CoCs. This calls for a dynamic curriculum intervention to internationalise Chinese MHE and to raise the average level of communicative competence among seafarers.

In particular, better use must be made of the four year's spent at an academic institution so that the exit level of language is at least operational against the three scales in question. Following a syllabus that makes better use the four years of study is of paramount concern. This thesis posits that should a CLIL curriculum be adopted, this stands to shorten the lead time from graduation to obtaining an *operational* level of communicative competence in English provided that the entry level is sufficient to allow for this rate of progress (Figure 22). This will have the subsequent effect of boosting the language level of senior officers because junior officers who have followed a CLIL curriculum progress through the ranks. Additional examinations for communicative competence are proposed at the stages (marked with red dotted lines) where the YME requires a higher level of English to be demonstrated. Figure 22 can be compared with Figure 15, which shows the actual average levels of communicative competence against each scale according to the findings of this research. For the four year degree Navigation students these stand at IELTS 5, ICAO 3 and YME 5. For master mariners IELTS 5.5, ICAO 5 and YME 6. For private MET cadets this stands at IELTS 4, ICAO 2 and YME 3. In the forecast model in Figure 22 shows values after the CLIL curriculum intervention with additional communicative competence examinations in place. For cadet officers the level achievable is IELTS 6, ICAO 5 and YME 6 for four year MHE

graduates. IELTS 7, ICAO 6 and YME 7 for senior officers sailing as second mate. There is also the possibility that examinations to test for levels as high as IELTS 8, ICAO 6 (this is the maximum) and YME 8 take place before achieving a master mariner certificate. This is not necessary according to YME or other standard, but for ship owners who wish to employ only those with an exceptional level of communicative competence then this is an optional gold standard. YME level 7 is sufficient for those responsible for the training of others, which is formally required of a second mate and above.

Recommendations also relate to how to instrument internationalisation in Chinese MET. The approach taken to investigate achieving greater internationalisation in Chinese MET, for the purposes of this research investigation, was through the development of CLIL. This approach to teaching and learning is one through which subjects themselves are studied in English as a non-native language. As a form of immersive learning, students of CLIL are challenged to a further degree than if they were to study the content of the subject discipline and the English language element separately (University of Cambridge ESOL Examinations, 2009). Because of the challenge of studying disciplinary content and English language simultaneously, the learner is exposed intensively to the target language and also acquires skills in other areas of the disciplinary curriculum.

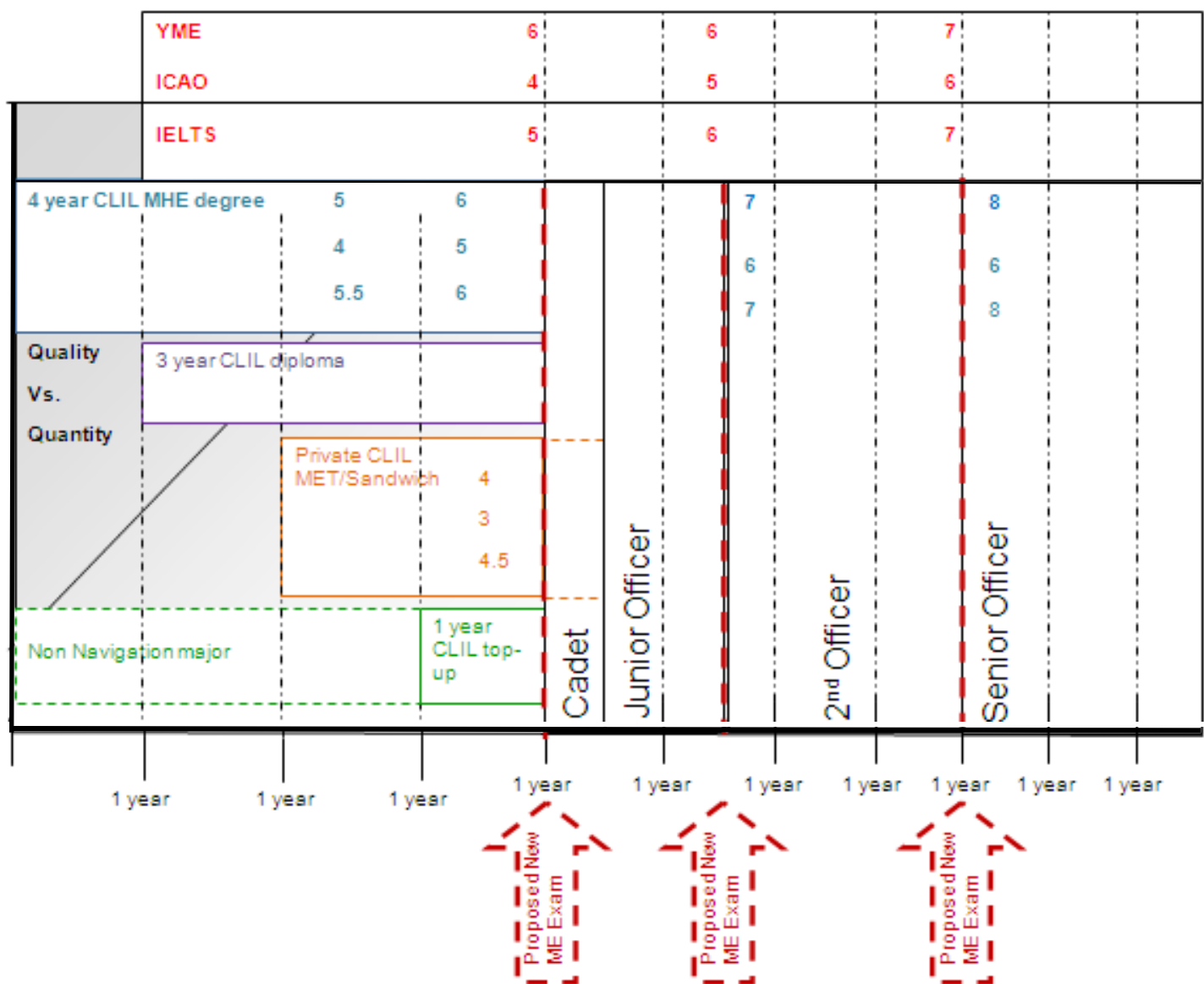


Figure 22: Proposed model for timing of additional English language assessment

7.1.3 Barriers to reform through innovation

It was during the first six week phase of the research that initial contact was had with the staff of the Navigation and Foreign Languages colleges at the case institution. Staff of both departments spoke of plans that were afoot to introduce a programme upon which Navigation students would study only in English. The reasoning given for this proposal was in order to address the perceived English language deficit of Chinese seafarers.

Upon further investigation during this relatively short stage of the overall research period, it was difficult to find out about any detailed or more concrete plans for this initiative. Through deliberate targeted observations and subsequent discussions with relevant staff, it became apparent during this initial research visit that the initiative for CLIL was at a very early stage of consultation. The significantly early stage of the CLIL initiative's development influenced reflection upon the research findings greatly. Initially it was not known that the *problem to frame* was an educational one. There was still the potential at this time that subsequent research phases could take place onboard ship in the real work environment. Once outside the field and upon examining the potential constraints on the proposed CLIL project, it seemed appropriate to try to get involved in its development and to restrict the scope of subsequent research phases to take place in this educational setting. The following specific considerations were made while outside the research setting and between phases A and B:

- Conceptual modelling in light of the findings of phase A
- Refining the research approach
- How to go about gaining entry into the field for the subsequent research phase(s).

In terms of conceptual modelling for phase A, the potential constraints upon the existing MET arrangements, were explored in the context of ME teaching. The decision was made to focus on ME teaching, as although CLIL would be a joint initiative between the Navigation and Foreign Language colleges at the institution, at this early stage of consultation they were still operating under a strict division of responsibilities

between departments. Despite the Dean of the Navigation College's desire to have his own staff teaching on the CLIL programme, at this point in time the case institution's policy was that programmes delivered in the English language were to be delivered by the staff of the Foreign Languages College. In addition to this, access had only been granted to attend classes held in English for Navigation students. Because of their language of delivery, the responsibility lay with the Foreign Languages College. This was also the arrangement that could be foreseen during subsequent phases of the research. It was not until a later stage of the research (phase C) that negotiations were necessary to act in the capacity of practitioner as observer and to hold classes in English with Navigation students as part of their Navigation College timetable. It was even later still when it was possible to observe other Navigation related classes that were being held in English with overseas visiting lecturers, as these had not been offered previously.

7.2 Achievement of research objectives

This research reveals that despite satisfying national academic and international regulatory requirements, there is much scope for improving the suitability of Chinese MHE for meeting the needs of the end user; the industry stakeholder. In particular, the English language competency and professional knowledge of Chinese MHE Navigation graduates is still perceived as below that required for the operational level of junior officer. Field data reveal empirical findings from a number of perspectives. The first of

these perspectives is that of the educational practitioners at the case institution. The second is through the perceptions of the case study institution's leadership. The third perspective represented is that of the GLMS stakeholders.

7.2.1 Research objectives ii and ii - The scope for innovation and change in MELT

The research investigation sought to explore the constraints upon a system and to and drive forward the internationalisation of Chinese MET through involvement with a leading publicly funded university in the development of a CLIL initiative. The research approach taken followed the guidelines for carrying out naturalistic inquiry, as devised by Lincoln and Guba (1985). In order to develop research objectives *in-situ* (Bogdan and Biklen, 1992), the research process followed a series of phases that were each informed by the previous professional training and experience as a higher education teaching practitioner gained prior to this study. It was also assisted by the rich naturalistic data obtained from an extensive period of time spent in the field during each phase of the research A-C. It was as early as this problem framing stage of the research that it became apparent that the Dean of the department responsible for Navigation studies had the desire to offer his students, what over time came to be identified as a CLIL environment. Through further exploration it was discovered that this desire was shared by other institutional leadership staff and teaching practitioners (catalytic authenticity). However, a series of constraints prevented them from consummating their desires (tactical authenticity)

7.2.2 Research objectives iii and iv. - Informed participation as a strategy for innovation, collaboration and evaluation procedures

Further investigation into the existing teaching practices at the case institution during phase B, revealed that in order to evolve a CLIL approach to teaching, both at that institution and at other potential locations across China, would involve drawing on effective pedagogical practice from both the research setting itself and from a range of external educational contexts. It also transpired during analysis of early data from phase C, that there was scope for drawing on effective practice from external stakeholder (private) MET set-ups. This realisation occurred upon reflection on the findings of phase B and the early finding of phase C, approximately an aggregate total of 4 months into the field work. After this time, drawing on both internal and external pedagogical contexts became the objective of the remaining phases (D and E) of ethnographic field research.

The specific reasoning for continuing to pursue Lincoln and Guba's ideal of 'Naturalistic Inquiry' was due to the belief that it is the 'genuine article' (Lincoln and Guba, 1985:47). Of course, the naturalistic paradigm is not always appropriate, but for a study such as this research investigation that involved the need to become integrated, and immersed, in the research setting, it was this paradigm that offered the most appropriate strategy. However, it is usually the research setting's natural participants who are most able to orchestrate change. In this study, and because of this phenomenon, it was necessary

to act in a multi-phase process in order to achieve the role of ‘participant as observer’ (Gold, 1958:219) and ensure the success of the project’s emergent objectives (Bogdan and Biklen, 1992).

It is undoubted that this research makes a significant contribution to knowledge in the form of in-depth of insight into China’s MHE teaching and learning. To some extent this research has been very unpredictable as it has involved reacting to the events that presented themselves as the project progressed. It has followed the broad directions (A and B) laid down at the outset. However, it has grown from two broad guidelines to four specific objectives.

7.3 Transferability of research

For this research to be generalisable it is necessary for its findings to be applicable to university level ME teaching practices outside of the research setting. In other words, its findings need to be convincing enough for any Chinese MELT practitioner at an HE institution to be able to believe that the advice is credible for their own social setting, and that it is not restricted in its applicability to the original case study institution only. Given the thousands of universities with millions of enrolments, the sample size of this study has its limitations due to the relatively small number of participants involved. The representativeness of the samples and generalisability of the findings from this research are, therefore, not guaranteed. The findings may only apply to participants and

situations involved in this research. There are, in addition, several sources of bias such as the personal nature of participants and respondents, the point in time when the individual research activities were conducted and with the researcher herself in the design of the research.

7.4 Further research

A third stage of the project was underway at the time of writing this thesis, which was an international inquiry project to develop a new MELT curriculum locally. A fourth stage of the project got underway in 2010 following the STCW 78/95 amendments, which was an initiative to carry out national inquiry into MELT and assessment. Both of these projects have the aim of implementing a new curriculum for MELT, one locally and the other nationally.

Due to time constraints this PhD research couldn't include the implementation phase of the development project and to assess how it affected student learning at the host institution. In addition, due to the review of the STCW 78/95 in 2010 falling outside of the research timeline, this PhD study couldn't take into account this national innovation programme for MELT and assessment commissioned by the CMSA in the same year. Carrying out research into the implementation of the modified curriculum at a local level, as well as charting the progress of the national MELT reform is highly desirable. The application of the LDC approach to international collaboration in educational

development research (Erickson *et al.* 2005;2008) would be beneficial to the future study of this research context, as it aims to increase the capacity of teaching practitioners to take on leadership roles in curriculum reform. Figure 23 illustrates the structure of the Maritime English Learning and Teaching Development Community (MEL-DC).

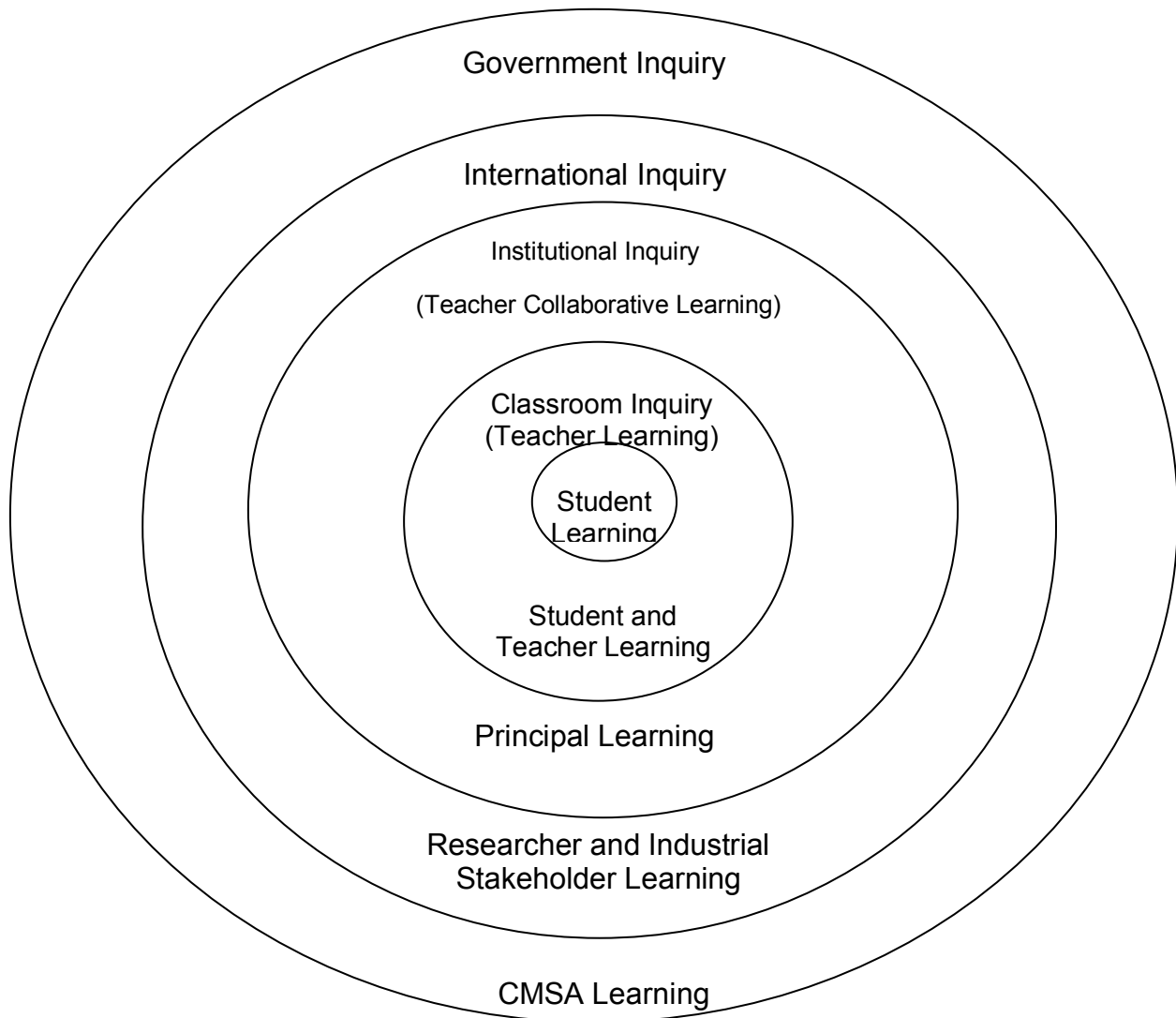


Figure 23: MELT-DC incorporating government and other institutions.

Source: Adapted from Kang et al. (2011).

Much was learnt about the research setting from the inner circles of Figure 23, but as this diagram represents a complex set of inter-relationships then it is still a work in progress to explore its outer rings. An additional level has been added to the figure for exploring the implementation of a new MELT curriculum to represent the government policy changes underway and how this affects other institutions nationally.

Collaborative action research was helpful in achieving the goals of this research and it is felt that it would be beneficial for other MHE institutions throughout China. Not only will this serve as a research tool, but also as an instrument for implementation of the new curriculum. This is to enable teaching practitioners to take an active role in curriculum implementation instead of being passive implementers. It is felt that this approach to implementation is more likely to ensure consistent adoption of the new curriculum, but firsthand experience of this through observations and expansion of LDC networks is desirable in order to encourage creativity among teaching practitioners and to identify the challenges with its implementation.

The latest phase of the project *government inquiry*, which is currently underway, does not involve the researcher. The local project members continue to consult with one another and collaborate in MELT developments under the leadership of the Dean of the Foreign Languages College. The scaling up of the MEPLC project to the national policy level was in direct response to the 2010 amendments to the STCW 78/95. It was the CMSA's reaction to appoint an institution to be responsible for the teaching and

examination reforms and it is a very pleasing outcome that the findings of the MEPLC's institutional and international inquiry into ME syllabus development has to scope to impact on national MHE policy.

7.4.1 Quantitative study into communicative competence

Having established that there is some correlation between the three scales of communicative competence employed (ICAO, IELTS and YME) a large and varied sample from across a number of MET institutions in China is desirable for a quantitative study into communicative competence. This is both to test the communicative competence of Chinese seafarers so as to reach a generalisable conclusion and to establish the validity and reliability of each language rating frame. IELTS and ICAO have been tested rigorously and the rich data available in the form of candidate scores allows for this kind of statistical analysis already. The YME, however, does not have a standardised test associate with its rating levels and they have not been trialled with a large national sample through any previous research. Their development to date has been limited to being theoretical rather than through applied research. Development of a standardised test that can be used with all levels of candidates from the Navigation discipline is currently underway with the direct involvement of the researcher as a consultant. This has both commercial and academic research value. As with the country studies carried out by IELTS using exam statistics as data, it is desirable to carry out similar research to collect data for YME, ICAO and IELTS scores for cadets and officers so as to have a significant sample internationally. This is to enable the establishment of

national average ME levels and to explore the pedagogical reasons for performance and to identify new opportunities for international collaboration on syllabus design.

At present the findings of this PhD research are limited to one MHE institution. Certain assertions can be made about the general situation in MHE curriculum reform. However, further scaling up of this project to involve a number of MHE institutions would be necessary to provide such valuable insight, to affirm these findings, and to increase understanding. It is anticipated that some regional differences may occur between institutions. The influence of industrial stakeholders and their level of involvement varies by MHE institution. Other non university level institutions also need to be studied as MET is provided at both HE and FE levels in the Chinese system. These institutions will be affected by curriculum reform also, but they face the greater challenge of attracting suitably qualified staff as they do not have university level status and cannot offer the same level of pay and conditions.

Some industry commentators predict a rise in private education provision in China and greater foreign shipping company investment, where future salaries may outstrip those of the public sector, and this may cause a change in who is driving the MELT reform agenda in the future. However, in all cases of educational development it is desirable that that research is carried out through action research, organised through PLCs and with the input of international research collaboration. This research has found that pedagogical ideas can cross cultural boundaries. Ideas about teacher research,

professional learning communities and educational change that came from the West have been useful in this project. However, it is of utmost importance that governance of development projects is led by Chinese partners (*Erickson et al.* 2005;2008; Kang *et al.* 2011; Ryan, 2011a). Professional conversations about Chinese MET curriculum reform must be two-way and not one-way. This is desirable in order to ensure that the truth can be disseminated to the international community, which has thus far relied on anecdotal evidence in its assessment of Chinese MET. It is also a necessary condition to ensure that MET curriculum reforms are implemented successfully and that these are not rejected as *foreign educational imports* (Zhong, 2006), many of which have failed to bring about the necessary changes in the past.

7.5 Final remarks

The aim of this thesis was not just to reduce the data and to present the explanations of phenomena, but also to establish that the methodological approach taken is a valid and reliable one. As a result, the justification of research approach has been provided in a dedicated chapter and the discussion of these methods is also presented chronologically as its consideration became necessary. Kember and McNaught (2007:5) offer a suitable phrase in light of this kind of development of methodology as ‘evolving as opportunities presented themselves’.

Of particular importance in this research process has been the investigation strategy of action research. This research shows that employing ethnography and action research as part of such an investigation provides a pathway for developing the level of input from a specific group of industry stakeholders who represent potential overseas employers. The involvement of this particular group of stakeholders has evolved as a direct result of the case study and its ethnographic action research approach. By the end of the 12 month research period, these interactions had led to a twelve month internationalised syllabus development project at the case study institution, financed by this group of industry stakeholders. As a result, this thesis argues that maritime industry stakeholder involvement in Chinese university level MET has the potential to lead to more effective learning and teaching practice that meets the needs of the international maritime community.

Due to the unique requirements of carrying out naturalistic research and composing this ethnography, it is necessary for this thesis to contain both a chapter dedicated to research strategy, and for methodology to also feature in discussion throughout its other chapters. In qualitative research data reduction is not separate to the analysis (Miles and Huberman, 1994) nor is the evolution of methodology to suit the research setting and its actors a separate concern (Lincoln and Guba, 1985; Bogdan and Biklen, 1992). The decision to include a chapter dedicated to research strategy satisfied Dunleavy's (2003) suggestion to combine approaches to explanation in thesis writing. He terms this combination of approaches to explanation 'matrix patterns' (Dunleavy, 2003:72). The presentation of this thesis is modelled on his recommendations with the combination of

the 'analytic plus descriptive' (Dunleavy, 2003:73) approach to explanation. The fact that methodology is given mention throughout the other chapters of the thesis is also down to Dunleavy's (2003) influence. A 'compromise model' (Dunleavy, 2003:61) was decided on, comprising of a focussed literature review, which is divided into disciplinary literature and methods literature; a core section, through which each research phase is represented chronologically; with analysis and discussion sections at its end including 'close literature' (Dunleavy, 2003:59):

'..., which tracks back and forth across what has been found out, and connects it up in detail with previous research and literature.'

(Dunleavy, 2003: 59)

Yardley (2000) argues that qualitative methodologies are perceived as having certain unique and positive characteristics, which are not offered by quantitative research. She goes on to state that it is the typical involvement of 'detailed exploration of the interwoven aspects of the topics or processes studied' (Yardley, 2000:215) that is its most positive feature, when compared with quantitative research that mostly 'employ a limited number of measures to summarise specific, isolated variables at one or two moments in time'.

Like Kember and McNaught (2007) this research did not begin with the exact research design that was followed step by step. Instead, as experience was gained in the field,

this facilitated the unfolding of context rich and catalytically authentic (Lincoln and Guba, 1985) conceptual frameworks. This research has satisfied this aim in so far as if another educational practitioner, wishing to make similar developments, were to read this thesis and its discussion of methodology, that they should feel convinced of the study's validity and reliability (Kember and McNaught, 2007), and the appropriateness of the naturalistic paradigm to the substantive focus of this inquiry (Lincoln and Guba, 1985).

References

Abbott, K. W. and Snidal, D. (1998) 'Why States Act through Formal International Organizations'. *Journal of Conflict Resolution*, 42 (1). pp. 3-32.

Alderton, T., Bloor, M., Kahveci, E., Lane, T., Thomas, M., Winchester, N., Wu, B and Zhao, M. (2004). *The Global Seafarer: living and working conditions in a globalized industry*. Geneva: International Labour Organisation.

Alderton, T. and N. Winchester (2002a). 'Globalisation and De-regulation in the Maritime Industry'. *Marine Policy*, 26 (1) pp. 35-43.

Alderton, T. and Winchester, N. (2002b) 'Regulation, representation and the flag market'. *Journal for Maritime Research*, (September), [Online]. Available at: <http://www.jmr.nmm.ac.uk/server?show=ConJmrArticle.53andsetPaginate=NoandoutputFormat=print> (Accessed: 19th September 2004).

Athanasios, A. (2007). *Maritime transport: the Greek paradigm*. Oxford: Elsevier Ltd.

Atkinson, P. and Coffey, A. (2004) 'Analysing Documentary Realities'. In Silverman, D. (ed.) *Qualitative Research: Theory, Method and Practice*. 2nd edn. London: Sage.

Baker, C. and Pry Jones, S. (1998) *Encyclopedia of Bilingualism and Bilingual Education*. Clevedon: Multilingual Matters Ltd.

Baszanger, I. and Dodier, N. (1997) 'Ethnography'. In Silverman, D. (ed.) *Qualitative Research: Theory Method and Practice*. London: Sage, pp. 8-23.

Baty, P. (2009) 'The long march'. *Times Higher Education*, [Online]. Available at: <http://www.timeshighereducation.co.uk/story.asp?storycode=408794> (Accessed: 29th October 2009).

Bax, S. (2003) 'The end of CLT: a context approach to language teaching'. *ELT Journal*, 57 (3). pp. 278-287.

Bayliss, D. and Raymond, P. (2004) 'The link between academic success and L2 proficiency in the context of two professional programs'. *Canadian Modern Language Review-Revue/Canadienne Des Langues Vivantes*, 61 (1). pp. 29-51.

Beaty, L. (1997) *Developing Your Teaching Through Reflective Practice*. SEDA Special No 5. Coventry: SEDA (Staff and Educational Development Association).

Becker, H. and Geer, B. (1960) 'Participant Observation: the analysis of qualitative field data.' in Adams, R. and Preiss, J. (eds.) *Human Organization Research: Field Relations and Techniques*. Homewood, IL: Dorsey.

Bellingham, L. (1995) 'The relationship of language proficiency to academic success for international students'. *New Zealand Journal of Educational Studies*, 30 (2). pp. 229-232.

Benton, G. (2003) 'ME, Critical Thinking and American ESL Programs'. *IAMU General Assembly 4*. Arab Academy for Science, Technology and Maritime Transport, Alexandria: 27th to 30th September 2003 IAMU.

Biao, Z. (1999) 'Some Dichotomies in ME Teaching', *Conference on Maritime Education and Training*. Rijeka-Opatija, Croatia IMLA, London, pp. 211-215.

BIMCO/ISF (1995) *Manpower Survey*. Warwick: Institute for Employment Research, University of Warwick.

BIMCO/ISF (2000) *Manpower Update - The world demand for and supply of seafarers*. Warwick: Institute for Employment Research, University of Warwick.

BIMCO/ISF (2005) *Manpower Update 2005 - The world demand for and supply of seafarers (Summary Report)*. Warwick: Institute for Employment Research, University of Warwick. [Online] Available at: <http://www.marisec.org/Manpower2005UpdateSUMMARY.pdf>. (Accessed 2nd December 2007).

BIMCO/ISF (2010) *Manpower 2010 Update - The world demand for and supply of seafarers (Highlights)*. [Online]. Warwick: Institute for Employment Research, University of Warwick. Available at: <http://www.marisec.org/Manpower%20Study.pdf> (Accessed: 12th May 2011).

Bloor, M. (1978) 'On the analysis of observational data: a discussion of the worth and uses of induction techniques and respondent validation'. *Sociology*, 12 (3). pp. 545-552.

Bocanegra-Valle, A. (2010) 'Global markets, global challenges: the position of Maritime English in today's shipping industry'. In Linde Lopez, A. and Crespo Jiménez, R. (eds.) *English in the European Context: The EHEA Challenge*. Bern: Peter Lang AG, International Academic Publishers, pp. 151-174.

Bogdan, R. and Biklen, S. (1992) *Qualitative Research for Education*. 2nd edn. Boston: Allyn and Bacon.

Brock-Utne, B. (1996) 'Reliability and validity in qualitative research within education in Africa'. *International Review of Education*, 42 (6). pp. 605-621.

Bryman, A. (2004) *Social Research Methods*. Oxford: Oxford University Press.

Bryman, A. (2009) *Social Research Methods*. 3rd edn. Oxford: Oxford University Press.

Burgess, R. (1985) 'Conversations with purpose? The ethnographic interview in educational research', *British Educational Research Association Annual Conference*. Sheffield.

Burgess, R. (1993) 'Biting the hand that feeds you? Educational research for policy and practice'. in Burgess, R. (ed.) *Educational Research and Evaluation for Policy and Practice* London: Falmer Press, pp. 60-76.

Cambridge ESOL (2009) *Content and English Language Integrated Learning and Teaching (CLIL) Handbook for Teachers*. Cambridge: UCLES.

Cambridge University Press (2011) *Cambridge Dictionaries Online* [Online], Cambridge: Cambridge University Press. Available from: http://dictionary.cambridge.org/dictionary/british/internationalize?q=internationalise#internationalize_3 (Accessed 20th January 2011).

Carr, W. and Kemmis, S. (1986) *Becoming Critical*. Lewes: Falmer.

Caruana, V. (2009) *Internationalising the Curriculum: an annotated bibliography (August 2009) commissioned by Nottingham Trent University*. Centre for Academic Practice and Research in Internationalisation of Higher Education, Leeds Metropolitan University. Themed Resource Bank for Internationalisation of HE, [Online]. Available at: http://www.leedsmet.ac.uk/NTU_review_FINAL_150210.pdf (Accessed: 1st July 2010).

Cathcart, A., Dixon-Dawson, J. and Hall, R. (2006) 'Reluctant hosts and disappointed guests? Examining expectations and enhancing experiences of cross cultural group work on postgraduate business programmes'. *International Journal of Management Education*, 5 (1). pp. 13-22.

Chamberlain, B. and Hope, B. (2003) 'Integrating international students into computing classes: issues and strategies', Mann, S. and Williamson, A. (eds.). *16th Annual NACCQ*. Palmerston North, New Zealand July 2003. NACCQ, Auckland.

Chang, T. (1962) *Chinese Education under Communism*. Richmond: Teachers College, Columbia University, William Byrd Press, Inc.

Chen, A. and Wu, B. (2011) 'The regional division of the higher education sector in China: A Spatial analysis'. In Morgan, W.J. and Wu, B. (eds.) *Higher Education Reform in China*. Abingdon: Routledge.

Chen, L. F. (2002) *Issues and Policy Suggestions for Improving the Management of China's Labour Export*. [Online]. Available at: <http://china.come.org.con> (Accessed: 16 March 2002).

Child, J. and Tse, D. K. (2001) 'China's transition and its implications for international business'. *Journal of International Business Studies*, 32 (1). pp 5-21.

CMSA (2006) *Seafarer Training, Examination and Certification in China*. Dalian: Dalian Maritime University.

CMETRG (2007) *Research report on the development and reform of the Chinese Maritime education system* (in Chinese). Draft report to the Ministry of Communications. Dalian: Dalian Maritime University.

Chomsky, N. (1982) *Rules and Representations*. Oxford: Blackwell.

Ciccarelli, F. and Conrow, F. (1998) 'An investigation of the predictive validity of IELTS amongst a group of international students studying at the University of Tasmania'. *English Language Testing System Research Reports*, 1 pp. 72 - 115.

Cohen, L., Manion, L. and Morrison, K. (2000) *Research Methods in Education*. 5th edn. London: Routledge Falmer.

Cole, C. and P. Trenkner (2008a). 'Developing Training and Watchkeeping Standards - the ME Yardstick in the Revised STCW Context - Annex1'. *Proceedings of the 20th Annual International ME Conference*. Shanghai Maritime University, Shanghai: International Maritime Lecturers Association.

Cole, C. and P. Trenkner (2008b). 'The Yardstick for ME STCW Assessment Purposes'. *Proceedings of the 16th IMLA Conference on MET*. Izmir: Dokuz Eylul University.

Cortazzi, M. and Jin, L. (1997) 'Communication for learning across cultures'. In McNamara, D. and Harris, R. (eds.) *Overseas Students in Higher Education: Issues on Teaching and Learning*. London: Routledge, pp. 76-90.

Cullinane, K. and M. Robertshaw (1996) 'The influence of qualitative factors in Isle of Man ship registration decisions'. *Maritime Policy and Management*, 23 (4) pp. 321-336.

David, M. and Sutton, C. (2004) *Social Research - The Basics*. London: Sage Publications.

Denzin, N. and Lincoln, Y. (eds.) (1994) *Handbook of Qualitative Research*. Thousand Oaks: Sage.

Denzin, N. and Lincoln, Y. (eds.) (2000) *Handbook of Qualitative Research*. 2nd edn. London: Sage.

Denzin, N. and Lincoln, Y. (eds.) (2003) *Collecting and interpreting qualitative materials*. London: Sage.

Ding, X., Li, F. and Sun, Y. (2011) 'Thirty years of reforming China's higher education funding mechanism'. In Morgan, W.J. and Wu, B. (eds.) *Higher Education Reform in China*. Abingdon: Routledge.

Drewry Shipping Consultants (2009) *Manning 2009*. London: Drewry Shipping Consultants.

Dunleavy, P. (2003) *Authoring a PhD: How to Plan Draft, Write and Finish a Doctoral Thesis or Dissertation*. Basingstoke: Palgrave Macmillan.

Eisner, E. (1991) *The Enlightened Eye: Qualitative Inquiry and the Enhancement of Educational Practice*. New York: Macmillan.

Erickson, G., Mitchell, I., Kang, C. Y. and Ryan, J. (2008) 'Role of teacher research and cross-cultural collaboration in the context of curriculum reform in China'. In Samaras, A., Beck, C., Freese, A. and Kasnik, L. (eds.) *Learning Communities in Practice*. New York:Springer.

Erickson, G., Mitchell, I., Minnes, C., Brandes, G. and Mitchell, J. (2005) 'Collaborative teacher learning: Findings from two professional development projects'. *Teaching and Teacher Education*, 21, pp. 787-798.

European Union-DG VII (1999a) *MARCOM Project: The Impact of Multicultural and Multilingual Crews on Maritime Communication Final Report - Volume 1*. Brussels: Transport RTD Program.

European Union-DG VII (1999b) *MARCOM Project: The Impact of Multicultural and Multilingual Crews on Maritime Communication Final Report - Volume 2*. Brussels: Transport RTD Program.

Fairclough, N. (1989) *Language and Power*. London: Longman.

Faircough, N. (1992) *Discourse and Social Change*. Cambridge: Polity Press.

Fairclough, N. (1995) *Critical Discourse Analysis*. London: Longman.

Forsythe (2001) *Studying Those Who Study Us: an Anthropologist in the World of Artificial Intelligence*. Stanford: Stanford University Press.

Froholdt, L. and Knudsen, F. (2007) 'The Human Element in Maritime Accidents and Disasters– a matter of communication'. *International Maritime English Conference*. Rotterdam: International Maritime Lecturers Association (IMLA).

Fullan, M. (2001) *Leading in a Culture of Change*. San Francisco: Jossey-Bass.

Gamble, J. (2003) *Shanghai in Transition*. Abingdon: RoutledgeCurzon.

Geertz, C. (1983) *Local Knowledge*. New York: Basic Books.

Geertz, C. (1993) *The Interpretation of Cultures: Selected Essays*. London: Fontana Press.

Gekara, V. (2008). *Globalisation, State Strategies and the Shipping Labour Market - The UK's Response to Declining Seafaring Skills*. [Online]. PhD Thesis. School of Social Sciences, Cardiff University. Available from: <http://www.sirc.cf.ac.uk/Nippon%20Fellows/Theses/Gekara.pdf> (Accessed 20th February 2008).

Giddens, A. (2002) *Runaway World; How Globalisation is Reshaping Our Lives*. London:Profile Books.

Glaser, B. (1992) *Emergence vs. forcing: Basics of substantive theory*. Mill Valley: Sociology Press.

Glaser, B. and Strauss, A. (1967) *The discovery of grounded theory analysis*. Chicago: Aldine.

Goetz, J. and LeCompte, M. (1981) 'Ethnographic research and the problem of data reduction'. *Anthropology and Education Quarterly*, 12, pp. 51-70.

Gold, R. (1958) 'Roles in Sociological Fieldwork'. *Social Forces*, 36, pp. 217-223.

Gordon, J. (2002) *Beyond the classroom walls: ethnographic inquiry as pedagogy*. London: Routledge.

Graddol, D. (1995) *The Future of English*. London: British Council.

Graddol, D. (2006) *English Next*. London: British Council.

Grool, R. (2002) 'How Will China Position Itself in International Manning?' *LSM Manning and Training in China Conference*. Shanghai October 2002. London: Lloyds Ship Manager.

Grundy, S. (1987) *Curriculum: product or praxis?*. London: Falmer.

Gu, M. (2001) 'Comparative Education in China: Name and Reality'. In Gu, M. (ed.) *Education in China and Abroad: Perspectives from a Lifetime in Comparative Education*. Translated by Chan, A. Hong Kong: Comparative Education Research Centre, The University of Hong Kong. pp. 236-242.

Guo, J., Chen, B. and Liu, N. (2008) 'Enclosed Training Institute - An Innovation for Improving Maritime English Level of Chinese Seafarers', *20th Annual International Maritime English Conference*. Shanghai Maritime University 29th October-2nd November 2009. IMLA.

Hadjistassou, C. K. (2004) *International Maritime Organisation: Rethinking Marine Environmental Policy*. (M.Sc. Thesis) Massachusetts: Department of Ocean Engineering, MIT.

Hall, T. and Lewis, W. (eds.) (2008) *Education in China: 21st Century Issues and Challenges*. New York: Nova Science.

Hargreaves, A. (1995) 'Development and Desire - A Postmodern Perspective'. In Guskey, T. and Huberman, M. (eds.) *Professional Development in Education New Paradigms and Practices*. New York and London: Teachers College, Columbia University, 1 (1), pp. 9-34.

Harmer, J. (2007) *The Practice of English Language Teaching*. 4th edn. Harlow: Pearson Education Ltd.

Hatzipanagos, S. and Lygo-Baker, S. (2006) 'Teaching observations: promoting development through critical reflection', *Journal of Further and Higher Education*, 30 (4), pp. 421-431.

Havelock, R. and Huberman, A. (1978) *Solving educational problems: the theory and reality of innovation in developing countries - A study prepared for the International Bureau of Education*. Paris: UNESCO.

Haywood, T. (2007) 'A Typology of International-Mindedness'. In Hayden, M., Levy, J. and Thompson, J. (eds.) *The Sage Handbook of Research in International Education*. London: Sage Publications Ltd.

Hayden, M., Levy, J. and Thompson, J. (eds.) (2007) *The Sage Handbook of Research in International Education*. London: Sage Publications Ltd.

Hayhoe, R. (2001) 'Introduction'. In Gu, M. (ed.) *Education in China and Abroad: Perspectives from a Lifetime of Comparative Education*. Translated by Chan, A. Hong Kong: Comparative Education Research Centre, The University of Hong Kong, pp. 5-24.

Hitchcock, G. and Hughes, D. (1989) *Research and the teacher: a qualitative introduction to school-based research*. London: Routledge.

Holly, P. (1984) 'Action research: a Cautionary Note'. *Classroom Action Research Network Bulletin*, 6.

Howe, C., Kueh, Y. and Ash, R. (eds.) (2003) *China's economic reform: a study with documents*. London: RoutledgeCurzon.

Hu, G. W. (2002) 'Potential cultural resistance to pedagogical imports: The case of communicative language teaching in China'. *Language, Culture and Education*, 15 (2), pp. 93-105.

Hu, G. W. (2003) 'English language teaching in China: Regional differences and contributing factors'. *Journal of Multicultural and Multilingual Development*, 24 (4), pp. 290-318.

Hu, G. W. (2005) "'CLT is best for China" - An untenable absolutist claim'. *ELT Journal*, 59 (1), pp. 65-68.

Hu, L. (2008) 'The Practice Implication of Constructivism in Maritime English Teaching and Learning', *20th Annual International Maritime English Conference*. Shanghai Maritime University 29th October -2nd November 2009. IMLA.

Huberman, A. M. and Miles, M. (2002) *The qualitative researcher's companion*. Thousand Oaks, CA: Sage.

Hult, M. and Lennung, S. (1980) 'Towards a definition of action research: a note and bibliography'. *Journal of Management Studies*, 12 (2). pp. 241-250.

Hutchins, E. (1995) *Cognition in the Wild*. Cambridge: Cambridge University Press.

Hutchins, E. (1996) 'Learning to Navigate'. In Chaiklin, S. and Lave, J. (eds.) *Understanding Practice*. New York: Cambridge University Press.

Hymes, D. (1972) 'On Communicative Competence'. In Pride, J.B. and Holmes, J. (eds.) *Sociolinguistics - Selected Readings*. Harmondsworth: Penguin, pp. 269-293.

Iheduru, O. (1996). *The Political Economy of International Shipping in Developing Economies*. Cranbury: Associated Universities Presses.

ICAO (2008) *English Speaking Level Descriptors*. Quebec: ICAO

IELTS (2003) *International English Language Testing System Handbook*. Brisbane: UCLES, The British Council, IDP Education Australia and IELTS Australia.

IELTS Partners (2010) 'IELTS Institutions - The proven test with ongoing innovation'. [Online]. Available at: http://www.ielts.org/institutions/about_ielts/the_proven_test.aspx (Accessed: 12th December).

IMO (1978) *International Convention on Standards of Training Certification and Watchkeeping for Seafarers, 1978*. London: IMO.

IMO (1994) *International Convention on Standards of Training, Certification and Watchkeeping for Seafarers, 1978, as amended in 1995*. London: IMO.

IMO (2000) *Model Course 3.17 – Maritime English*. London: IMO.

IMO (2001) *Report on the implementation of the 1995 amendments to the International Convention on Standards of Training, Certification and Watchkeeping for seafarers, (STCW), 1978 upgrading and revision of training programmes and ME Syllabi: People's Republic of China*, London: IMO.

IMO (2001) *Standard Marine Communication Phrases – Draft*. London: IMO.

IMO (2004a) *Standard Marine Communication Phrases*. London: IMO.

IMO (2004b) *The Role of the Human Element Joint MSC/MEPC Working Group on the Human Element - Report of the Working Group*. London: IMO

IMO (2008) *Parties to the International Convention on Standards of Training, Certification and Watchkeeping for Seafarers (STCW), 1978, as amended, confirmed by the Maritime Safety Committee to have communicated information which demonstrates that full and complete effect is given to the relevant provisions of the Convention*. London: IMO.

- IMO (2009) *Model Course 3.17 – Maritime English 2009 Edition*. London: IMO.
- IMO (2011) *STCW: International Convention on Standards of Training, Certification and Watchkeeping for Seafarers, Including 2010 Manila Amendments*. London: IMO.
- Jenkins, A. and Healey, M. (2005) *Institutional Strategies to link Teaching and Research*. The Higher Education Academy. [Online]. Available at: http://www.heacademy.ac.uk/assets/York/documents/ourwork/research/Institutional_strategies.pdf (Accessed: June 2007).
- Jin, L. and Cortazzi, M. (2006) 'Changing practices in Chinese cultures of learning'. *Language, Culture and Curriculum*, 19 (1). pp. 5-20.
- Kang, C. Y., Erickson, G., Ryan, J. and Mitchell, I. (2011) 'A cross-cultural teacher professional learning community'. In Ryan, J. (ed.) *Education Reform in China*. Abingdon: Routledge, pp. 41-60.
- Kember, D. and McNaught, C. (2007) *Enhancing University Teaching - Lessons into research into award-winning teachers*. Oxon: Routledge.
- Kemmis, S. and McTaggart, R. (1992) The Action Research Planner. In Cohan, L., Manion, L. and Morrison, K. (Eds.) *Research Methods in Education*. (5th Edn.) London: Routledge Falmer.
- Knight, J. (1993) 'Internationalization: Management Strategies and Issues'. *International Education Magazine*, 9 (6). pp. 21-22.
- Knight, J. (1997) 'Internationalization of Higher Education: a conceptual framework'. In Knight, J. and de Wit, H. (eds.) *Internationalization of Higher Education in Asia Pacific Countries*. Amsterdam: European Association for International Education, pp. 5-19.
- Knight, J. and de Wit, H. (1995) 'Strategies for internationalisation of higher education: historical and conceptual perspectives'. In de Wit, H. (ed.) *Strategies for Internationalisation of Higher Education: a comparative study of Australia, Europe, Canada and the United States of America* Amsterdam: European Association of International Education, pp. 5-33.
- Knight, J. and de Witt, H. (eds.) (1997) *Internationalisation of higher education in Asia Pacific countries*. Amsterdam: European Association for International Education.
- Knight, J. (2004) 'Internationalization Remodelled: Definition, Approaches, and Rationales'. *Journal of Studies in International Education*, 8 (1), pp. 5-31.
- Knight, P. and Yorke, M. (2006) 'Employability: judging and communicating achievements'. York: The Higher Education Academy. [Online]. Available at: <http://www.qualityresearchinternational.com/esectools/esectpubs/knightyorkeachievement.pdf> (Accessed: 10th September 2010).

Krashen, S. (1986) *Second Language Acquisition and Second Language Learning*. Oxford: Pergamon Press.

Kreber, C. (2009) 'Different Perspectives on Internationalisation in Higher Education'. *New Directions for Teaching and Learning*, 118 pp. 1-14.

Lane, A., Obando, B., Sorenson, M., Wu, B. and Tasiran, A. (2002) *Crewing the International Merchant Fleet*. Cardiff, UK: Seafarers International Research Centre/Lloyds Register Fairplay.

LeCompte, M., Millrow, W. and Preissle, J. (eds.) (1992) *The Handbook of Qualitative Research in Education*. San Diego: Academic Press Inc..

LeCompte, M. and Preissle, J. (1993) *Ethnography and Qualitative Design in Educational Research*. San Diego: Academic Press Inc..

Leggate, H. (2004) 'BIMCO decision will help quality of data'. *Lloyds List*. (Letters to the Editor), 8/3/04. London: Informa Group

Leggott, D. and Stapleford, J. (2007) 'Internationalisation and Employability'. In Jones, E. and Brown, S. (eds.) *Internationalising Higher Education*. Abingdon: Routledge.

Leonardo da Vinci project and the University of Turku (2007) 'MARENG Learning Tool', Available at: <http://mareng.utu.fi/oldmareng/index.html> , (Accessed 30th October 2008).

Levin (1974) 'Educational Reform and Social Change'. *Journal of Applied Behavioural Science*, 10 (3). pp. 304-320.

Lewin, K. (1946) 'Action research and minority problems'. *Journal of Social Issues*, 2 (4). pp. 34 - 46.

Lewin, K. (1952) *Field theory in social science: selected theoretical papers*. London: Tavistock Publications.

Lincoln, Y. and Guba, E. (1985) *Naturalistic Inquiry*. Beverly Hills: Sage.

Lloyds Register Fairplay (2001) 'Manning in crisis - competition pulling Philippines down'. *Lloyds Register Fairplay*, pp. 18-21.

Lofland, J. (1974) 'Styles of reporting qualitative field research'. *American Sociologist*, 9, pp. 101-111.

Luo, W. (2007) *English Language Teaching in Chinese Universities in the Era of the World Trade Organization: A Learner Perspective*. PhD. RMIT University.

Lutzhof, M. (2004) *"The technology is great when it works" maritime technology and human integration on the ship's bridge*. PHD. University of Linköping.

MCA (2010) *Certificates of Equivalent Competency – Amendment of Procedures MIN 340 (M+F): Notice to all Owners, Operators, Managers, Masters, Skippers and Officers of Merchant Ships and Fishing Vessels*. [Online]. London: Department for Transport. Available from: http://www.dft.gov.uk/mca/min_340_proof_3.pdf, (Accessed 10th August 2010)

Maritime International Secretariat Services Limited (2000) 'BIMCO/ISF 2000 Manpower Update - Summary Report'. Marisec, London, UK. [Online]. Available at: <http://www.marisec.org/resources/2000Manpowerupdate.htm> (Accessed: 15/3/2004).

Marshall, H. (2007) 'The Global Education Terminology Debate: Exploring Some of the Issues'. In Hayden, M., Levy, J. and Thompson, J. (eds.) *The Sage Handbook of Research in International Education*. London: Sage Publications Ltd., pp. 38-50.

Mautner, T. (2000) *The Penguin Dictionary of Philosophy*. London: Penguin Books.

McCarter, P. (1999) 'STCW'95: implementation issues: What is the pass mark?' *Marine Policy*, 23 (1), pp. 11-24.

McKernan, J. (1996) *Curriculum Action Research: a handbook of methods and resources for the reflective practitioner*. London: Kogan Page.

McLean, P. and Ransom, L. (2005) 'Building intercultural competencies: Implications for academic skills development'. In Carroll, J. and Ryan, J. (eds.) *Teaching International Students: Improving Learning for All*. Abingdon: Routledge.

McNeil, L. (1986) *Contradictions of Control: School Structure and School Knowledge*. New York: Routledge Kegan Paul.

Mejia, M. Q. (2010) 'The STCW Conference in Manila'. *WMU Journal of Maritime Affairs*, 9 (2), pp. 231-234.

Metaxas, B. (1985) *Flags of Convenience: A Study of Internationalisation*. Aldershot: Gower.

Miles, M. and Huberman, A. (1984) *Qualitative Data Analysis*. Beverly Hills: Sage.

Miles, M. and Huberman, A. (1994) *Qualitative data analysis: an expanded sourcebook*. Newbury Park, CA: Sage.

Mill, S. (1872) *System of Logic*. (1986 Reprint Edition). Charlottesville: Lincoln-Rembrandt.

Morgan, W. J. and Wu, B. (eds.) (2011) *Higher Education Reform in China*. Abingdon: Routledge.

Mora, J. G., Garcia-Montalvo, J. and Garcia-Aracil, A. (2000) 'Lifelong learning policies in Spanish universities '. *European Journal of Education*, 36 (3), pp. 317-327.

Nadkarni and Almazan (2003) 'China's Invasion threat to Indian, Filipino seamen'. *Lloyds List Maritime Asia*, pp. 15.

Ng, C. and Tang, E. (1997) 'Teachers' needs in the process of EFL reform in China: a report from Shanghai'. *Perspectives*, 9 (1). pp. 63-85.

Nolan, P. (2001) *China and the Global Economy: National Champions, Industrial Policy, and the Big Business Revolution*. Basingstoke: Palgrave.

Nystrom, P. and Starbuck, W. (eds.) (1981) *Handbook of Organizational Design*. Oxford; New York Oxford University Press.

Odeke, A. (1998). *Bareboat Charter*. Cambridge: Kluwer Law International.

Oxford, R. (1990) *Language Learning Strategies: What Every Teacher Should Know*. . New York: Newbury House Publishers. .

Patton, M. (1978) *Utilization-focused evaluation*. Beverly Hills: Sage.

Paulston, R. G. (1977) 'Social and Educational Change: Conceptual frameworks'. *Comparative Education Review*, 22 (2/3). pp. 370-395.

Phillips, N. and Hardy, C. (2002) *Discourse Analysis: Investigating Processes of Social Construction*. London: Sage.

Popper, K. (1966) *The Open Society and Its Enemies: The Spell of Plato*. 5th edn. London: Routledge and Kegan Paul.

Qiang, N., Wolff, M. and Hai, T. (2008) 'China EFL: A New Paradigm'. In Hall, S. and

Lewis, M. (eds.) *Education in China 21st Century Issues and Challenges*. New York: Nova Science Publishers Ltd.

Rabinow, P. (ed.) (1991) *The Foucault Reader*. London: Penguin.

Ramsden, P. (1998) *Learning to Teach in Higher Education*. London: Routledge.

Raz, A. (1999) *Riding the black sheep: Japan and Tokyo Disneyland*. Cambridge, MA: Harvard University Asia Center: Harvard University Press.

Reason, J. (1990) *Human Error*. Cambridge: Cambridge University Press.

Reich, R. (1992) *The Work of Nations: Preparing Ourselves for 21st Century Capitalism*. London: Vintage Books.

Rogers, E. and Shoemaker, E. (1971) *Communication of Innovations: A cross cultural approach*. 2nd edn. New York: The Free Press.

Risvi, F. (2007) 'Internationalization of Curriculum: a Critical Perspective'. In Hayden, M., Levy, J. and Thompson, J. (eds.) *The Sage Handbook of Research in International Education*. London: Sage Publications Ltd. pp. 390-403.

Ryan, J. (2011a) 'Higher education and Chinese teachers: Professional education in the context of China's curriculum reform'. In Morgan, W.J. and Wu, B. (eds.) *Higher Education Reform in China*. Abingdon: Routledge, pp. 121-138.

Ryan, J. (ed.) (2011b) *China's Higher Education Reform and Internationalisation*. Abingdon: Routledge.

Ryan, Y. and Zuber-Skerritt, O. (1999) *Supervising Postgraduates from Non-English Speaking Backgrounds (Society for Research into Higher Education)*. Buckingham: Open University Press.

Sato, M. (2003) 'Pleasure of Learning toward Dialogic Practice '. Beijing: Education and Science Press (original work in Japanese - 1999).

Selkou, E. and M. Roe (2004). *Globalisation, policy and shipping: Fordism, post-Fordism and the European Union maritime sector*. Cheltenham: Edward Elgar.

Sletner, T. (2000) 'Quality system for the implementation of STCW -95 in higher maritime education in Norway'. *Maritime Policy and Management*, 27 (1). pp. 89-100.

Sorensen, G. (2004) *The Transformation of the State: Beyond the Myth of Retreat*. Basingstoke: Palgrave Macmillan.

Stenhouse, L. (1980) *Curriculum research and development in action*. London: Heinemann Educational.

Stopford, M. (2009) *Maritime Economics*. 3rd edn. New York: Routledge.

Strauss, A. and Corbin, J. (1988) *Basics of Qualitative Research: Techniques and Procedures for Developing Grounded Theory*. Thousand Oaks: Sage Publications.

Sweeny, S. (2010) 'Bologna Process: responding to the post-2010 challenge'. York: The Higher Education Academy. [Online]. Available at: <http://www.heacademy.ac.uk/assets/documents/internationalisation/BolognaProcess.pdf> (Accessed: 10th September 2010).

Sylvester, R. (2007) 'Historical Resources for Research in International Education (1851-1950)'. In Hayden, M., Levy, J. and Thompson, J. (eds.) *The Sage Handbook of Research in International Education*. London: Sage Publications Ltd., pp. 11-24.

Tacchi, J., Slater, D. and Hearn, G. (2003) *Ethnographic Action Research*. [Online]. Available at: http://unesdoc.unesco.org/ulis/cgi-bin/ulis.pl?catno=139419andset=496C79A1_1_391andgp=1andlin=1 (Accessed: February 2007).

Teo, P. (2000) 'Racism in the News: A Critical Discourse Analysis of News Reporting in Two Australian Newspapers'. *Discourse and Society*, 11 (1), pp. 7-49.

The British Council (2010) *Relating IELTS scores to the Council of Europe's Common European Framework*. [Online] Available at: http://www.britishcouncil.org/ielts-coe_flier.pdf . (Accessed 31st May 2010).

Thorne, C. and Wang, Q. (1996) 'Action Research in Language Teacher Education'. *ELT Journal*, 50 (3). pp. 254-262.

Trigwell, K, Prosser, M. and Waterhouse, F. (1999) 'Relations between teachers' approaches to teaching and students' approaches to learning' *Higher Education*, 37, pp. 57-83

University of Cambridge ESOL Examinations (2009) *University of Cambridge ESOL Examinations Annual Review 2009*. Cambridge: Cambridge University ESOL Examinations

University of Cambridge ESOL Examinations (2010) 'IELTS test taker performance 2009'. *Cambridge ESOL: Research Notes*, (40). pp. 26 - 29.

UK P and I Club (2000) *The Human Factor - A Report on manning*. London, UK: Thomas Miller.

Vicente, K. (1993) *Reconstructive remembering of the scientific literature*. Netherlands: Elsevier.

Weber, M. (1904) *The Objectivity of Knowledge in Social Science and Social Policy*. New York: Oxford University Press.

WMU (1998) *EC Study on the MET systems of China, India, Indonesia and the Philippines (CIIPMET), Final Report*. Malmö, Sweden: World Maritime University.

Woods (1992) 'Symbolic Interactionism: theory and method'. In LeCompte, M., Milroy, W. and Preissle, J. (eds.) *Handbook of Qualitative Research in Education*. San Diego: Academic Press Inc. pp. 337-404.

Wu, B. (2003) *Sustainable Development in Rural China*. London: RoutledgeCurzon.

Wu, B. (2004) 'Participation in the global labour market: experience and responses of Chinese seafarers'. *Maritime Policy and Management*, 31 (1). pp 69-82.

Wu, B. (2006) 'Emergence of 'new professionalism' among Chinese seafarers: empirical evidence and policy implications'. *Maritime Policy and Management*, 33 (1). pp. 35-48.

Wu, B., Shen, G. and Li, L. (2007) *The Transformation of the Chinese Labour Market for Seafarers*. Cardiff: Seafarers International Research Centre.

- Wu, J. (2008) 'Views of Taiwanese students and teachers on language testing'. Cambridge ESOL: Research Notes, (34). pp 6-9.
- Yang, R. (2002) *Third delight: the internationalization of higher education in China*. London: Routledge.
- Yardley, L. (2000) 'Dilemmas in Qualitative Health Research'. *Psychology and Health*, 15 (2). pp. 215-228.
- Yercan, F., Fricke, D. and Stone, L. (2005) 'Developing a model on improving ME training for maritime transportation safety'. *Educational Studies*, 31 (2). pp. 213-234.
- Zaltman, G., Duncan, R. and Holbek, J. (1973) *Innovations and Organisations*. New York: John Wiley.
- Zaltman, G., Florio, D. and Sikorski, L. A. (1977) *Dynamic Educational Change*. New York: The Free Press/Macmillan.
- Zhao, M. (2000a) 'Chinese Seafarers at the End of the 20th Century'. *Seaways*, pp. 7-10.
- Zhao, M. (2000b) *Chinese Seafarers: Value for Money or Cheap Labour?* Cardiff: Seafarers International Research Centre.
- Zhao, M. (2002) 'The Consequences of China's Socialist Market Economy for Seafarers'. *Work, Employment and Society*, 6 (1), pp 171 - 183.
- Zhao, M. and Amante, M. (2005) 'Chinese and Filipino Seafarers: A Race to the Top or the Bottom'. *Modern Asian Studies*. pp.535-557.
- Zhao, M. and Wu, B. (2002) 'Chinese Seafarers at the Beginning of the 21st Century', *LSM Manning and Training in China Conference*. Shanghai October 2002. London: Lloyds Ship Manager.
- Zhong, Q. (2006) 'Curriculum reform in China: Challenges and Reflections'. *Frontiers of Education in China*, 3, pp. 370-382.
- Zuber-Skerrit, O. (Ed.) (1996) *New directions in action research*. London: Falmer

Appendix 1 – Classroom observations coding frame

Category	Description	Code
Layout of rooms (LOR)	Fixed seating	F
	Fixed seating in booths	FB
	Movable seating	M
Use of textbook (UOT)	Extensive	TE
	Moderate	TM
	Not used	TN
Use of teacher's own/ genuine materials (UGM)	Extensive	OE
	Moderate	OM
	Not used	ON
Influence of IMO Model Course (IMO)	Extensive	MCE
	Moderate	MCM
	Not evident	MCN
Student preparedness (SP)	Extensive	PE
	Moderate	PM
	Low	PL
Student engagement (SE)	Extensive	EE

	Moderate	EM
	Low	EL
Skills (SK)	Listening	SL
	Speaking	SS
	Reading	SR
	Writing	SW
	Vocabulary	TLV
Target Language (TL)	Grammar	TLG
	Pronunciation	TLP
	Fluency	TLF
	Teacher talk to students	TTS
Teacher/student interaction (TSI)	Student(s) talk to teacher	STT
	Student(s) talk to student(s)	SSS
Manner of delivery (MOD)	Engage	E
	Study	S
	Activate	A

Appendix 2 – Detailed coding of classroom observations

Obs. No. Code	TL	TSI	MOD	8	TLV (60%) TLG (20%) TLF (10%)	TTS (80%) STT (10%) SSS (10%)	S (80%) A (20%)
1	TLV (80%) TLP (20%)	TTS (75%) STT (25%)	S (80%) E (10%) A (10%)	9	TLV (70%) TLF (20%) TLP (10%)	TTS (75%) STT (10%) SSS (15%)	S (80%) A (20%)
2	TLV (95%) TLP (5%)	TTS (80%) STT (5%) SSS (10%)	S (80%) A (20%)	10	TLF (60%) TLV (30%) TLP (10%)	TTS (30%) SST (30%) SSS (40%)	E (20%) S (50%) A (30%)
3	TLV (75%) TLP (25%)	TTS (90%) STT (!)%	S (70%) E (→%) A (10%)	11	TLV (60%) TLF (30%) TLG (10%)	TTS (60%) SST (20%) SSS (20%)	E (10%) S (60%) A (30%)
4	TLF (60%) TLV (40%)	TTS (60%) STT (40%)	E (40%) S (20%) A (40%)	12	TLV 50%() TLF (20%) TLP (20%)	TTS (50%) SST (20%) SSS (30%)	E (10%) S (50%) A (40%)
5	TLP (30%) TLF (30%) TLG (10%) TLV (30%)	TTS (50%) STT (30%) SSS (20%)	E (30%) S (30%) A (40%)	13	TLV (60%) TLG (30%) TLP (10%)	TTS (70%) SSS (20%) SST (10%)	S (70%) A (30%)
6	TLV (50%) TLG (40%) TLF (10%)	TTS (70%) STT (20%) SSS (10%)	E (20%) S (50%) A (30%)	14	TLV (60%) TLF (30%) TLP (10%)	TTS (60%) SSS (30%) STT (10%)	E (10%) S (60%) A (30%)
7	TLV (60%) TLF (20%) TLP (20%)	TTS (50%) STT (30%) SSS (20%)	E (10%) S (60%) A (30%)	15	TLV 80% TLP (20%)	TTS (80%) SSS (20%)	S (70%) A (30%)

Appendix 3 – Informed consent form

自愿同意授权书

项目名称：海事英语研究

普利茅斯大学，普利茅斯，德文郡，英国，PL4 8AA

我叫 Robyn Pyne，是一名就读于英国普利茅斯大学的在校博士生。我所学习和研究的专业是国际航运与物流，以及海事英语。其中，根据学位要求需进行一项调查研究。

对参与者的说明：

您正在被邀请加入我的调查研究中。下列内容是有关于参与本调查研究的信息，请您仔细阅读。首席研究员（Robyn Pyne）将回答您的所有问题。您在决定是否参加之前，请提出您所不明白的任何问题。您在参与研究期间或参与研究之后也可以随意提问。您参与研究完全是自愿的。您可以拒绝参与研究，不会因拒绝参加研究而被罚款，并且不会对您其它方面享有的利益造成损失。您的年龄至少 18 岁，并且您本人没有医疗问题、语言或教育的理解障碍，也包含在本授权的解释，为自愿同意。

此项研究的目的：研究中国海事英语教授和学习。

程序：

如果您在阅读本同意书后，同意参加，您可能将被邀请参加观察、小组讨论还有结构化面试。

可能出现的风险或不适：本研究项目涉及的风险很小。不会让您感受到任何本质上具有敏感性的问题。参与这项研究需要您一个小时的时间。

可能带来的好处：参与这项研究，或许您没有直接受益。但它有助于您了解、获取更多关于航海类专业英语的教授和学习。

财政考虑：由于您参与的这项研究没有成本支出，因此没有财政上的补偿。但参与研究期间将为您提供茶点。

匿名的

研究资料将予以保密。您的身份不会被识别，相关数据将以“集团”的方式在报告中反映出来。您参与这项研究是自愿的，因此您出席分组讨论、观察与访谈将视为您知情并同意。

这项研究的结果可能会被发表在博士论文、科学期刊、或是在专业会议上介绍。在所有出版物中或是介绍这项研究中，您的隐私权将被维护。

正如上文所述，在这项研究期间收集的所有数据将由调查员严格保密。数据将被储存在密封的文件夹里，并在研究结束时销毁。所有信息将被严格保密，不会被披露，除非法律或法规所要求。

撤销权：你可以自由选择是否参与这项研究。如果您没有选择参加这项研究，将不会在其它方面造成您的利益损失或是罚款。

接触问题/获取同意书：您参与此项研究时，无论何时，有任何问题都可以与罗宾派恩（首席研究员）联系解答，电话为 13578944721（大连移动）。也可致电航海学院院长刘正江教授。

请保持本同意书的副本。

调查的书面证言：我特此证明，我已向参与项目调查的人全面解释了上述项目的性质、要求、利益和风险。参与调查的人自愿同意参与本项研究，且表明他/她至少年龄 18 岁，并且他/她没有医疗问题或语言或教育的阻碍，排除了他/她明白我解释的障碍。因此，本人特此证明，尽本人所知，让参与者清楚的理解 这个项目的性质，要求，利益和他她参加所涉及的风险。

调查员签名

IMCRC 批准日期：2006 年 6 月

Appendix 4 – Final stage Navigation student survey

Navigation Student Survey: Stage 4

Economic and Social Research Council of the UK

Researcher: Robyn. M. PYNE


robyn.pyne@plymouth.ac.uk

<http://www.esrc.ac.uk>

Search keyword: Seafarers

Dear Final Stage Navigation Student,

Good morning/afternoon! Thank you for kindly taking part in this survey, it should take you around 5 minutes to complete. Maybe you have some of the following questions to satisfy before you continue:

WHAT IS THE SURVEY FOR? Your answers will be used in feedback activities in order to improve the training and employment opportunities for future groups of Navigation students. If you take part in subsequent surveys, this information will be used to map the careers of DMU Navigation graduates and to record where in the world they are working and for which companies.

WHY DO YOU WANT TO ASK ME QUESTIONS? Please be honest with your responses and answer questions about the way you are feeling at this present time. This will help to ensure that your answers are effective in helping to achieve the aims of the research. All questionnaires will remain anonymous and your name will not be told to anyone. Your form will be given a number and this will be used in place of your name.

HOW CAN I BENEFIT FROM THIS SURVEY? All questionnaires supplying contact details will be entered into a prize draw to win an electronic Chinese – English dictionary.

HOW DO I ANSWER THIS QUESTIONNAIRE?Please answer all “**ANSWER ALL**” questions.Please answer only the appropriate “**ANSWER IF**”Where “**SINGLE CODE**” appears please provide only one answer.

Please follow the prompts as to which questions to answer:

EXAMPLE – if you answer 2. “No” to this question, you should go forward to Section Three and not proceed to answer any further questions in Section Two.

Q3 ANSWER ALL**Do you plan to work at sea after your graduation?****SINGLE CODE ONLY**

Yes	1 <input type="checkbox"/>	CONTINUE
No	2 <input type="checkbox"/>	GO TO SECTION THREE
I don't know	3 <input type="checkbox"/>	CONTINUE

Q3a**ANSWER IF Q3 ANSWERED “YES” (1) OR “I DON’T KNOW”(3)**

CHECK QUESTION

ANSWER ALL

S1 Are you in your 4th year of studying the Navigation/Nautical science major at Dalian Maritime University?

SINGLE CODE

Yes	1 <input type="checkbox"/>	CONTINUE	
No	2 <input type="checkbox"/>	DO NOT CONTINUE	
I don't know	3 <input type="checkbox"/>	CONTINUE, BUT CLARIFY LATER	()

SECTION ONE

ASK ALL

Q1 How important do you think the following are to you concerning your choice to study Navigation?

SINGLE CODE FOR EACH A-P

		Very important to me	Fairly important to me	Neither important nor unimportant	Not very important	Not at all important	Don't Know/ don't understand	
A	Because seafaring is a good job that will pay good money	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>	()
	Personal comment							
B	Because being a seafarer is exciting	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>	()
	Personal comment							
C	Because being a seafarer is romantic/has a long history	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>	()
	Personal comment							
D	Because being a seafarer is a good way to earn money that I may invest or use to start a business of my own in the future	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>	()
	Personal comment							

		Very important to me	Fairly important to me	Neither important nor unimportant	Not very important	Not at all important	Don't Know/ don't understand
E	Because a member of my family is/was a seafarer						
		1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>
	Personal comment						
F	Because my parents decided that I should become a seafarer						
		1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>
	Personal comment						
G	Because I am interested in the subject of navigation						
		1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>
	Personal comment						
H	Because I wish to have the chance to work for China's Maritime Safety Administration						
		1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>
	Personal comment						
I	Because I wish to travel around the world						
		1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>
	Personal comment						
J	Because I would like to teach in a maritime university/training college when I have enough experience						
		1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>
	Personal comment						
K	Because I would like to study for a Masters degree in this subject area						
		1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>

	Personal comment						
L	Because I would like to carry out research within the maritime industry in the future	()					
		1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>
	Personal comment						
M	Because being the Captain of a ship will gain me much respect in Chinese society	()					
		1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>
	Personal comment						
N	Because I wish to experience new things and to find my work challenging and interesting	()					
		1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>
	Personal comment						
O	Because I wish to gain experience so I can work elsewhere within the Maritime Industry	()					
		1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>
	Personal comment						
P	Any other reasons: please write in the space provided	()					

ASK ALL

Q2 Which international Shipping companies have you heard of before?

SINGLE CODE EACH ONE A-C

		YES	NO
A	AP Moller-Maersk "Maersk"	1 <input type="checkbox"/>	2 <input type="checkbox"/>
B	American President Lines "APL"	1 <input type="checkbox"/>	2 <input type="checkbox"/>
C	Mediterranean Shipping Co. "MSC"	1 <input type="checkbox"/>	2 <input type="checkbox"/>
D	Peninsula and Orient Steamship line "P&O"	1 <input type="checkbox"/>	2 <input type="checkbox"/>
E	Evergreen	1 <input type="checkbox"/>	2 <input type="checkbox"/>
F	BP Tankers	1 <input type="checkbox"/>	2 <input type="checkbox"/>
G	Exxon Mobil	1 <input type="checkbox"/>	2 <input type="checkbox"/>
H	P&O Nedlloyd	1 <input type="checkbox"/>	2 <input type="checkbox"/>
I	COSCO	1 <input type="checkbox"/>	2 <input type="checkbox"/>
J	Hyundai	1 <input type="checkbox"/>	2 <input type="checkbox"/>
K	Ocean Tankers	1 <input type="checkbox"/>	2 <input type="checkbox"/>
L	Others (you may write in English, Pinyin or Hansi:		

Q3 Do you plan to work at sea after your graduation?

ASK ALL SINGLE CODE ONLY

Yes	1 <input type="checkbox"/>	CONTINUE
No	2 <input type="checkbox"/>	GO TO SECTION THREE
I don't know	3 <input type="checkbox"/>	CONTINUE

()

SECTION TWO: B - ANSWER IF YOU ARE CONSIDERING WORKING AT SEA

ASK IF Q3 ANSWERED YES (1) OR I DON'T KNOW (3)

Q3a

If all of the following offered you the same salary, which type of ship would you like to work onboard?

SINGLE CODE FOR EACH A-H

	First Choice	Second Choice	Third Choice	Fourth Choice	Fifth Choice	Sixth choice	Seventh Choice	Eighth Choice	I Don't know	
a Oil tanker	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>	7 <input type="checkbox"/>	8 <input type="checkbox"/>	9 <input type="checkbox"/>	()
b Chemical/Product Tanker	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>	7 <input type="checkbox"/>	8 <input type="checkbox"/>	9 <input type="checkbox"/>	()
c Gas Carrier	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>	7 <input type="checkbox"/>	8 <input type="checkbox"/>	9 <input type="checkbox"/>	()
d Bulk Carrier	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>	7 <input type="checkbox"/>	8 <input type="checkbox"/>	9 <input type="checkbox"/>	()
e General Cargo	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>	7 <input type="checkbox"/>	8 <input type="checkbox"/>	9 <input type="checkbox"/>	()
f Container	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>	7 <input type="checkbox"/>	8 <input type="checkbox"/>	9 <input type="checkbox"/>	()
g Passenger	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>	7 <input type="checkbox"/>	8 <input type="checkbox"/>	9 <input type="checkbox"/>	()
h Other (please specify by writing the ship type on the line below)	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>	7 <input type="checkbox"/>	8 <input type="checkbox"/>	9 <input type="checkbox"/>	()

PLEASE STATE A REASON FOR YOUR 1st, 2nd and 3rd CHOICE

1st Choice:

2nd Choice:

3rd Choice:

ASK IF Q3 ANSWERED YES (1) OR I DON'T KNOW (3)

Q3b For how many years do you plan to work at sea?

SINGLE CODE ONLY or NUMBER

State YEARS in numbers:		
I don't know	3 <input type="checkbox"/>	()

ASK IF Q3 ANSWERED YES (1) OR I DON'T KNOW (3)

Q3c If you go to sea, what level of command do you anticipate achieving before you retire from your seafaring career?

SINGLE CODE EACH ONE A-D

		PLAN TO ACHIEVE	DO NOT PLAN TO ACHIEVE	I DON'T KNOW	
A	3rd officer	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	
	Personal comment				
B	2nd Officer	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	
	Personal comment				
C	1st Officer/Chief officer	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	
	Personal comment				
D	Captain	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	
	Personal comment				

Q4a General considerations for choice of shipping company to work for when you graduate:

SELECT FROM MENU AS APPROPRIATE AND SECLECT SINGLE CODE FOR EACH A – O

		Very important to me	Fairly important to me	Neither important nor unimportant	Not very important	Not at all important	Don't Know/ don't understand	
A	I wish to work with other Chinese	1	2	3	4	5	6	()
	Personal comment							
B	I wish to work with Koreans	1	2	3	4	5	6	()
	Personal comment							
C	I wish to work with Japanese	1	2	3	4	5	6	()
	Personal comment							
D	I wish to work with my classmates	1	2	3	4	5	6	()
	Personal comment							
E	I wish to work with Westerners	1	2	3	4	5	6	()
	Personal comment							
F	wish to work with Singaporeans	1	2	3	4	5	6	()
	Personal comment							
G	I wish to work with a mix of nationalities on one ship	1	2	3	4	5	6	()
	Personal comment							
H	I wish to work with just one or two nationalities on one ship	1	2	3	4	5	6	()
	Personal comment							

I	I wish to work on a non-Chinese ship because it will pay more money	1	2	3	4	5	6	()
	Personal comment							
J	I wish to sail for long periods of time (over two months)	1	2	3	4	5	6	()
	Personal comment							
K	I wish to sail for short periods of time (under two months)	1	2	3	4	5	6	()
	Personal comment							
L	I wish to work for a company with a good safety record	1	2	3	4	5	6	()
	Personal comment							
M	I wish to experience job satisfaction	1	2	3	4	5	6	()
	Personal comment							
N	I wish to return home to my family regularly (at least four times per year)	1	2	3	4	5	6	()
O	Any other reasons for choice of shipping company, please write in the space provided:	()						

ASK IF ANSWERED Q4a – A 1 or 2

Q4b Importance to you of working with other CHINESE:

DELETE AS APPROPRIATE AND SECLECT SINGLE CODE FOR EACH A – D

		Very important to me	Fairly important to me	Neither important nor unimportant	Not very important	Not at all important	Don't Know/ don't understand
A	I WISH/DO NOT WISH to work with other Chinese because my English is poor	1	2	3	4	5	6 ()
B	I WISH/DO NOT WISH to work with other Chinese because I feel happier with people from my own culture e.g. when eating and talking at rest times	1	2	3	4	5	6 ()
C	I have heard GOOD/BAD things about working with foreigners	1	2	3	4	5	6 ()
D	Any other reasons for choice of to WORK/NOT WORK with other Chinese, please write in the space provided:	()					

Q4c Importance to you of working with other ASIANS:

DELETE AS APPROPRIATE AND SECLECT SINGLE CODE FOR EACH A – D

		Very important to me	Fairly important to me	Neither important nor unimportant	Not very important	Not at all important	Don't Know/ don't understand
A	I WISH/DO NOT WISH to work with other Asians because my English is poor	1	2	3	4	5	6 ()
B	I WISH/DO NOT WISH to work with other Asians because I feel happier with people from a similar culture to my own e.g. when eating and talking at rest times	1	2	3	4	5	6 ()
C	I have heard good/bad things about working with Asians	1	2	3	4	5	6 ()
D	Any other reasons for choice of to work/not work with other Asians, please write in the space provided:	()					

Q4d Importance to you of working with WESTERNERS:

DELETE AS APPROPRIATE AND SECLECT SINGLE CODE FOR EACH A – D

		Very important to me	Fairly important to me	Neither important nor unimportant	Not very important	Not at all important	Don't Know/ don't understand
A	I WISH/DO NOT WISH to work with Westerners to improve my English	1	2	3	4	5	6 ()
C	I WISH/DO NOT WISH to work with Westerners because I feel happier with people from another culture e.g. when eating and talking at rest times	1	2	3	4	5	6 ()
D	I have heard GOOD/BAD things about working with foreigners	1	2	3	4	5	6 ()
E	Any other reasons for choice of to WORK/NOT WORK with other Chinese, please write in the space provided:	()					

Q6 What is important to you in choosing which shipping company to work for in the immediate future (for the next 2 years employment)?

DELETE AS APPROPRIATE AND SECLECT SINGLE CODE FOR EACH A – D

		Very important to me	Fairly important to me	Neither important nor unimportant	Not very important	Not at all important	Don't Know/ don't understand
A	I WISH/DO NOT WISH to work for a company owned by a Chinese shipowner, that sails only to ports in China	1	2	3	4	5	6 ()
B	I WISH/DO NOT WISH to work on a ship owned by a Chinese shipowner, that sails to ports around East Asia (e.g. Mainland China, Hongkong, Taiwan, Korea, Malaysia, Vietnam, Japan).	1	2	3	4	5	6 ()
C	I WISH/DO NOT WISH to work on a ship owned by a Chinese shipowner, that sails to ports all around the world	1	2	3	4	5	6 ()
D	I WISH/DO NOT WISH to work on a ship owned by a Hongkong or Taiwanese shipowner, that sails to ports around mainland China, Hongkong and Taiwan.	1	2	3	4	5	6 ()
E	I WISH/DO NOT WISH to work on a ship owned by a Hongkong or Taiwanese shipowner, that sails to ports around East Asia (e.g. Mainland China, Hongkong, Taiwan, Korea, Malaysia, Vietnam, Japan).	1	2	3	4	5	6 ()

		Very important to me	Fairly important to me	Neither important nor unimportant	Not very important	Not at all important	Don't Know/ don't understand
F	I WISH/DO NOT WISH to work on a ship owned by a Hongkong or Taiwanese shipowner, that sails to ports all over the world.	1	2	3	4	5	6 ()
G	I WISH/DO NOT WISH to work on a ship owned by a Korean shipowner that sails to ports around East Asia	1	2	3	4	5	6 ()
H	I WISH/DO NOT WISH to work on a ship owned by a Korean shipowner, that sails to ports all over the world.	1	2	3	4	5	6 ()
I	I WISH/DO NOT WISH to work on a ship owned by a Japanese shipowner that sails to ports around East Asia	1	2	3	4	5	6 ()
J	I WISH/DO NOT WISH to work on a ship owned by a Japanese shipowner, that sails to ports all over the world.	1	2	3	4	5	6 ()
K	I WISH/DO NOT WISH to work on a ship owned by a Singaporean shipowner that sails to ports around East Asia	1	2	3	4	5	6 ()
L	I WISH/DO NOT WISH to work on a ship owned by a Singaporean shipowner, that sails to ports all over the world.	1	2	3	4	5	6 ()
M	I WISH/DO NOT WISH to work on a ship owned by a Western shipowner that sails to ports around East Asia	1	2	3	4	5	6 ()

Very important to me	Fairly important to me	Neither important nor unimportant	Not very important	Not at all important	Don't Know/ don't understand
----------------------------	------------------------------	--------------------------------------------	-----------------------	-------------------------	------------------------------------

N	I WISH/DO NOT WISH to work on a ship owned by a Western shipowner, that sails to ports all over the world.	1	2	3	4	5	6	()
O	Any other reasons for choice of shipping company nationality, please write in the space provided:	()						

Q7 What is important to you in choosing which shipping company to work for in the long-term future (the next 5 to 10 years)?

DELETE AS APPROPRIATE AND SECLECT SINGLE CODE FOR EACH A – O

		Very important to me	Fairly important to me	Neither important nor unimportant	Not very important	Not at all important	Don't Know/ don't understand
A	I WISH/DO NOT WISH to work for a company owned by a Chinese shipowner, that sails only to ports in China	1	2	3	4	5	6 ()
B	I WISH/DO NOT WISH to work on a ship owned by a Chinese shipowner, that sails to ports around East Asia (e.g. Mainland China, Hongkong, Taiwan, Korea, Malaysia, Vietnam, Japan).	1	2	3	4	5	6 ()
C	I WISH/DO NOT WISH to work on a ship owned by a Chinese shipowner, that sails to ports all around the world	1	2	3	4	5	6 ()
D	I WISH/DO NOT WISH to work on a ship owned by a Hongkong or Taiwanese shipowner, that sails to ports around mainland China, Hongkong and Taiwan.	1	2	3	4	5	6 ()
E	I WISH/DO NOT WISH to work on a ship owned by a Hongkong or Taiwanese shipowner, that sails to ports around East Asia (e.g. Mainland China, Hongkong, Taiwan, Korea, Malaysia, Vietnam, Japan).	1	2	3	4	5	6 ()

		Very important to me	Fairly important to me	Neither important nor unimportant	Not very important	Not at all important	Don't Know/ don't understand
F	I WISH/DO NOT WISH to work on a ship owned by a Hongkong or Taiwanese shipowner, that sails to ports all over the world.	1	2	3	4	5	6 ()
G	I WISH/DO NOT WISH to work on a ship owned by a Korean shipowner that sails to ports around East Asia	1	2	3	4	5	6 ()
H	I WISH/DO NOT WISH to work on a ship owned by a Korean shipowner, that sails to ports all over the world.	1	2	3	4	5	6 ()
I	I WISH/DO NOT WISH to work on a ship owned by a Japanese shipowner that sails to ports around East Asia	1	2	3	4	5	6 ()
J	I WISH/DO NOT WISH to work on a ship owned by a Japanese shipowner, that sails to ports all over the world.	1	2	3	4	5	6 ()
K	I WISH/DO NOT WISH to work on a ship owned by a Singaporean shipowner that sails to ports around East Asia	1	2	3	4	5	6 ()
L	I WISH/DO NOT WISH to work on a ship owned by a Singaporean shipowner, that sails to ports all over the world.	1	2	3	4	5	6 ()
M	I WISH/DO NOT WISH to work on a ship owned by a Western shipowner that sails to ports around East Asia	1	2	3	4	5	6 ()

		Very important to me	Fairly important to me	Neither important nor unimportant	Not very important	Not at all important	Don't Know/ don't understand
N	I WISH/DO NOT WISH to work on a ship owned by a Western shipowner, that sails to ports all over the world.	1	2	3	4	5	6 ()
O	Any other reasons for choice of shipping company nationality, please write in the space provided:	()					

Q8

Are you registered with an agency?

Employment agency (non-fee charging)	1
Employment agency (fee charging)	2
I don't know	3

Q9

ASK IF ANSWERED YES TO Q7

REDORD NAME OF AGENCY(IES):

1. _____
2. _____
3. _____

SECTION THREE: EDUCATIONAL INFORMATION**C1 DID YOU ATTEND A PRIVATELY OR A STATE FUNDED HIGH SCHOOL?**

SINGLE CODE ONLY

Yes	1	CONTINUE
No	2	GO TO QUESTION D1
I don't know	3	CONTINUE

()

ASK IF YES TO C1

C2 RECORD LENGTH OF TIME AT A PRIVATE SCHOOL:

Age when you began at this school:	
Age upon graduation:	

SECTION FOUR: PERSONAL INFORMATION**D1 RECORD GENDER**

Male	1
Female	2

D2 RECORD AGE

Date of Birth:	
Age upon graduation:	

D3 RECORD RESIDENTIAL STATUS

Urban	1
Rural	2

D4**RECORD PARENTAL
OCCUPATION**

Occupation

Unemployed

Retired

Mother's occupation:		1	1
Father's occupation:		2	2

D5	FUNDING OF TUITION FEES	Percentage
	Family income/savings	
	Scholarship	
	Own income/savings	
	Bank loan	
	Shipping company sponsorship	
	Loan from family or friends	
	Other.....	

That concludes the questionnaire. Thank you for taking the time to help with this study. As I mentioned at the start, all of your answers will be treated as strictly private and confidential.

D4 Would you be willing to take part in a similar survey about your experiences onboard next year?

SINGLE CODE ONLY

Yes	1	COMPLETE PERMANANT CONTACT DETAILS
No	2	END

()

D5 PERMANAENT CONTACT DETAILS

Name: _____

Home Address: _____

Province: _____

Zip Code: _____

Email: _____

Mobile Phone Number: _____

Any other means of contacting you: _____

Appendix 5 – Standardised industry approved language test

Student: Hou Wanli
侯万里

Group Number: 2004 - 13

Listening

- | | | | | | | |
|-----|---------------|-------------------------------------|----|--------------|-------------------------------------|-----|
| 1. | Seen | <input checked="" type="checkbox"/> | Or | In | <input type="checkbox"/> | 1. |
| 2. | For | <input type="checkbox"/> | Or | Four | <input checked="" type="checkbox"/> | 2. |
| 3. | Houston | <input type="checkbox"/> | Or | Fuston | <input checked="" type="checkbox"/> | 3. |
| 4. | Finnish | <input type="checkbox"/> | Or | Finished | <input checked="" type="checkbox"/> | 4. |
| 5. | Personal | <input type="checkbox"/> | Or | Personnel | <input type="checkbox"/> | 5. |
| 6. | Vessel's | <input checked="" type="checkbox"/> | Or | Visual | <input type="checkbox"/> | 6. |
| 7. | PA | <input type="checkbox"/> | Or | B8 | <input checked="" type="checkbox"/> | 7. |
| 8. | Loss | <input type="checkbox"/> | Or | Lots | <input checked="" type="checkbox"/> | 8. |
| 9. | At anchor | <input checked="" type="checkbox"/> | Or | At tanker | <input type="checkbox"/> | 9. |
| 10. | 30 | <input checked="" type="checkbox"/> | Or | 40 | <input type="checkbox"/> | 10. |
| 11. | Three | <input type="checkbox"/> | Or | Their | <input checked="" type="checkbox"/> | 11. |
| 12. | All | <input type="checkbox"/> | Or | Oil | <input checked="" type="checkbox"/> | 12. |
| 13. | Channel | <input type="checkbox"/> | Or | Canal | <input checked="" type="checkbox"/> | 13. |
| 14. | Sail | <input type="checkbox"/> | Or | Sell | <input checked="" type="checkbox"/> | 14. |
| 15. | Crude | <input checked="" type="checkbox"/> | Or | Crew | <input type="checkbox"/> | 15. |
| 16. | Tension | <input checked="" type="checkbox"/> | Or | Attention | <input type="checkbox"/> | 16. |
| 17. | New assistant | <input checked="" type="checkbox"/> | Or | Newer system | <input type="checkbox"/> | 17. |
| 18. | Docks | <input checked="" type="checkbox"/> | Or | Stocks | <input type="checkbox"/> | 18. |
| 19. | Can | <input type="checkbox"/> | Or | Can't | <input checked="" type="checkbox"/> | 19. |
| 20. | Notes | <input type="checkbox"/> | Or | Notice | <input checked="" type="checkbox"/> | 20. |
| 21. | 2000 | <input checked="" type="checkbox"/> | Or | 2100 | <input checked="" type="checkbox"/> | 21. |
| 22. | Not | <input checked="" type="checkbox"/> | Or | Now | <input type="checkbox"/> | 22. |
| 23. | Longer | <input checked="" type="checkbox"/> | Or | Long | <input type="checkbox"/> | 23. |
| 24. | Coast | <input checked="" type="checkbox"/> | Or | Coats | <input type="checkbox"/> | 24. |
| 25. | Retain | <input checked="" type="checkbox"/> | Or | Regain | <input type="checkbox"/> | 25. |
| 26. | When | <input type="checkbox"/> | Or | Where | <input checked="" type="checkbox"/> | 26. |

Odd Word:

1. stand
2. maintain
3. gauze
4. finish
5. sport
6. car
7. computer
8. surgeon
9. insert
10. ~~metal~~ cheese

Fill the gap:

1. in
2. on
3. with
4. on
5. along
6. by
7. down
8. to
9. on
10. for

Numbers (time)

1. ~~zero~~ oh two one
2. half an hour
3. three quarters of an hour
4. ten o'clock
5. fourteen and a half days
6. six
7. eleven
8. one five zero
9. one hundred and thirty-eight point four five metres
10. one hundred and fifty-eight point four five metres fifteen five hundred

27.	Pirates	<input checked="" type="checkbox"/>	Or	Pilots	<input type="checkbox"/> 27.
28.	Screwdriver's	<input checked="" type="checkbox"/>	Or	Crew's driver's	<input type="checkbox"/> 28.
29.	Difficulty	<input checked="" type="checkbox"/>	Or	Difficult day	<input type="checkbox"/> 29.
30.	Lifebuys	<input checked="" type="checkbox"/>	Or	Lifboats	<input type="checkbox"/> 30.
31.	Sold	<input type="checkbox"/>	Or	So old	<input checked="" type="checkbox"/> 31.
32.	Tight	<input checked="" type="checkbox"/>	Or	Tied	<input type="checkbox"/> 32.
33.	Crowds	<input type="checkbox"/>	Or	Clouds	<input checked="" type="checkbox"/> 33.
34.	Gearing	<input type="checkbox"/>	Or	Clearing	<input checked="" type="checkbox"/> 34.
35.	Lunch	<input checked="" type="checkbox"/>	Or	Launch	<input type="checkbox"/> 35.
36.	To date	<input type="checkbox"/>	Or	Today	<input checked="" type="checkbox"/> 36.
37.	Tried	<input type="checkbox"/>	Or	Dried	<input checked="" type="checkbox"/> 37.
38.	Horrid day	<input type="checkbox"/>	Or	Holliday	<input checked="" type="checkbox"/> 38.
39.	Few	<input type="checkbox"/>	Or	View	<input checked="" type="checkbox"/> 39.
40.	Sealing Tape	<input type="checkbox"/>	Or	Ceiling paint	<input checked="" type="checkbox"/> 40.

Fill the gap 2

1. Where do you expect ..
2. It ~~has~~ still ..
3. Can ..
4. He is ..
5. When ..

Different sound

1. ~~mass~~ ..
2. ~~break~~ ..
3. night ..
4. ~~draw~~ ..
5. would ..
6. far ..
7. ~~pet~~ ..
8. ~~first~~ ..
9. Comb ..
10. photo ..

Fill the gap 3

1. have ..
2. ..
3. ~~to~~ Press .. Press
4. are ..
5. Is ..

Reading

1. discovering ..
2. the vessel ..
3. assess ..
4. ~~is seen to be~~ can be ignited ..
5. the lifeboats ..

Appendix 6 – Teacher perception survey instrument

Maritime English training 233

Questionnaire for teachers of TOEFL or ESP at IAMU member institutions

Please fill in the appropriate box for the level at your institution.

1: Very poor **2:** Poor **3:** Fair **4:** Good **5:** Very good **n/a:** Not applicable

A. In general:						
	1	2	3	4	5	n/a
1. Total time spent for teaching the English language at our institution						
2. Testing of student English language proficiency						
3. Level of standardized international exam for measuring English language proficiency of students						
4. Participation of students in class discussions using English language						
5. Availability of courses at our institution for students to practise English						
6. Availability of native English speakers at our institution to help students practise English						
7. Availability of instructors who hold a certificate in the teaching of English as a Second Language (ESL) or English for Special Purposes (ESP)						
8. Required (English language) proficiency level sufficient for instructors teaching English						
9. Availability of plans for the improvement of the English language of instructors						
10. Instructors teaching English at our institution benefit from special development plans						
B. Listening/speaking/reading/writing skills:						
	1	2	3	4	5	n/a
Listening						
1. Availability of techniques used to improve the listening skills of students						
2. Availability of films and videos in English for students to practise listening skills						
3. Availability of techniques used to develop and improve the listening skills of students in order to prevent them from translating into their own language						
4. Availability of techniques used to develop and improve the ability of students to think in the English language						
Speaking						
5. Participation of students in class discussions using Maritime English						
6. Students can practise speaking English with native speakers at our institution						
7. Oral proficiencies of students are tested in simulated maritime situations.						

Reading						
8. The level of phonics instructions						
9. Availability of special reading courses in English for students						
Writing						
10. Availability of English writing course						
11. The level of English writing skills of students is checked regularly						

Appendix 7 – Industry stakeholder question frame

1. What attracts you to recruit from Dalian Maritime University (DMU)?
2. In which skills are DMU students strongest?
3. What are their weaknesses?
4. How do you suggest solving these weaknesses?
5. How does DMU compare with other maritime education and training institutions?

(prompt on : English ability, subject knowledge, attitude)
6. Are you supplying labour primarily to Chinese or foreign shipping Companies?
 - 6a. If foreign: are any of your customers members of the Singapore Maritime Officers Union (SMOU) or other group?
 - 6b. What other nationalities can the cadets expects to work with?
7. Did you satisfy your recruitment quota last year? (Why/why not)
8. Where else HAVE YOU/will you recruit this year?
9. Is DMU your first choice for recruitment?
10. Do you prefer to recruit graduates from four year university programmes, three year diplomas or one year to-up students?

11. Do you prefer to recruit urban or rural citizens?

12. Is your company responsible for monitoring onboard training for cadets?

12a. If yes, how? E.g. Do you have a training manager and what does he/she do?

Appendix 8 – Navigation four year degree curriculum (translated from Chinese)

Navigation Technology undergraduate four-year professional training programme (regular course of study):

一、 Training aims:

The professionals trained in line with the state's education policy , requirements of the relevant laws and regulations of the international and domestic,good comprehensive quality, good awareness of safety and environmental, internationally competitive senior maritime personnel.

二 、 Basic requirements of the student upon completion:

1, love the socialist motherland, support for the Chinese Communist Party's leadership, grasp the basic principle of Marxism-Leninism, Mao Zedong's Thought and Theory of Deng Xiaoping, willing to service socialist modernization construction for the prosperity of the country, working hard for national prosperity aspiration and responsibility; A dedicated and love work, working hard, and love of labor, obey law, the quality of solidarity and cooperation; have good morals and ideology, social morality and professional ethics.

2, have the basic ability of independent access to knowledge, ask questions, analyze,

and resolve issues and the spirit of pioneering and innovative, having professional competence and quality to do operational work of professional work and adjacent profession.

3, master some basic knowledge of sports and the military, master basic skills of scientific exercise, develop good health habits and physical exercise by the necessary military training, the students meet the state sports and military training eligibility criteria, have a sound psychological and good health, the building the motherland and to fulfill the sacred obligation to defend the homeland.

4, having the basic knowledge of shipping management and regulations, has some understanding of the international shipping market economy.

5, master 'voyage of the ship,' 'cargo stowage and handling,' 'management and ship operations staff management,' 'radio communications' and other operational-level management knowledge and a certain level of knowledge.

6, have undergraduate English language requirements of state University (Polytechnic), and now has a strong ability to adapt to the professional English listening, speaking, reading ability and certain writing ability.

7, pass examination and assessment of school and national competent authority, having required qualifications on the sea , have the pilot's relevant particulars certificate of the marine ships.

三、 Degree course content:

The basic tenets of Marxism, Mao Zedong's Thought, Theory of Deng Xiaoping and the 'Three Represents' important thought Studies, Advanced Mathematics, College Physics, physics experiment, college English, sports, the University of basic computer, Navigation English Conversation and Evaluation, (Shipping) radio technology foundation, marine mechanics, ship theory, navigational science, the structure of the ship and equipment, ships on duty, manipulation and avoid collision, ship freight, marine meteorology and oceanography, ship safety management, navigation equipment, radar observation and APPA, GMDSS, offshore transport operations and maritime law In the process of curriculum and graduate courses to bring

四、 Featured courses:

Boat arts training, maritime studies, the structure of the ship and equipment, ships on duty, manipulation and avoid collision, ship freight, marine meteorology and oceanography, ship safety management, navigation equipment, radar observation and APPA, GMDSS, electronic chart system.

五, Structure of degree:

To follow the system of the school year. School system of four years. Classification as an Engineering degree.

六、 Specific Teaching Syllabus:

课程名	Lesson
军事训练	Military training
法律基础	Legal basis
体育(1)	Sports (1)
思想道德修养	Ideological and Moral Cultivation
军事理论	Military theory
英文打字	English typing
健康教育	Health education
大学英语(1-1)	College English (1-1)
高等数学(1)	Advanced Mathematics (1)
毛泽东思想概论	Introduction to Mao Zedong's Thought
计算机文化基础	Computer Culture Foundation
英语初级口语	College Primary Oral English Practice

船员心理学	Crew Psychology
航海史纲	Maritime History
机械制图	Mechanical Drawing
精通急救	Proficient in first aid
高级消防	Senior fire fighting
基本安全(个人安全与社会责任)	Basic safety (personal safety and social responsibility)
基本安全(防火与灭火)	Basic safety (fire prevention and fire fighting)
体育(2)	Sports (2)
船艺训练	Shipping Arts training
基本安全(个人求生)	Basic safety (personal life)
基本安全(基本急救)	Basic Safety (basic first aid)
精通艇筏和救助艇	Proficient boat raft and rescue boat
高等数学(2)	Advanced Mathematics (2)
大学物理	College Physics
大学英语(1-2)	College English (1-2)
物理实验	Physics Experiment
程序设计(C)	Program Design (C)
线性代数	Linear Algebra
国际关系	International relations

软件基础	Foundation Software
体育(3)	Sports (3)
(船舶)无线电技术基础	(Shipping) based radio technology
大学英语(1-3)	College English (1-3)
航海学(2)	Maritime Science (2)
航海学(1)	Maritime Science (1)
电工技术	Electrotechnics
航海力学	Navigation mechanics
运动艇操作	Campaign boat operation
国际航运政策	International shipping policy
船舶信号与VHF通信	Shipping signals and VHF communications
船舶认识实习	Awareness training ship
体育(4)	Sports (4)
体育(2)	Sports (2)
船舶结构与设备	The structure of the ship and equipment
马克思主义政治经济学原理	Marxist political economy theory
航海气象学与海洋学	Maritime Meteorology and Oceanography
大学英语(1-4)	College English (1-4)
航海化学	Navigation chemical

货物积载与系固	Cargo stowage and the -
GMDSS设备操作	GMDSS equipment operators
航海英语阅读	ME reading
船舶货运	Cargo Ship
航海仪器(1)	Navigational equipment (1)
航海仪器(2)	Navigational equipment (2)
GMDSS通信业务与设备	Business and communications equipment GMDSS
人力资源管理	Human resources management
船舶交通管理系统 (VTS)	Vessel Traffic Management System (VTS)
航海英语会话与评估	ME conversation and evaluation
航海模拟器训练	Marine simulator training
航线设计	Route Design
轮机概论	Introduction Engine
船舶安全管理	Ship Safety Management
船舶值班、操纵与避碰	Ship on duty, manipulation and collision avoidance
航海学(3)	Sailing (3)
船舶动力学基础	Kinetic basis for the ship
海上事故调查与分析	Marine accident investigation and analysis

Appendix 9 – Yardstick for Maritime English

Band	Definition	Descriptor
9	Expert User (Masters/Senior Deck Officers/ Chief and Second Engineer Officers)	Has a full command of ME as to safe navigation, technical ship operation, emergency management, cargo handling and administration; meets fully all the ME requirements as laid down in STCW 1978/95. Communicates fluently on radio complying with the Radio Regulations, is fully conversant with the IMO-SMCP and uses them flexibly when the addressee gives reason to apply them. Expert in the use of glossaries/dictionaries, and seldom needs aids when reading IMO and other documents or handling professional correspondence. Unhindered when leading meetings, even controversial ones, with other officers, crew, authorities, services and outsiders. Able to develop personal skills to include the instructions of others in the use of the English language on board.
8	Very Good User (Masters/Senior Deck Officers/ Chief and Second Engineer Officers/)	Has a command of ME approaching that of the expert user in safe navigation, technical ship operation, emergency management, cargo handling and some administrative tasks; meets fully the ME requirements as laid down in STCW 1978/95. Copes well even with demanding and complex language situations, whether in oral or printed/written form, with only rare uncertainties and minor lapses in accuracy, fluency, appropriateness and discourse which do not affect communication. Communicates fluently on radio complying with the Radio Regulations. Fully conversant with the IMO-SMCP. Gives clear and sufficient orders in all situations connected with job and rank. Able to develop personal skills to include the instruction of others in the use of the English language on board up to band 6.
7	Good User (Junior Deck Officers/ Junior Engineer Officers) Minimum required for certification as Officer on STCW-Management Level	Uses ME effectively but may need to take special care in complex and difficult situations; meets the ME requirements as laid down in STCW 1978/95. Communicates well enough on radio complying with the Radio Regulations. A few lapses in accuracy, fluency, appropriateness and discourse and in conveying or comprehending the content of a message, but communication is effective, consistent and unmistakable. Conversant with the IMO-SMCP. Can give clear and succinct orders to ratings. Understands written and spoken instructions in how to use, maintain and repair equipment. Any lack in ME skills does not hinder safe ship operations. Able to draft the messages, reports and letters required for ship business occasionally using dictionaries, glossaries and/or correspondence guidelines.
6	Competent User (Junior Deck Officers/ Junior Engineer Officers) Minimum required for certification as Officer on STCW-Operational Level (OOW/EOW)	Uses ME with confidence in moderately difficult situations; meets basically the ME requirements as laid down in STCW 1978/95. Noticeable lapses in accuracy, fluency, appropriateness and discourse that may lead to difficulties in complex situations. Communication is effective on most occasions. Can communicate on radio under the supervision of senior officers applying selected standard phrases and occasionally using manuals in order to comply with the Radio Regulations. Speaks, reads and writes ME sufficiently well for ship operations. Is familiar with the IMO-SMCP. Competent use of language in giving and executing orders. Able to respond competently in emergencies. Able to comprehend nautical/engineering publications. Able to write up logbook

Band	Definition	Descriptor
		without causing misunderstandings.
5	Effective User (Assistant Deck Officers/ Assistant Engineer Officers)	Uses the language independently and effectively in all familiar and moderately difficult situations. Can read and pronounce the IMO-SMCP applicable to the working sphere. Frequent lapses in accuracy, fluency, appropriateness and discourse, but usually succeeds in communicating. Basically abilities as at band 6 but permitted to act only under constant supervision. Effective use of ME in giving and carrying out orders.
4	Modest User	Uses basic range of ME, sufficient for familiar and non-pressure situations. Many lapses in accuracy, fluency, appropriateness and discourse that restrict continual communication so that frequent efforts and guidance are needed to ensure that the communicative intention is achieved. Renders the minimum level required to follow specialist instruction in ME using the IMO-SMCP. Able to ask and answer basic questions referring to the vessel, its cargo, equipment and machinery. Can pass on distress/urgency and safety messages and ask for assistance in cases of emergency using the relevant IMO-SMCP.
3	Limited User	Can communicate using sentences and questions. Problems in accuracy, fluency, appropriateness and discourse so that communication frequently breaks down or is difficult to maintain. Understands and executes orders from the IMO-SMCP for basic shipboard needs such as general emergency drills, person over board, and standard wheel/engine orders. Can speak about basic duties on board.
2	Intermittent User	Uses a very limited range of ME. Adequate for basic needs and simple situations. Able to verbalize and understand such items as names and ranks, ship's name and certain specifications of the vessel and/or its machinery. Can look up basic phrases from the IMO-SMCP but uses them inflexibly. Can ask for help and assist officers directing passengers in different situations, particularly in cases of drills or emergencies.
1	Non User	Uses a few words or phrases such as common greetings. Capacity limited to elementary listening and reading skills. Recognises notices and signs within the working sphere but has difficulty in interpreting the information into action. At the lowest level, recognises which language is being used. Should not be admitted as Navigation Officer Cadet/Engineer Officer Cadet without prior pre-sea ME training.

© GAME November Seminar 1994, GAME Newsletter 29/1994, Warnemünde (p 11), C. Cole and P. Trenkner (2008)

Source: Cole (2009)

Appendix 10 – ICAO Speaking Level Descriptors

Level	Pronunciation	Structure	Vocabulary	Fluency	Comprehension	Interactions
Expert 6	Pronunciation, stress, rhythm, and intonation, though possibly influenced by the first language or regional variation, almost never interfere with ease of understanding.	Both basic and complex grammatical structures and sentence patterns are consistently well controlled.	Vocabulary range and accuracy are sufficient to communicate effectively on a wide variety of familiar and unfamiliar topics. Vocabulary is idiomatic, nuanced, and sensitive to register.	Able to speak at length with a natural, effortless flow. Varies speech flow for stylistic effect, e.g. to emphasize a point. Uses appropriate discourse markers and connectors spontaneously.	Comprehension is consistently accurate in nearly all contexts and includes comprehension of linguistic and cultural subtleties.	Interacts with ease in nearly all situations. Is sensitive to verbal and non-verbal cues, and responds to them appropriately.
Extended 5	Pronunciation, stress, rhythm, and intonation, though influenced by the first language or regional variation, rarely interfere with ease of understanding.	Basic grammatical structures and sentence patterns are consistently well controlled. Complex structures are attempted but with errors which sometimes interfere with meaning.	Vocabulary range and accuracy are sufficient to communicate effectively on common, concrete, and work related topics. Paraphrases consistently and successfully. Vocabulary is sometimes idiomatic.	Able to speak at length with relative ease on familiar topics, but may not vary speech flow as a stylistic device. Can make use of appropriate discourse markers or connectors.	Comprehension is accurate on common, concrete, and work related topics and mostly accurate when the speaker is confronted with a linguistic or situational complication or an unexpected turn of events. Is able to comprehend a range of speech varieties (dialect and/or accent) or registers.	Responses are immediate, appropriate, and informative. Manages the speaker/listener relationship effectively.
Operational 4	Pronunciation, stress, rhythm, and intonation are influenced by the first language or regional variation but only sometimes interfere with ease of understanding.	Basic grammatical structures and sentence patterns are used creatively and are usually well controlled. Errors may occur, particularly in unusual or unexpected circumstances, but rarely interfere with meaning.	Vocabulary range and accuracy are usually sufficient to communicate effectively on common, concrete, and work related topics. Can often paraphrase successfully when lacking vocabulary in unusual or unexpected circumstances.	Produces stretches of language at an appropriate tempo. There may be occasional loss of fluency on transition from rehearsed or formulaic speech to spontaneous interaction, but this does not prevent effective communication. Can make limited use of discourse markers or connectors. Fillers are not distracting.	Comprehension is mostly accurate on common, concrete, and work related topics when the accent or variety used is sufficiently intelligible for an international community of users. When the speaker is confronted with a linguistic or situational complication or an unexpected turn of events, comprehension may be slower or require clarification strategies.	Responses are usually immediate, appropriate, and informative. Initiates and maintains exchanges even when dealing with an unexpected turn of events. Deals adequately with apparent misunderstandings by checking, confirming, or clarifying.
Pre-Operational 3	Pronunciation, stress, rhythm, and intonation are influenced by the first language or regional variation and frequently interfere with ease of understanding.	Basic grammatical structures and sentence patterns associated with predictable situations are not always well controlled. Errors frequently interfere with meaning.	Vocabulary range and accuracy are often sufficient to communicate on common, concrete, or work related topics but range is limited and the word choice often inappropriate. Is often unable to paraphrase successfully when lacking vocabulary.	Produces stretches of language, but phrasing and pausing are often inappropriate. Hesitations or slowness in language processing may prevent effective communication. Fillers are sometimes distracting.	Comprehension is often accurate on common, concrete, and work related topics when the accent or variety used is sufficiently intelligible for an international community of users. May fail to understand a linguistic or situational turn of events.	Responses are sometimes immediate, appropriate, and informative. Can initiate and maintain exchanges with reasonable ease on familiar topics and in predictable situations. Generally inadequate when dealing with an unexpected turn of events.

Pre-Operational 3	Pronunciation, stress, rhythm, and intonation are influenced by the first language or regional variation and frequently interfere with ease of understanding.	Basic grammatical structures and sentence patterns associated with predictable situations are not always well controlled. Errors frequently interfere with meaning.	Vocabulary range and accuracy are often sufficient to communicate on common, concrete, or work related topics but range is limited and the word choice often inappropriate. Is often unable to paraphrase successfully when lacking vocabulary.	Produces stretches of language, but phrasing and pausing are often inappropriate. Hesitations or slowness in language processing may prevent effective communication. Fillers are sometimes distracting.	Comprehension is often accurate on common, concrete, and work related topics when the accent or variety used is sufficiently intelligible for an international community of users. May fail to understand a linguistic or situational turn of events.	Responses are sometimes immediate, appropriate, and informative. Can initiate and maintain exchanges with reasonable ease on familiar topics and in predictable situations. Generally inadequate when dealing with an unexpected turn of events.
Elementary 2	Pronunciation, stress, rhythm, and intonation are heavily influenced by the first language or regional variation and usually interfere with ease of understanding.	Shows only limited control of a few simple memorized grammatical structures and sentence patterns.	Limited vocabulary range consisting only of isolated words and memorized phrases.	Can produce very short, isolated, memorized utterances with frequent pausing and a distracting use of fillers to search for expressions and to articulate less familiar words.	Comprehension is limited to isolated, memorized phrases when they are carefully and slowly articulated.	Response time is slow, and often inappropriate. Interaction is limited to simple routine exchanges.
Pre-Elementary	Performs at a level below the Elementary level.	Performs at a level below the Elementary level.	Performs at a level below the Elementary level.	Performs at a level below the Elementary level.	Performs at a level below the Elementary level.	Performs at a level below the Elementary level.

Source: ICAO (2008:Appendix iv)

Appendix 11 - IELTS Level Descriptors

Band	Fluency and coherence	Lexical resource	Grammatical range and accuracy	Pronunciation
9	<ul style="list-style-type: none"> speaks fluently with only rare repetition or self-correction; any hesitation is content-related rather than to find words or grammar speaks coherently with fully appropriate cohesive features develops topics fully and appropriately 	<ul style="list-style-type: none"> uses vocabulary with full flexibility and precision in all topics uses idiomatic language naturally and accurately 	<ul style="list-style-type: none"> uses a full range of structures naturally and appropriately produces consistently accurate structures apart from 'slips' characteristic of native speaker speech 	<ul style="list-style-type: none"> uses a full range of pronunciation features with precision and subtlety sustains flexible use of features throughout is effortless to understand
8	<ul style="list-style-type: none"> speaks fluently with only occasional repetition or self-correction; hesitation is usually content-related and only rarely to search for language develops topics coherently and appropriately 	<ul style="list-style-type: none"> uses a wide vocabulary resource readily and flexibly to convey precise meaning uses less common and idiomatic vocabulary skilfully, with occasional inaccuracies uses paraphrase effectively as required 	<ul style="list-style-type: none"> uses a wide range of structures flexibly produces a majority of error-free sentences with only very occasional inappropriacies or basic/non-systematic errors 	<ul style="list-style-type: none"> uses a wide range of pronunciation features sustains flexible use of features, with only occasional lapses is easy to understand throughout; L1 accent has minimal effect on intelligibility
7	<ul style="list-style-type: none"> speaks at length without noticeable effort or loss of coherence may demonstrate language-related hesitation at times, or some repetition and/or self-correction uses a range of connectives and discourse markers with some flexibility 	<ul style="list-style-type: none"> uses vocabulary resource flexibly to discuss a variety of topics uses some less common and idiomatic vocabulary and shows some awareness of style and collocation, with some inappropriate choices uses paraphrase effectively 	<ul style="list-style-type: none"> uses a range of complex structures with some flexibility frequently produces error-free sentences, though some grammatical mistakes persist 	<ul style="list-style-type: none"> shows all the positive features of Band 6 and some, but not all, of the positive features of Band 8
6	<ul style="list-style-type: none"> is willing to speak at length, though may lose coherence at times due to occasional repetition, self-correction or hesitation uses a range of connectives and discourse markers but not always appropriately 	<ul style="list-style-type: none"> has a wide enough vocabulary to discuss topics at length and make meaning clear in spite of inappropriacies generally paraphrases successfully 	<ul style="list-style-type: none"> uses a mix of simple and complex structures, but with limited flexibility may make frequent mistakes with complex structures, though these rarely cause comprehension problems 	<ul style="list-style-type: none"> uses a range of pronunciation features with mixed control shows some effective use of features but this is not sustained can generally be understood throughout, though mispronunciation of individual words or sounds reduces clarity at times

5	<ul style="list-style-type: none"> usually maintains flow of speech but uses repetition, self-correction and/or slow speech to keep going may over-use certain connectives and discourse markers produces simple speech fluently, but more complex communication causes fluency problems 	<ul style="list-style-type: none"> manages to talk about familiar and unfamiliar topics but uses vocabulary with limited flexibility attempts to use paraphrase but with mixed success 	<ul style="list-style-type: none"> produces basic sentence forms with reasonable accuracy uses a limited range of more complex structures, but these usually contain errors and may cause some comprehension problems 	<ul style="list-style-type: none"> shows all the positive features of Band 4 and some, but not all, of the positive features of Band 6
4	<ul style="list-style-type: none"> cannot respond without noticeable pauses and may speak slowly, with frequent repetition and self-correction links basic sentences but with repetitious use of simple connectives and some breakdowns in coherence 	<ul style="list-style-type: none"> is able to talk about familiar topics but can only convey basic meaning on unfamiliar topics and makes frequent errors in word choice rarely attempts paraphrase 	<ul style="list-style-type: none"> produces basic sentence forms and some correct simple sentences but subordinate structures are rare errors are frequent and may lead to misunderstanding 	<ul style="list-style-type: none"> uses a limited range of pronunciation features attempts to control features but lapses are frequent mispronunciations are frequent and cause some difficulty for the listener
3	<ul style="list-style-type: none"> speaks with long pauses has limited ability to link simple sentences gives only simple responses and is frequently unable to convey basic message 	<ul style="list-style-type: none"> uses simple vocabulary to convey personal information has insufficient vocabulary for less familiar topics 	<ul style="list-style-type: none"> attempts basic sentence forms but with limited success, or relies on apparently memorised utterances makes numerous errors except in memorised expressions 	<ul style="list-style-type: none"> shows some of the features of Band 2 and some, but not all, of the positive features of Band 4
2	<ul style="list-style-type: none"> pauses lengthily before most words little communication possible 	<ul style="list-style-type: none"> only produces isolated words or memorised utterances 	<ul style="list-style-type: none"> cannot produce basic sentence forms 	<ul style="list-style-type: none"> speech is often unintelligible
1	<ul style="list-style-type: none"> no communication possible no rateable language 			
0	<ul style="list-style-type: none"> does not attend 			

Source: IELTS (2009-2011:n.p.)

Appendix 12 – IELTS/CEFR equivalency

CEFR	Ability	IELTS
C2	Can understand with ease virtually everything heard or read. Can summarise information from different spoken and written sources, reconstructing arguments and accounts in a coherent presentation. Can express him/herself spontaneously, very fluently and precisely, differentiating finer shades of meaning even in the most complex situations.	7.5-9.0
C1	Can understand a wide range of demanding, longer texts, and recognise implicit meaning. Can express him/herself fluently and spontaneously without much obvious searching for expressions. Can use language flexibly and effectively for social, academic and professional purposes. Can produce clear, well-structured, detailed text on complex subjects, showing controlled use of organisational patterns, connectors and cohesive devices.	6.5-7.0
B2	Can understand the main ideas of complex text on both concrete and abstract topics, including technical discussions in his/her field of specialisation. Can interact with a degree of fluency and spontaneity that makes regular interaction with native speakers quite possible without strain for either party. Can produce clear, detailed text on a wide range of subjects and explain a viewpoint on a topical issue giving the advantages and disadvantages of various options.	5.0-6.0
B1	Can understand the main points of clear standard input on familiar matters regularly encountered in work, school, leisure, etc. Can deal with most situations likely to arise whilst travelling in an area where the language is spoken. Can produce simple connected text on topics which are familiar or of personal interest. Can describe experiences and events, dreams, hopes & ambitions and briefly give reasons and explanations for opinions and plans.	3.5-4.5
A2	Can understand sentences and frequently used expressions related to areas of most immediate relevance (e.g. very basic personal and family information, shopping, local geography, employment). Can communicate in	3.0

	simple and routine tasks requiring a simple and direct exchange of information on familiar and routine matters. Can describe in simple terms aspects of his/her background, immediate environment and matters in areas of immediate need.	
A1	Can understand and use familiar everyday expressions and very basic phrases aimed at the satisfaction of needs of a concrete type. Can introduce him/herself and others and can ask and answer questions about personal details such as where he/she lives, people he/she knows and things he/she has. Can interact in a simple way provided the other person talks slowly and clearly and is prepared to help.	1.0-2.5

Source: Amalgamated: The British Council (2010) CEFR (2009)

Appendix 13 – Interview transcript (Dean of Navigation College)

Proposed Questions

1. Shipping companies with direct involvement with this institution.

- a) I have heard about one major shipping company's [name removed] involvement with DMU, but are there any others or plans to cooperate with other companies in a similar way in the future? Will this company recruit again this year? What has the feedback been from them?
- b) How many students were selected for xxxx company in 2004? Is all their training taking place in Singapore? At which point were these students recruited and has it been repeated in subsequent years? Are these students included in the output figure for this University or counted separately? Have these students signed contracts to work for xxxx company after their training is complete?
- c) What do you think about this procedure? Is it desirable to have such involvement from companies? Would it be desirable in future years for other companies to come here and recruit students at the beginning of a year?

2. Who is employing your graduates?

- a) In 2001 researchers at SIRC stated that the great majority of Chinese seafarers are employed onboard nationally flagged ships. What about graduates from recent years?

- c) I have read that University fees are around 10,000 RMB for Navigation students. What are the fees at Dalian?
- d) What % of support to the institution is from i) the government and ii) the students fees?

4. Course recruitment

- a) I've been told about college entrance exams and the physical fitness tests for this University. Is it the case that students are approached about Navigation courses at this stage? How many apply each year to study Navigation independent of this process ?
- b) Where do your students come from? Can I find out if they are registered as rural or urban citizens?
- c) What is the drop-out rate? How does intake compare with graduate numbers? E.g. what happened to the 603 from 2004, how many are left this year? How many of these were normal, advanced or advanced English? Of the xxxxx company do you know how many are still in training?

Interview Transcript

Can I record you for memory? (Agrees) [As we begin the interviewee is signalling to the office staff to make us some tea]

What is your next appointment (2pm) [it is 1.15pm already]

1. Shipping companies with direct involvement with this institution:

So [the name of a leading shipping company] take cadets away for training in Singapore [seeking clarification of this] (Confirms).

Do any other companies do this? (No. Not yet. We only have contact with some shipping companies. Because of the law it is not allowed that the students can graduate and go straight to work for a foreign firm. [A member of staff brings tea and knocks over a cup that is on the desk, I am still concerned about my limited time and not the spilt milk].

I would like to find out about the English level of these students. Will [the name of a leading company] come back this year and recruit more students? [Again looking for clarification] (No) [I believe he has misunderstood the question and I ask again] (You see for [the name of a leading company], most students train directly in our university and the first group was 2000. Most of them are already working onboard. Some of them didn't go to sea. There was a class supervisor who went with them and he came back to here after two years, when they changed their policy.

Do you know the current in-house training manager [name omitted]? (I don't know him, I just know the old guy and he is in Singapore so I don't have contact with him).

Has the government changed the policy to take more Chinese? (Our Vice premier met the King of Denmark and they talked about seafarers and sending more to Denmark. The Danes asked for more Chinese seafarers to be made available. Wu Yi came back and asked the other ministers why. The Ministers asked DMU, why don't you want to get more seafarers to their fleet. He replied that there are lots of problems. 1. the Chinese fleet needs more and more seafarers. 2. Because of cultural differences, what they expect is very different from what they meet. 3. Language problems. All the same we have tried our best to educate and train more and more qualified seafarers. The Chinese government has made new policies to recruit more and more students. This year institutions have admitted nearly 20,000 students.

Has this put pressure on your department? (Yes we are under pressure with enlarging the number of students and our training capacity).

As I understand it is difficult to recruit students from the coastal regions. (Yes, you are right. Not fully correct, to some extent that is correct. Of course we recruit a lot of students from the East, coastal side of the country, but compared with those in the West they are much more qualified and it is easier for them to find a job. The students from the West are under pressure from their family so they have to go onboard, after they graduate they will work for 2,3,4,5 or 10 years will come back from the ship, „escape from the ship’. From the first year 85% will go onboard. After one year another 15% will leave and then after, around five years later there remain around 50% of the original graduating class are still onboard. On average for Captain, for Navigation they will stay onboard for 10-11 years. For Engineers they will stay for 11-12 years.

So what about the opportunities for investment from companies. You mentioned that one of these students had come back to DMU, but what about the others have they stayed working onboard? [He nods in agreement]. What is the reason for this, is it pay or..? (Pay in of course an important factor. It influences them greatly. Secondly you see that after they have stayed there for some time their language has improved and they know about ships. So, then they realise they need to better themselves to get good shore jobs. All these new companies need experienced people who have been to see.

I think that Maersk are very successful with recruitment and retention. (Yes, I think so too) [Enthusiastically].

Are there any policies limited DMU in developing the same relations as Maersk? (Graduates can’t go to work for foreign companies directly. We have talked to other companies, but they are put off by the strict conditions. So, now we have the goal to

receive more than 1000 students. The foreign ones want 200 each, but the domestic requirements are high too. We have to meet with the requirements of the government and the domestic fleet. So we just continue to talk with the foreign companies and not make oral agreements with them. They also know that we have admitted students who have passed the university level exams. So, some of them are taking on a lower level students and supporting courses for these students. They realise that they cannot have access to the higher level students, so they facilitate study for lower level students. You know already that a Japanese company has already asked COSCO Dalian to find students without Nautical degrees).

I read it was 40 students per year for that Japanese company? (More like 430).

So, as far as the student fees are concerned. The students pay the majority themselves. How much is it? (That is a good question. Many people ask how much it is. Even the government. From start to finish it costs about 150,000 RMB. Why is it so difficult to come to this figure? The government invests so much in the facilities already so we cannot divide the cost so clearly. We also have some support from shipping companies, so when you put it together it comes to 120,000 – 200,000 RMB).

What do the shipping companies get in return for their investment?(You know there is a situation. An association that decides the allocation, the quota for graduates. It is an economic market, so the students have the choice to choose).

So there are no contracts signed? Just a friendly agreement (That's right. Many shipping companies will come in advance of the recruitment meeting. So the company will come and ask „do you want to work for my company?’ „OK so I'll give you some

money to finish your training or something like that. [I found out from an industry stakeholder that it is illegal to 'bond' a cadet].

So there is nothing to stop this happening and the students are free to choose their employers? (Right).

What about the pay that they graduates receive? (Do you mean when they graduate? For a third officer \$1800-\$2000.)

Does some of that money get taken by the agency? (That depends on the agency. Some money comes from the ship and some goes to the agent. When they finish their contract it is ok, they can take the money when they come back).

So is it like welfare money, some of it can go into a pension? (Right)

I take it that the Chinese government are quite strict about this behaviour? (Yes).

I take it that the older seafarers and those already in the labour pool have more problems? The younger ones have more rights and a better change. (Yes, you are right. You are right. Some of the elder ones the more senior seafarers don't belong to one shipping company, so they approach an agent and negotiate a contract usually for a year and it varies).

And that is always through agencies right? (Yes).

I have read recently that many sectors of transport and logistics have become more open and are encouraging wholly owned companies. E.g. machine machinery. What would the effect of this be? (Recently it has become more open because of WMO and WTO.

What do you think the advantages and disadvantages of a more open system be? (This will have a great impact on the Chinese shipping industry. It will just come down to who is paying best and whose company is better than the others).

So it may be better now with the agencies because they can be monitored by the government? (Ha ha ha. All agencies just do their work within the requirements of the laws).

But the foreign companies won't be regulated by these laws, so it might not be a good thing? (At the minute it is like that, but in the future we will have to do that).

Yes, because your government is moving away from maintaining and monitoring so much...

What about scholarships? Do they receive living costs? Do they receive tuition? (In China for the Nautical Science and Marine Engineering courses they receive support from the shipping companies and some societies. And of course from the government. Their tuition fees are only 1/3 of that of other courses. Their clothes are supported by the government. Their food and accommodation are supported by the government. Only 10% is paid by themselves [or did he mean that 10% of them pay for themselves?]. Those with high marks can get scholarship and some more money.

So any money coming goes into a collected pot and is then distributed? (Yeah, yeah, yeah.)

So the shipping company can't pay a student directly? (This has happened in the past. They have come along and said „I like this student, I want to give him a job when he finishes', this can happen).

Are these Western companies that do this? (They are both, but it can be done via agencies. It is really welcome, we are introducing a new policy to allow for a society, a company to support students directly through their study. We are introducing some rules).

That is pretty much all the questions. Were there any questions that surprised you? (You ask about pay).

Yes, people ask me about it! [He looks at my questions again. He had a copy already. He reads a few aloud summarising them and we agree that I have already asked these and we have answered them].

00.28 [We move on to talk a little more about DMU's uniqueness] The other thing about this institution is that it receives the most funding from the government for training. (It is a lot different for other institutions. We have 81 institutions.[his phone rings and he asks someone to wait for him, moving his next meeting to 2.30pm. I thank him.]. It is only one of those, my one, that is directly supported by the government. There are some other ones, there are 30 that have opened their Nautical Science and Engineering courses to students, 14 have higher university level. Jimei and Shanghai are supported by MOE not MOC. So the MOE do not pay special attention to them because they are maritime, because we report to MOC we can get more money. Shanghai has strong economy and

academy so they can get more money. The more developed the area they better the university can do for funding as it is regional, provincial. „if it is a developed area they can get more money, if it is less developed they can get less money’. Some academies are operated only by shipping companies like COSCO. Shanghai Vocational Maritime Academy was just opened by China Shipping. There is the Zhejiang Vocational Maritime Academy opened by some Hongkong shipping companies. Anyway, many of them are supported by society funds, maybe some foreign shipping company has already paid and they are operating through heir Chinese agents. The equipment required is much different).

So they may look new and shiny, but maybe they don’t have a long record of teaching? (No, and also our purpose is different. For us, for our university, we are operated by the government, we have to stand by the government. The government says we need to educate more and more highly educated seafarers. This is our aim, our purpose. We don’t have to pay attention to how many are needed. Quality, not necessarily quantity. Some shipping companies know that there is a serious lack of seafarers, so they can just take them to the market and they will get jobs).

Are you given much freedom within the requirements of the government to change the way that you educate the students and to evaluate whether your attempts are effective. (Oh, indeed we are limited by two laws. Just international law, you know it. And the other one is the Education law of the People’s Republic of China. This has a lot of affect on the quality of the teachers, the curriculum and content of the syllabus and the quality of the students. Of course there are still some omissions and some supplements to the law).

So as long as you meet the guidelines of the laws, you can set your own syllabus? (Yes. Yes. For example for my university there are a lot of subjects. Some of them are just basic, essential subjects. Some are just political subjects, mathematics, physics, physical training. And also it is required that a proportion of different kind of subjects, so for some specialisation courses it should have a certain proportion.

My last question relates to this as well. Where do your plans for change with English teaching for seafarers fit with the government curriculum? (I have already had a lot of meetings with the officers about this. They always say that maritime education is a very different from other engineering education. For our normal engineering education we can comply with national law, but for maritime specialisation we have to give more time and attention to the courses to meet international law. So, the government says we are free to set the courses ourselves. They say „you are free to set the standard’. So you will find in China that there is a Maritime Teaching and Instruction Committee. The Chair of this committee is our ex president (Wu) and I was already the secretary for five years already before I studied over seas, now I am a member of this committee. Most of the members have just left.. we are going to set the requirements for maritime education and training.

Is there a time frame? (We will make a general curriculum that the university or college can adjust for their own characteristics. We have a standard textbook, every five years we need a new edition. In 2007 it will be renewed [in 2012 it will be renewed again]. But they should have their own reference. They see the textbook, and then adapt it).

So it doesn't have to be by the book? (It can be flexible. Some universities would like to use this basic textbook, but some add their own materials. Technology changes so quickly so they need to add information).

[Our interview concludes as other members of staff linger and for his signature and response to their concerns before his 2.30pm meeting]

Appendix 14 – Example teaching observation 1 (typed version)

Teaching Observation Form

Academic Practice in Teaching and Learning

Please complete this page *before* the session begins. Attach additional pages if necessary

Name of teacher XXXXXXXXXX Date 6th April 2007
Name of observer Robyn Pyne Venue Navigation Building 214
Course/level of students Grade Three - Engineering No. of students 28
Type of session ME Lesson Length of Observation 90 min

Aim(s)

What are your aims for the session?

To present expressions relating to turbocharger (and purifier)

To familiarize the students with basic principles of turbocharger (and purifier)

To develop spoken accuracy with professional words.

To practice spoken fluency via student-to-student interaction

Outcomes

What are the specific learning outcomes planned for the students (e.g. knowledge and understanding, skills, subject-specific skills)?

Students can: pronounce some professional words correctly

explain in connected speech

understand basic principles of turbo-charger (and purifier) in English.

Were there any particular factors/problems taken into account when planning the session? *E.g. Is this your first ever class with this group? Can you anticipate and prepare for any potential difficulties?*

Students talk in Chinese. Inactive students in the group.

Are there any aspects of this session which are *new* to you?

Background knowledge about purifiers

What *particular aspects* of your teaching would you like feedback on?

Observer's Comments

To be completed by the observer *during or immediately after* the teaching session. Attach additional pages if necessary.

The breakdown of each category (in italics) is a *guide* to the observer as to aspects for comment and discussion. *They are not intended to be comprehensive or that each has to be covered in every case.* Different disciplines may have additional aspects to consider.

Teaching characteristics – Comments
<p>Planning and start of session <i>Appropriateness of aims and outcomes (where it is possible to evaluate this). Communication of these to students. Continuity with other sessions and students' prior knowledge made explicit. Coping with any unexpected occurrences, e.g. latecomers, missing equipment.</i></p> <p>Session opens with reference being made to the module to be studied from the text book - Auxiliary Machinery: Turbocharger". Illustrations to be used stated so students are able to follow. The teacher continues to explain what will take place in the session today and why. Students are told of the importance of accuracy and fluency with the overall aim of today's session being to improve both of these two factors through offering them advice on pronunciation and mistakes made during the discussion session.</p> <p>The teacher is aware that the discussion exercise is likely to highlight problems in the areas of accuracy and fluency, which will be fed into the later part of the session.</p> <p>The lesson commences with an active —warm-up" exercise – the term brain storming" is used also. Students are asked then to discuss the differences between —super-charger" and turbo-charger".</p> <p>The latter part of the lesson is formed around the expressions given by the students during the —warmer" exercise. Help is provided with vocabulary and students are given the opportunity to practice pronunciation in pairs before forming discussion groups.</p>
<p>Presentation <i>Structure. Relevance and organisation of content. Attitude to subject matter. Clarity of presentation. Emphasis of key points. Pace of session (time management). Tone, volume, clarity of speech. Links made to other aspects of course (e.g. lectures, seminars or tutorials). Summary (end and/or interim).</i></p> <p>Introduction – ice-breaker (—warmer"). Links are made to the textbook and what will be studied.</p> <p>During the ice-breaker – no links or references are made to the text. This is a good opportunity for the students to think about English in their own way, away from the book. Students instructed to take part in — cross classroom talk" that should be in context, but will not to be graded. - Practise the mouth muscles. Open you mouths widely and speak" [Group formed in two lines, row of desks between them so that they must shout to each other]. Discussion of the differences between the —super-charger" and the turbo-charger". [I take part in this].</p> <p>Second activity is —brain storming". Follow-up to task one —do you really know the difference between these two systems?". Teamed into A and B, must contribute key words [scribed on blackboard "A" and —B]. Confirmed that they are the same thing, using differing terminology due to historical foundations.</p> <p>After the break in class – key vocabularies are highlighted for practice for pronunciation. A task relating to the text book is outlined. One question is the focus —what is the turbo-charger" . Students must outline its —use" and —basic component parts". Hints for composition of sentences given: consists of..." composed..."</p>
<p>Student participation <i>Question and answer technique. Exercises/activities. Class management (appropriate level of control and authority). Instructions to students. General class atmosphere. Level of participation between students (excessive? lacking?).</i></p>

Attention and interest. Attitude to students. Awareness of individual needs. Student-teacher rapport.

Usual cold start – teacher has to get the students up to move around and participate. Explains that “in the ship’s engine room that they must shout to be heard properly”. Following this participation was very strong [I took part to even out the numbers – shouting to the students required great effort and precision in pronunciation even from a native speaker. Listening skills developed also].

In the brainstorming participation was good as they had woken up and were enthused by the competition. Under columns A and B the students write on the board in a free manner as an idea comes to them [seated and rising when ready to write – seated again to watch progress].

Following highlighting from the teacher that mainly nouns are written on the board, students are asked to consider verbs too.

Methods and approaches

Choice/variety of teaching/learning methods. Use and design of instructional materials (OHP, handouts etc.) Use of appropriate reinforcement. Examples and analogies. References and links to research, other resources. Dealing with problems/disruptions.

Great choice of warm-up exercise. This was well timed and appropriate to the aims and objectives of the session.

Reflection at each stage allowed for the students to engage further than just the tasks in hand. This reflection leads into the next task —do you really know the difference?”. Nearly all words are nouns, what about verbs?”.

The brainstorming is particularly good as it allows for the teacher to account for i) the scope of the group’s vocabulary and ii) further explanation of terms and answering the original question what is the difference...?”.

General

Were the aims and outcomes achieved? Appropriateness of teaching/learning methods. Was effective communication achieved? Awareness of needs of learners and differences in approach.

The teacher demonstrated a good connection with the students and received a respectful response from them. They engaged in tasks as held trust that it would be beneficial and worthwhile – possibly based on their past experiences with this teacher.

Progress of session mapped on the board – good to give this information to the students e.g. “introduction”, “warmer” etc.. kept on board as reference points to eventual return to the text and the outcomes in relation to the assessment of the module.

Aware of needs of the students. As they are engineering students, characteristically they like to know the working parts of the whole system. The teacher made sure to explain the workings of the session and its relevance to their learning in preparation for assessment.

The teacher continuously attempted to engage all students. All have a go at saying “turbo-charger” and the teacher goes to the extent of recognising different provincial dialects and the challenges this posed for pronunciation of some words – giving personal feedback to the students during the discussion.

Aspects of note

Comment in terms of both teaching style and content (if possible). In particular, refer back to the areas identified for focus by the teacher on the bottom of page 1 of this form.

Students do talk in Chinese at times. Usually prior to the task to gain peer support and assistance in vocabulary. Good to allow this preparation time for reading and discussion.

The group have to use English in an active manner – there is no opportunity not to be engaged, especially during the warm-up.

The teacher appears very knowledgeable of marine engineering – obvious that effort has been made in research and preparation

Strengths

Again, comment in terms of both teaching style and content (if possible) and refer back to the areas identified for focus by the teacher before the session.

Level of awareness of students' needs.

Overall level of connection with the group.

Structuring of the session.

A high level of speaking practice opportunities for the group.

Signed by observer:

Date:

Your reflections

Please complete this section *after* your teaching session. Attach additional pages if necessary.
What did you feel went well in this session?

Most students were engaged in the activity or learning process.

What would you like to change about this session if you had to teach it again?

I would design some activities specifically designed to account for the practice of some difficult words to overcome local accents for some students.

In the light of the observer's comments, what aspects of your teaching approach will you look at changing in the future? How will you go about doing this?

To be aware of outcomes or aims. And design the activity to achieve these aims in a better way. I will be more concerned with student's accents, and create more engaging atmosphere and activities for learning.

What have you found useful/not so useful about the observation process?

The observation process is beneficial. I become aware of my own teaching procedure, outcomes and problems. I really gain some insights into my own style of teaching. That is really great.

Appendix 15 – Example teaching observation 2 (typed version)

Teaching Observation Form Academic Practice in Teaching and Learning

Please complete this page *before* the session begins. Attach additional pages if necessary

Name of teacher XXXXXXXX Date 16th April 2007
Name of observer Robyn Pyne Venue Navigation 214
Course/level of students 3rd Year (Navigation) No. of students 30
Type of session ME (Beginners) Length of Observation 90m

Aim(s)

What are your aims for the session?

1. Let students know background, procedures of berthing, unberthing, anchoring operations.
2. Learn phrases, sentences used in the operations.
3. How to answer the relative topics in English

Outcomes

What are the specific learning outcomes planned for the students (e.g. knowledge and understanding, skills, subject-specific skills)?

Students have reviewed the lessons they learned last time. Questions have been asked. Most of students have well prepared for the lessons.

Were there any particular factors/problems taken into account when planning the session? *E.g. Is this your first ever class with this group? Can you anticipate and prepare for any potential difficulties?*

Subject knowledge (seamanship) and language skills are still problems in combination with them.

Are there any aspects of this session which are *new* to you?

From surface structuring or deep structuring of the content, I am afraid that I can arrange them easily.

What *particular aspects* of your teaching would you like feedback on?

Observer's Comments

To be completed by the observer *during or immediately after* the teaching session. Attach additional pages if necessary.

The breakdown of each category (in italics) is a *guide* to the observer as to aspects for comment and discussion. *They are not intended to be comprehensive or that each has to be covered in every case.* Different disciplines may have additional aspects to consider.

Teaching characteristics – Comments
<p>Planning and start of session <i>Appropriateness of aims and outcomes (where it is possible to evaluate this). Communication of these to students. Continuity with other sessions and students' prior knowledge made explicit. Coping with any unexpected occurrences, e.g. latecomers, missing equipment.</i></p> <p>Teacher has prepared a situation – berthing. It is written on the board that the ship has travelled from A to B and is now in port. The students are asked to role play the officers onboard who are bringing the vessel into port.</p> <p>p.118-130 of book to be studied in this class.</p> <p>= 'Near miss' – teacher stresses importance of these and how to avoid them. = 'IMDG Code' – the teacher outlines the categories and writes these on the board.</p>
<p>Presentation <i>Structure. Relevance and organisation of content. Attitude to subject matter. Clarity of presentation. Emphasis of key points. Pace of session (time management). Tone, volume, clarity of speech. Links made to other aspects of course (e.g. lectures, seminars or tutorials). Summary (end and/or interim).</i></p> <p>The teaching styles is very much about linking the students' Navigation knowledge to their English.</p> <p>I was asked to join in and to judge the role playing groups. Asked to give feedback – positive first and then highlight problems. I did this and then the teacher gave feedback – highlighted the mistakes and gave clarification:</p> <p>Team 1 – At times the helmsman bypasses the Captain and replies directly to the Pilot. Correct use of SMCP. Helmsman is very good at confirming instructions.</p> <p>Team 2 – Pilot boarding, crew member introduces the Pilot to the Captain (very appropriate). The same issue happens with team 1 when receiving orders from the Pilot. 'Alter course 135'... 'Yes sir', he should have waited for the Captain to repeat this and have replied 'Altering course to 135'. Pilot very good. Mooring team very good (although they took the anchor up after leaving port??).</p> <p>Team 3 – Pilot boarding. 'Hoist flag H'. This helmsman waited for the Captain's instructions, but should have used command confirm: 'Stop engines' ... 'stopping engines' and not 'yes sir'. Anchoring team good in their roles.</p> <p>Presentation of new topic starts after this warm-up exercise – Cargo handling p.118.</p> <p>Question 15 is misleading – the answer is that the cargo should be kept dry, but no</p>

explanation as to why. The book needs to have an explanation to help the students to be able to judge the answer and not just remember A,B,C,D.

Student participation

Question and answer technique. Exercises/activities. Class management (appropriate level of control and authority). Instructions to students. General class atmosphere. Level of participation between students (excessive? lacking?). Attention and interest. Attitude to students. Awareness of individual needs. Student-teacher rapport.

Team leaders compete for mooring positions for the role play. 1. Ship, 2. Pilot station, 3. Boarding party. 4. Pilot. Some SMCP is used for lifting the anchor and departure. Pilot gives realistic instructions. Good command/confirm style. Engine commands and helm commands are used. The students make silly mistakes that are from a lack of real practice.

The teacher asks for examples of cargo – there is no response. Asks a more direct question.

When he outlines the IMDG code, students note these categories enthusiastically. This starts to get in the way of what he is actually trying to teach and he asks them to finish writing these down after class.

Observer's Comments (continued)

Teaching characteristics – Comments

Methods and approaches

Choice/variety of teaching/learning methods. Use and design of instructional materials (OHP, handouts etc.) Use of appropriate reinforcement. Examples and analogies. References and links to research, other resources. Dealing with problems/disruptions.

Role play – A great way to enhance deep learning. (End of unit so plenty to include).

New topic introduced: Vocabulary – Stowage plan, parameter [computer programme], stability, trim – an explanation given, hogging, sagging, stevedoring (UK), longshoreman (US), tally, tally man, drought (UK) draft (US) - teacher highlights differences between these two, dispute, SMS (Safety Management System), synchronise, minute work.

General

Were the aims and outcomes achieved? Appropriateness of teaching/learning methods. Was effective communication achieved? Awareness of needs of learners and differences in approach.

While going through the vocabulary from p.118 – explaining/questioning knowledge at same time, is a way to add value to the teaching of vocabulary. The explanations provided are necessary as the students' subject knowledge may be lacking. A simple translation into Chinese may not make the meaning clear.

Aspects of note

Comment in terms of both teaching style and content (if possible). In particular, refer back to the areas identified for focus by the teacher on the bottom of page 1 of this form.

- The review of anchoring/berthing vocabulary was very successful. The role play was a very successful way of testing depth knowledge too. Having to act in the roles and having to recall the vocabulary was also very beneficial.
- Team work for the assignment – this develops transferable skills also.
- Sometimes general questions are not understood and these need to be more direct. The students also need practice in deciphering meaning when not being asked direct questions.
- When so reliant upon the teacher the right answer the teacher can get lost in long discussions when attempting to emphasise meaning. This needs to be controlled.

Strengths

Again, comment in terms of both teaching style and content (if possible) and refer back to the areas identified for focus by the teacher before the session.

Attempts by the teacher to aide depth learning are a definite strength. It is acknowledged that time constraints and the nature of the examination force surface learning from the textbook.

Signed by observer:

Date:

Your reflections

Please complete this section *after* your teaching session. Attach additional pages if necessary.

What did you feel went well in this session?

The cooperation [of all students] was essential. The 'pilots' and 'captains' showered their leadership in the teamwork. Students realised the mistakes made in their use of language as well as mimicking a navigation scenario.

What would you like to change about this session if you had to teach it again?

1. The clarification of dangerous good will be given after class, or I will let them to pick up and ask popular terms such as radioactive, explosives (I mean those terms are easier to be memorized).

In the light of the observer's comments, what aspects of your teaching approach will you look at changing in the future? How will you go about doing this?

The timing of the class evenly, perhaps, will be improved for teaching in the transition of chapters. For example, how to start with the end of the last chapter and how to continue

teaching new chapter are 'smooth' process. In other words, 'gaps' for different content teachings in one class should be avoided. However, it is difficult to handle. Sometimes, classes were interrupted and the contents were not complete to finish. Then, we must finish teaching the old content in the new class hours to pay the price. It just depends. For a skilful teacher, those 'transition' courses in teaching contents must be less and less.

What have you found useful/not so useful about the observation process?

The ideas on how to teach English are exchanged, though some of idea I keep my mind o disagreement. The pinions on how to teach English from English speakers (as mother tongue) and how to teach English from speakers of English (as SL) are, somewhat, slightly different.

Appendix 16 – Teaching observations coding frame

Category	Description	Code
Pre-observation (teacher)		
Aims		
Learning outcomes		
Factors/problems when planning		
New aspects		
Feedback		
Observation notes (observer)		
Planning	Appropriateness of aims/outcomes:	PA
	High	PAH
	Moderate	PAM
	Limited	PAL
Start of session	Level of continuity:	SC
	High	SCH
	Moderate	SCM
	Limited	SCL
	Ability to cope with unexpected occurrences:	SUO
	High	SUOH
	Moderate	SUOM
	Limited	SUOL
Presentation	Structure:	ST
	High relevance in organisation of content	STH
	Moderate relevance in organisation of content	STM

	Limited relevance in organisation of content	STL
	Clarity of Presentation:	CP
	High clarity of presentation	CPH
	Moderate clarity of presentation	CPM
	Limited clarity of presentation	CPL
	Emphasis of key points:	EP
	Highly effective emphasis of key points	EPH
	Moderately effective emphasis of key points	EPM
	Limited effectiveness emphasis of key points	EPL
	Pace of session:	PS
	High appropriateness of pace	PSH
	Moderate appropriateness of pace	PSM
	Limited appropriateness of pace	LPS
	Clarity of speech:	CS
	Excellent clarity of speech	ECS
	Fair clarity of speech	FCS
	Synthesis with other aspects of course:	SC
	Excellent synthesis	SCE
	Moderate synthesis	SCM
	Limited synthesis	SCL
	Summary/plenary:	SM
	Excellent summary/plenary	SME
	Moderate summary/plenary	SMM
	Limited summary/plenary	SML
Student participation	Question and answer technique:	QA
	Highly effective technique	QAH
	Moderately effective technique	QAM

Limited effectiveness of technique	QAL
Exercises/activities:	EX
Highly effective exercises/activities	EXH
Moderately effective exercises/ activities	EXM
Limited effectiveness of effective exercises/ activities	EXL
Class management (control/authority):	CM
Highly effective class management	CMH
Moderately effective class management	CMM
Limited effectiveness of class management	CML
Instructions to students:	IS
High clarity of instructions to students	ISH
Moderate clarity of instructions to students	ISM
Limited clarity of instructions to students	ISL
General class atmosphere:	GA
High conduciveness for learning	GAH
Moderate conduciveness for learning	GAM
Limited conduciveness for learning	GAL
Level of participation between students:	SP
High participation between students	SPH
Moderate participation between students	SPM
Limited participation between students	SPL
Student attention and interest:	SA
High student attention and interest	SAH
Moderate student attention and interest	SAM
Limited student attention and interest	SAL
Attitude of teacher to students:	AT

	High awareness of student needs	ATH
	Moderate awareness of student needs	ATM
	Limited awareness of student needs	ATL
	Student teacher rapport:	RS
	High student teacher rapport	RSH
	Moderate student teacher rapport	RSM
	Limited student teacher rapport	RSL
Methods and approaches	Choice/variety of teaching/learning methods:	TL
	High choice/variety of TL methods	TLH
	Moderate choice/variety of TL methods	TLM
	Limited choice/variety of TL methods	TLL
	Use/design of instructional materials:	IM
	High level of innovation	IMH
	Moderate level of innovation	IMM
	Limited level of innovation	IML
	Use of appropriate reinforcement:	AR
	High level of appropriate reinforcement	ARH
	Moderate level of appropriate reinforcement	ARM
	Limited level of appropriate reinforcement	ARL
	Relevant examples and analogies:	EA
	High use of examples and analogies	EAH
	Moderate use of examples and analogies	EAM
	Limited use of examples and analogies	EAL
	References/links to research:	RR
	High level of reference/links to research/resources	RRH
	Moderate level of reference/links to research/resources	RRM

General	Limited level of reference/links to RRL research/resources	
	Dealing with problems/disruptions:	PD
	Highly effective in dealing with problems/disruptions	PDH
	Moderately effective in dealing with problems/disruptions	PDM
	Limited effectiveness in dealing with problems/disruptions	PDL
	Achievement of aims/outcomes	AO
	High satisfaction of aims/objectives	AOH
	Moderate satisfaction of aims/objectives	AOM
	Limited satisfaction of aims/objectives	AOL
	Appropriateness of teaching methods:	AM
	High appropriateness of teaching methods	AMH
	Moderate appropriateness of teaching methods	AMM
	Limited appropriateness of teaching methods	AML
	Effectiveness of communication:	EC
	High effectiveness of communication	ECH
	Moderate effectiveness of communication	ECM
	Limited effectiveness of communication	ECL
	Awareness of needs of learning styles and variation in approach:	LS
	High level of awareness of LS and variation	LSH
	Moderate level of awareness of LS and variation	LSM
	Limited level of awareness of LS and variation	LSL
Aspects of note	Teaching style and content	TC

	Highly effective	TCH
	Moderately effective	TCM
	Limited effectiveness	TCL
Strengths	Summarise from categories above.	SS

**Observation reflections
(teacher)**

	Select from categories above	
What went well?		WW
What would you change?		WC
What aspects of your teaching approach will you look to change in the future?		TF
What have you found useful about the observation process?		OU
What have you found not to be useful about the observation process?		ON

Appendix 17 – Summary of ME initiative proposal

Objectives: i) To make available the necessary resources for teaching English to Navigation students through a communicative course. ii) To promote to staff of the Navigation College and those of the Foreign Languages College the benefits and networking opportunities between them.							
One Resources Development	Initial set-up: June to December 2008	Project manager to spend 16 hours p.w - programme/resources set-up and management as required. Additional support form willing FLC staff/postgraduate students	Manpower: 1 Total Hours 16 p.w. Manpower: 2 Total Hours:4 p.w. Other Costs: Photocopying/materials production Textbook procurement	Two Teaching	Pilot Teaching Semester Two 2008/9 TBC Ongoing: 2009 onwards	16 hours p.w - programme management/teaching as required. Additional support from willing FLC staff/Foreign teachers ME Teaching Group of the Foreign Languages College sufficient to cover approx. 40 hours p.w. Additional support for oral English from foreign teachers approx. 40 hours p.w.	Manpower:1 Total Hours: 16 p.w. Manpower: 4 Total Hours: 8 p.w. Manpower: Up to 20 Total Hours: 40 p.w. Other Costs: Photocopying/materials production

Appendix 18 - Example CLT ME Lesson Plans

Teacher: Robyn Pyne
University/2- 410

Date: 26th/27th November 2007

Location: Dalian Maritime

Student Context

Number of students _____ 35 _____ Approx age range of sts: __19__ to __22__ Sts' level of English: _Lower Int/Int.
Sts' approx. purposes in learning English (e.g. work, travel, social etc) _____ Work in the maritime industry _____
Sts' first languages _____ (Mandarin) Chinese _____

Aims of the lesson, with learning outcomes

- ✧ To revise asking for and giving personal information: conjugation of verbs – be, do and have in positive, negative and question forms.
- ✧ To awaken vocabulary: adjectives of nationality.
- ✧ To practice question intonation.
- ✧ To enable students to construct key question and to answer these in an oral/listening/writing activity: Exchanges personal information orally, listens to and notes personal information about partner, fills out cadet application form.

Anticipated problems and strategies to deal with them

- ✧ The motivation of the students to learn English is difficult to maintain in the classroom setting. They very often act to please the teacher and not themselves
- ✧ The group tend to wain if not continuously directed to listen/take part.

Means of assessing learning outcomes / Assessment opportunities

- ✧ There will be opportunities to mingle in the class and to listen to the English words being used.
- ✧ It will be clear to see if students are not engaged and to alter tack to bring them back into being involved in activities. Preparing some extra work for those who become bored easily is a good idea.
- ✧ There will be plenty of opportunities for self and peer correction during the class.
- ✧ At all stages there is the opportunity to listen to the pron and to incorporate some correction/drilling.

Aspects of teaching to focus on:

Correction – appropriate time and self, peer then me.

Keeping stimulated and motivated.

Guidance on phonology: word stress.

Stage	Approx. time	Teacher activity	Student activity	Aim	Interaction	Materials
Monday 26th Novemeber						
E	10 mins	Immitating picture at front of the class and answering questions regarding personal information.	Asking questions.	To elicit the topic of the calss from the students, to awaken question vocabulary	Ss>Ss Ss>T	PPT Picture “IMO SECRETAR Y GENERAL”
S A	20 mins	Playing listening material and pausing. Directing students a) Listen and match questions to gaps, b) listen again and mark intonation, check with partner afterwards c) listen for a third time and agree answers with a partner. Direct to read the text aloud - prompt on correction. Elicit from the students the rules for innonation of questions.	Listening, completing gap fill exercise, considering intonation, comparing with partner’s response and discussing/feeding back rules for question intonation.	To allow the students to hear native speakers asking questions and to recognise intonation in their voice. This will be used later in the lesson when the students ask their own questions.	a) Listening/ writing individual b) Closer listening individual/ Ss >Ss check c) Closer answers S>.S discuss and agree.	CD A “SHIP OR SHEEP” – Exercise 23 and 24 Modified handout from P12/13
S	10 Mins	Introduce CV format to the calss and elicit question forms to obtain informtion.	Formulating question form and feeding back when prompted.	To awaken vocabulary and verb conjugation: be, do, have.	T>S S> T	IMO CV Blank Document on screen (MS Word). BOARD PLAN

Break

Stage	Approx. time	Teacher activity	Student activity	Aim	Interaction	Materials
A	30 mins	Return to IMO Secretary Genral Immitation. Answer students' questions.	Three groups: 1) Ask question to the teacher. 4) Listens for intonation and corrects if necessary. 3) Listens and completes fields on the computer. Groups 1 and 2 correct this information. One student acts as chair. and decides who should speak.	To practice asking questions, to listen and record responses. To practice use of phonetic alphabet in spelling words.	Ss>T(in role play) T(in role play) > Ss Ss>Ss	IMO CV Blank Document on screen (MS Word).
10 mins - End of Lesson Game – Nationalities/Languages						

Stage	Approx. time	Teacher activity	Student activity	Aim	Interaction	Materials
Tuesday 27th Novemeber						
E	10 mins	Direct students to complete handout with country names and then nationality and langauge blanks. Give example from Greece = Greek – Greek.	Working in small groups to complete nationality task.	To elicit fromt the students the nationality associated with each county.	Ss>Ss closed groups.	HANDOUT
S	20 Mins	Facilitate students in formulating question structures relevant to the categroies on Page 2 of CV.	Formulating question form and feeding back when prompted.	To awaken vocabulary and verb conjugation: be, do, have.	T>S S> T	IMO CV Blank Document on screen (MS Word). BOARD PLAN

A	10	Continue to answer questions and to complete 2 nd page of the CV form.	Three groups: 1) Ask question to the teacher. 4) Listens for intonation and corrects if necessary. 3) Listens and completes fields on the computer. Groups 1 and 2 correct this information. One student acts as chair. and decides who should speak.	To practice asking questions, to listen and record responses.	Ss>T(in role play) T(in role play) > Ss Ss>Ss	IMO CV Blank Document on screen (MS Word).
Break						
S	10	Handout application forms and clarify/pre-teach new vocabulary.	Listening and reading along using handouts.	To understand the forms and the fields.	T>S	Application Handouts
A	30	Monitor class work. Hand out new forms when old ones have been completed. Mark corrections and hand back during the lesson for amendment.	Students ask each other the relevant questions to complete the forms.	To practice asking questions, to listen and record responses. To receive teacher correction on written work.	Ss>Ss
10 mins - End of Lesson Game – Nationalities/Languages						

Teacher: Robyn Pyne

Date: 22nd November 2007

Location: Dalian Maritime University/3- 410

Student Context

Number of students _____ 35 _____ Approx age range of sts: __19__ to __22__ Sts' level of English: __Lower Int/Int.
Sts' approx. purposes in learning English (e.g. work, travel, social etc) _____ Work in the maritime industry _____
Sts' first languages _____ (Mandarin) Chinese _____

Aims of the lesson, with learning outcomes

- ✧ To continue to practice the use of *there is/are*, to describe places onboard a vessel and describing parts of the vessel.
- ✧ To recognise and note the use of singular and plural forms of regular and irregular nouns from a listening exercise.
- ✧ To practise the use of articles *a/an* and definite article *the* orally and in writing.
- ✧ To practice pronunciation at any relevant opportunities.
- ✧ To introduce new vocabulary relating to ship parts and places.
- ✧ To use prepositions of place to describe places onboard.
- ✧ Uses 's to indicate possession.

Anticipated problems and strategies to deal with them

- ✧ The class are known to me now, but I am still unfamiliar with their level of English.
- ✧ The group tend to wain if not continuously directed to listen/take part.
- ✧ This was overcome with another group, but this group still need some training in classroom norms.
- ✧ Students' previous experiences make it difficult not to be too teacher centred.

Means of assessing learning outcomes / Assessment opportunities

- ✧ There will be opportunities to mingle in the class and to listen to the English words being used.
- ✧ It will be clear to see if students are not engaged and to alter tack to bring them back into being involved in activities. Preparing some extra work for those who become bored easily is a good idea.
- ✧ There will be plenty of opportunities for self and peer correction during the class.
- ✧ At all stages there is the opportunity to listen to the pron and to incorporate some correction/drilling.

Aspects of teaching to focus on

Correction – appropriate time and self, peer then me.
Keeping stimulated and motivated.
Guidance on phonology: word stress.

Stage	Approx. time	Teacher activity	Student activity	Aim	Interaction	Materials
E	10 mins	Display images of different vessel types on the ppt. Divide board into team A and B. Monitor activity and change slides. After this dries up and points have been allocated. Offer the teams coloured chalk and the chance to correct the other team.	Watching the pictures and recalling vocabulary. Coming up and writing on the board.	To engage topic/revise vocabulary	Ss>Ss	PPT of vessel types, board divided+coloured chalk.
S	15 mins	Vessel descriptions: Read material to provide further vocabulary.. Circulate to help with correct spelling etc..	Listening to description and looking at diagrams.	Listening and noting new vocabulary.	T>Ss Ss to Ss (closed groups)	
S	15 mins	Elicit from the students a) the types of words on the board and b) a set of criteria that can be used for vessel description Scribe key questions/ sentence structure used on the board/ppt ready for the next step.	Work in pairs to formulate questions. Provide feedback to the teacher regarding the construction of sentences to gain vessel information.	Formation of question practice. To awaken verb tense use. There is/are etc. To awaken article use a/an and the.	Ss>T Plenary	Board Plan – Blank PPT slide for constructing question table.
A	10 mins	Hidden pictures question game – show/change slides. Offer appropriate checking and correction.	Use these questions freely.	To practice verb tense and question/new vocabulary use. Fluency.	Ss>Ss.	

Teacher: Robyn Pyne
University/2- 410

Date: 6th November 2007

Location: Dalian Maritime

Student Context

Number of students _____ 35 _____ Approx age range of sts: __19__ to __22__ Sts' level of English: __Upper Intermediate
Sts' approx. purposes in learning English (e.g. work, travel, social etc) _____ Work in the maritime industry _____
Sts' first languages _____ Chinese _____

Aims of the lesson, with learning outcomes

- ✧ To practice the use of *there is/are*, articles, prepositions of place and possessives in the context of naming types of vessel and describing parts of the vessel.
- ✧ To practice pronunciation at any relevant opportunities.
- ✧ To introduce new vocabulary relating to ship parts and places.

Anticipated problems and strategies to deal with them

- ✧ The class are known to me now, but I am still unfamiliar with their level of English.
- ✧ The group tends to wain if not continuously directed to listen/take part.
- ✧ This was overcome with another group, but this group still needs some training in classroom norms.
- ✧ Students' previous experiences make it difficult not to be too teacher centred.

Means of assessing learning outcomes / Assessment opportunities

- ✧ There will be opportunities to mingle in the class and to listen to the English words being used.
- ✧ It will be clear to see if students are not engaged and to alter tack to bring them back into being involved in activities. Preparing some extra work for those who become bored easily is a good idea.
- ✧ There will be plenty of opportunities for self and peer correction during the class.
- ✧ At all stages there is the opportunity to listen to the pron and to incorporate some correction/drilling.

Aspects of teaching to focus on

Correction – appropriate time and self, peer then me.
Keeping stimulated and motivated.
Guidance on phonology: word stress.

Stage	Approx. time	Teacher activity	Student activity	Aim	Interaction	Materials
E	5-10 mins	Playing central role in icebreaker activity, demonstrating with strong student (class monitor?) how to play the name and hobbies game. Monitor language used. Scribe a few if the key questions used on the board ready for the next step.	Listening to demonstration and to other students answering the questions. Preparing to answer the question for themselves. Speaking when their turn to answer the question/ask another person.	To break the ice and to warm up the class. To learn names and to assess level/needs of the group.	T>Ss Ss>Ss Ss>T	Board pen or inflatable ball. Paper to get them to put their name in front of them.
S/A	10 mins	Highlight question intonation and word stress. Provide feedback when needed for the use of present tense in answering questions.	Provide feedback to the teacher's prompts regarding word intonation and stress. Practice in pairs. Practice use.	To study phonology and grammar: present simple and the correct use of pronouns.	T>S Ss>T Ss>Ss (closed pairs)	-----
E	10mins	Showing pictures of settings onboard the ship. Monitoring and changing slides.	Direct students to work in teams. Give each three a piece of paper. Picture 1, 2, 3, flow chart. Looking at the pictures, guessing the context in their groups and writing on the sheet.	To elicit context and to gauge range of relevant vocabulary in existence.	Ss to Ss (closed groups)	Picture handouts printed in PPt notes page format

Stage	Approx. time	Teacher activity	Student activity	Aim	Interaction	Materials
S	10 mins	Where is he/she/are they? What is he/she/are they doing? What are their responsibilities? Elicit question form from the class. Construct table on the board, questions and possible answers. For answers use the ship areas diagram.	To communicate their suggestions regarding form to the teacher to write on the board.	To study question form and responses.	Ss>Ss (closed groups)	Board plan
A	30 mins	Duplicated pictures handed out to groups (one per group). Monitor groups' work.	Working in groups to speak about and to come up with sentences about the pictures and the write on the pictures (where space has been provided). When instructed pass to another group and then repeat the task. Return original picture to each group at end.	To awaken vocabulary and activate TL in student to student speaking and writing.	Ss to Ss (closed groups)	Handouts from presentations.
	10 mins correctio ns	Direct spoken feedback. Provide feedback and correction.	Work in groups to correct sentences and to speak out loud.	Peer correction and speaking practice.		

Appendix 19 – New ME syllabus outline

Overall Aims for Intermediate Communicative Competency	
Safety Management	Operational Management
<ul style="list-style-type: none"> To contribute to responding to emergencies onboard. To take personal emergency action onboard. To contribute to taking control of survival craft and rescue boats. To contribute to the implementation of a Safety Management System (SMS). 	<ul style="list-style-type: none"> To take part in creating, maintaining and enhancing productive working relationships onboard. To take part in maintaining safe, legal and effective working practices onboard. To assist in maintaining personal health and safety, the health and safety of others and environmental standards onboard. To take part in creating productive relationships onboard and cooperating with the relevant shore personnel

Unit	Introduction to Safety/Operational Management (60%)
1	Joining/leaving ship
2	Ship familiarisation
3	Introduction to Safety Management
4	Introduction to Operational Management
5	Safe Working Practices for Merchant Seamen
6	Marine Pollution Prevention

Unit	Onboard Community (10%)
7	Intercultural relations
8	Interacting with shore personnel
9	Going ashore
10	Illness and medical assistance

Unit	Deck Safety and Operational Management (30%)	Unit	Engineering Safety and Operational Management (30%)
11	Bridge Watchkeeping and Navigation Operations	16	Engine-room Watchkeeping
12	Cargo Handling and Ship Stability	17	Engineering operations
13	Deck maintenance and routine operations	18	Engineering maintenance
14	Deck Emergencies	19	Engineering Emergencies
15	Deck Logs, Permits and Reports	20	Engineering Logs, Permits and Reports

Appendix 20 – Example syllabus detail

Unit No. 5 Safe Working Practices for Merchant Seamen	
Sub unit	Aim
A: Principles/ Guidelines/ Publications	<ul style="list-style-type: none"> - To demonstrate understanding of the use, content and location onboard of key publications - To demonstrate the ability to discuss health and safety, and risk in the workplace - To demonstrate understanding of warnings and advice (reading/listening) concerning health and safety, and risk onboard
B: Maintaining a safe working environment	<ul style="list-style-type: none"> - To demonstrate the ability to give warnings and advice (speaking/writing) concerning health and safety, and risk onboard. - To demonstrate the ability to refer to maintenance procedures guides in relation to the following: <ul style="list-style-type: none"> o a ship's safety management system as it refers to work activities o a ship's planned maintenance system as it relates to work activities o risk assessment plans for likely personal work area and how to carry out an assessment o a ship's permit to work system o the special precautions to be taken for work in hazardous areas - To demonstrate understanding of the requirements for compliance with safe working practices in relation to the following: <ul style="list-style-type: none"> o Work planning

	<ul style="list-style-type: none"> ○ Work aloft or outboard ○ Preparation of work area ○ Selection of tools, materials and equipment ○ Selection and use of personal protective clothing and equipment ○ Manual lifting and carrying ○ Use of power operated tools ○ Use of lifting gear ○ Return and safe stowage of tools, materials and equipment on completion of work, and disposal of waste materials <p>- Leave work area in a safe and clean condition on completion</p>
C: Weather and Watertight arrangements	<ul style="list-style-type: none"> - To demonstrate understanding of the weather and watertight arrangements on the vessel; be able to take part in associated drills - To demonstrate understanding of the fittings and types of arrangements

D: Planning operations	<ul style="list-style-type: none"> - To demonstrate understanding of the role of the senior officer in determining trim, stress and stability of the vessel throughout different stages of the voyage - To demonstrate the ability to describe the ballasting/de-ballasting system and operational precautions
------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

New Marine English

Unit 5— Safe Working Practices for Merchant Seamen.



Unit Index

A — Principles, guidelines and publications

P.2 Teachers' notes

P. 3 Students' workbook

B — Maintaining a safe working environment

P.10 Teachers' notes

P.11 Students' workbook

Classroom

4 hours

Self Study

8 hours

Immerse
New Marine English

© 2010 Robyn Pyne, NMTC & Dalian Maritime University

5A Teachers' Notes

Syllabus Aims

- i. To demonstrate understanding of the use, content and location onboard of key publications.
- ii. To demonstrate the ability to discuss (speaking/writing) health and safety, and risk in the workplace.
- iii. To demonstrate understanding of warnings and advice (reading/listening) concerning health and safety, and risk onboard.

Stage	Learning Outcomes and Target Language
Engage	To engage students in the context of the COSWP, safety signs and personal safety onboard.
Study	<p>To introduce students to key grammar forms in phrases for giving orders, warnings and advice:</p> <ul style="list-style-type: none"> - Modal verbs <ul style="list-style-type: none"> • <i>must, should, have to, ought to and had better</i> • Positive and negative forms - Passive voice and modals <ul style="list-style-type: none"> • <i>Modal + be + past participle</i> - Imperative form - Conjunctions – <i>before, after, when and while + ing</i> <p>To introduce students to key vocabulary:</p> <ul style="list-style-type: none"> - Code of safe working practices - Safety signs <ul style="list-style-type: none"> • Prohibition • Mandatory • Warning • Safely advice - Working in enclosed spaces
Activate	<ul style="list-style-type: none"> • To activate students' use of modal verbs in the context of personal safety and the safety of others onboard.

5A Student workbook



1. Ships are dangerous places

Listening 5.A.1

Risks onboard ¹ _____ identified and evaluated. Action ² _____ taken to remove or minimise these risks, so that seafarers are protected. Of most importance is identifying the risks to the health and safety of seafarers due to their day-to-day duties. To help reduce risk, seafarers ³ _____ comply with the *Code of* ⁴ _____ *Practices (COSWP)*, which is for all merchant seamen.

The ⁵ _____ tells all seafarers how to take effective action to ensure their ⁶ _____ and the ⁷ _____ by maintaining a safe working environment.

According to the COSWP:

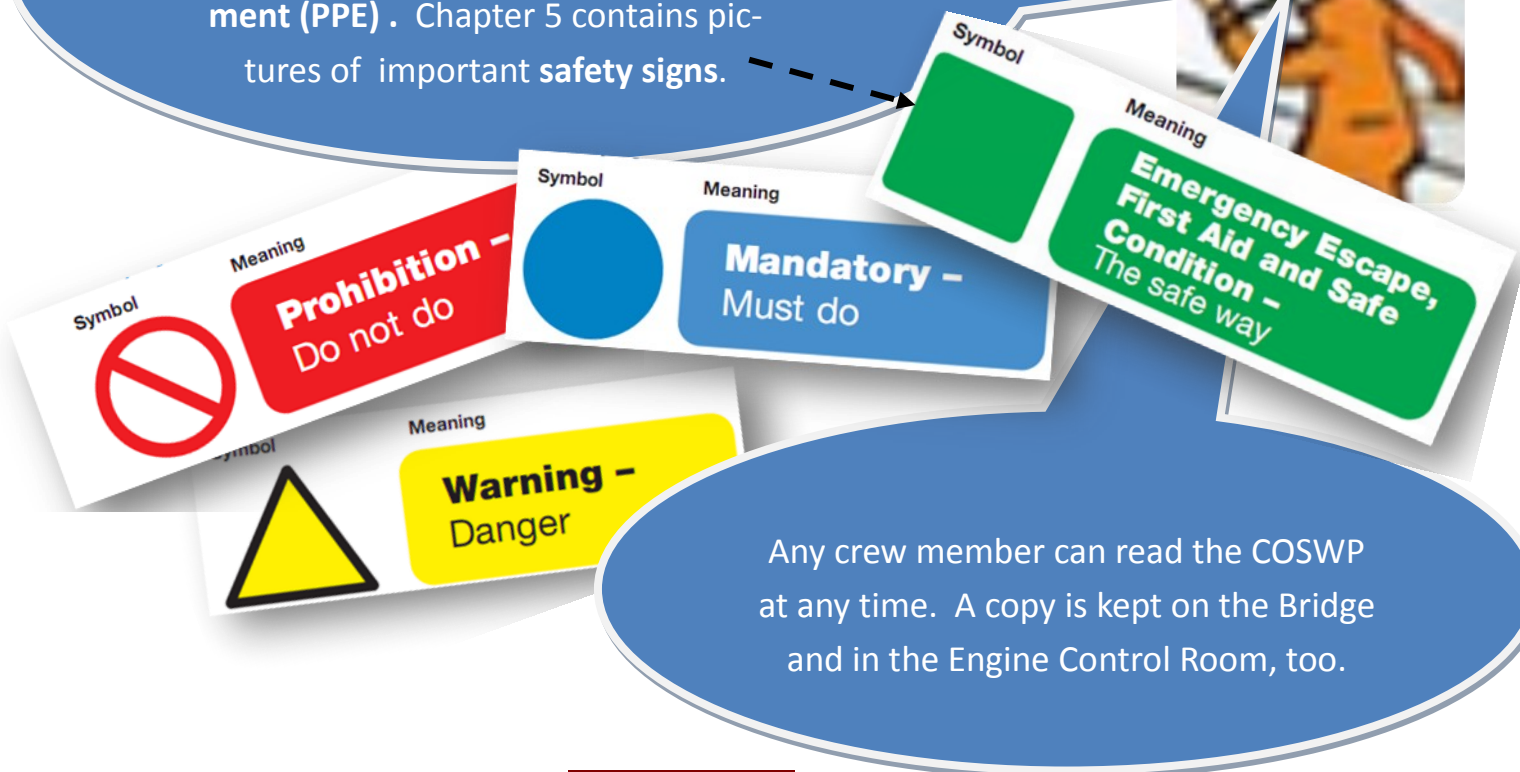
All seafarers...

⁸ _____ clean up spills of any liquids as soon as they occur.

⁹ _____ leave stores equipment and garbage lying around. ¹⁰ _____ wear correct and well fitting Personal Protective Equipment (PPE), for example safety boots. ¹¹ return and safely stow all tools, materials and equipment on completion of work. ¹² leave work areas in a safe and clean condition.



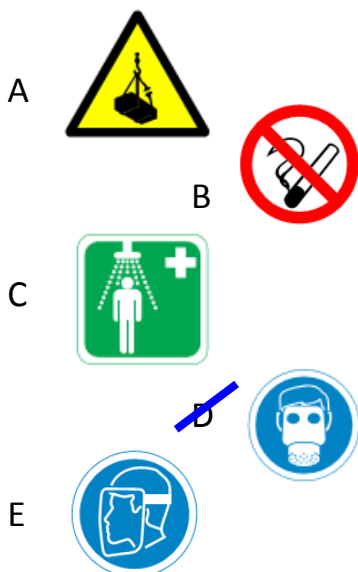
The COSWP “/kəz//wɒp/” helps seafarers to do things the safe way. Chapter 4 will tell you all about wearing **Personal Protective Equipment (PPE)**. Chapter 5 contains pictures of important **safety signs**.



2. Do things the safe way! **Listening 5.A.2**

The Second Engineer ordered the Junior Officer to enter the¹ _____. The Junior Officer felt² _____ after he entered the enclosed space. The Junior Officer didn't wear³ _____, and the enclosed space should have been⁴ _____ and the oxygen content of air should be tested before entering.

Matching 5.A.3



- i. Face protection must be worn while welding.
- ii. Safety advice signs should be observed, during and after working.
- iii. You must not smoke while working in the cargo holds.
- iv. The air should be tested and respiratory equipment worn before entering an enclosed space.
- v. You had better take care on deck due to the danger of overhead loads.

- 1 It's not permitted to do this.
- 2 It's highly advisable to do this.
- 3 The company requires everyone to do this.
4. It is compulsory to do this.

<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>



Matching 5.A.4

- () 1. You must not touch.
- () 2. Do not extinguish with water.
- () 3. Smoking and naked flames forbidden.
- () 4. Not drinkable.
- () 5. No access for pedestrians.
- () 6. No access for unauthorised persons.
- () 7. You must not smoke.
- () 8. No access for industrial vehicles.

Symbol		
A	B	C
D	E	F
G	H	

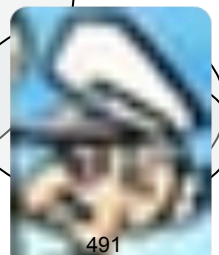
Captain's Questions 5.A.5:

- 1) What colour are safety signs for prohibited actions?
- 2) What colour are safety signs for mandatory actions?
- 3) What colour are safety signs for warning of danger?
- 4) What colour are safety signs for working/living safely?
- 5) What type of safety sign is needed for the following?

Sentence A: You ought to watch out for overhead loads.

Sentence B: You must wear ear protection.

Sentence C: Do not smoke on deck.



1. Working clothes should be _____ with no loose flaps.
2. Sandals and slippers are dangerous and must not be _____ when working.
3. Welding gloves and protective masks must be _____ for protection against electrical shock and glare.
4. Cargo spaces should be well _____ before entry is made.
5. When there is cargo work, the cargo spaces should be adequately _____. Dazzle and strong contrast of lights and shadow should be _____.
6. When work is to be done near a tall stack of cargo, the cargo ought to be _____

closely-fitted avoided

made available ventilated stowed
cleared cleaned lit worn
secured



Matching 5.A.7



1. Face protection



2. Safety helmet



3. Safety gloves



5. Safety overalls

6. Ear protection



G

Grammar
box 5.A.1

Active	Passive	Imperative
<p>Every <i>seafarer</i> must <i>wear</i> safety boots on deck. (The emphasis is on the people)</p> <p><i>Subj. (Every seafarer) + active modal verb (must) + verb (wear) + object (safety boots)..</i></p>	<p>Safety boots must <i>be worn</i> by every seafarer. on deck (The emphasis is on the item and the action)</p> <p><i>Object (safety boots) + passive modal verb (must be) + verb past participle (worn) + subj. (every seafarer).</i></p>	<p>Wear safety boots on deck. (The emphasis is on the item and the action)</p> <p><i>Verb imperative (wear) + object (safety boots).</i></p>

Writing 5.A.8

1. Signs should be displayed on the accommodation deck to show the lifeboat and mustering stations ,and these must be _____ visible at all times.
2. It is very important that oil on deck/engine room should be _____ as soon as possible.
3. When casting off, personnel should be _____ well clear of the bight of the mooring rope and whiplash areas, in case a mooring line breaks.
4. Before hot work operations, the work area has to be _____ as 'gas free' to document that there is no explosive gas in the vicinity
5. During hot work, fire extinguishers should be _____ nearby at all times.
6. The wearing of a safety belt and attaching the safety hook to a guardrail must be _____ , when working aloft, or when there is a risk of falling .

~~to display~~

to keep

to clear-up

to perform

to certify

to place

to stand

Look at Grammar box 5.A.1 and exercise 5.A.4 p.6

Writing 5.A.9

Active	Passive	Imperative
1. You must <u>wear</u> face protection. while welding..	While welding, face protection must be <u>worn</u> ..	While welding <u>wear</u> face protection.
2.		Wear a safety helmet when working on deck.
3. You must wear safety gloves while working with chemicals.		
4.		Obtain a permit to work before entering an enclosed space.
5. You ought to wash your dirty safety overalls after being on duty.	After being on duty,	
6.	Upon entering the engine room, ear protectors must be used	

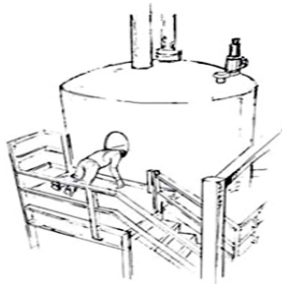
Speaking 5.A.10

Design a safety poster including some warnings or advice for new crew members. Use the safety signs and photographs in this unit to help you. Prepare notes and give a 2 minute oral presentation based on your poster.

You	<p>had better (not)</p> <p>must (not) ...</p> <p>should (not) ...</p> <p>ought (not) ...</p> <p>(don't) have to...</p>	<p>before – <i>ing</i></p> <p>while – <i>ing</i></p> <p>after – <u><i>ing</i></u></p> <p>when – <i>ing</i></p>
-----	------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------



Safety harness
must be worn



Obstacles



Fire extinguisher



General danger



Flammable material
or high temperature (a)



Face protection
must be worn



Safety overalls
must be worn



Eyewash



Harmful or irritant
material (b)



Safety boots
must be worn

5B Teachers' Notes

Syllabus Aims

- i. To demonstrate the ability to refer to maintenance procedures guides in relation to the following:
 - risk assessment plans for likely personal work area and how to carry out an assessment
 - a ship's permit to work system
 - the special precautions to be taken for work in hazardous areas
- ii. To demonstrate understanding of the requirements for compliance with safe working practices in relation to the following:
 - Work planning
 - Selection and use of personal protective clothing and equipment
 - Return and safe stowage of tools, materials and equipment on completion of work, and disposal of waste materials

Stage	Learning Outcomes and Target Language
Engage	To engage students in the context of risk assessment and procedures for carrying out work in hazardous areas.
Study	<p>To explore further the key grammar forms and phrases for giving orders, warnings and advice studies in 5.A in the context of:</p> <ul style="list-style-type: none"> - Ship's permit to work system - Ship's safety management system <ul style="list-style-type: none"> • Entry into an enclosed space scenario: <ul style="list-style-type: none"> • Selection and use of personal protective clothing and equipment • Return and safe stowage of tools, materials and equipment on completion of work, and disposal of waste materials <p>To introduce students to key grammar forms in phrases relating to safety checklists:</p> <ul style="list-style-type: none"> - Question form - Imperative form <p>To introduce students to key vocabulary items of ship's safety checklist.</p>
Activate	<ul style="list-style-type: none"> • To activate students' use of key vocabulary and grammar constructions in the context of personal safety and the safety of others onboard.

5B Student workbook

1. What is the meaning of risk management?

Reading 5.B.1

To ensure the general wellbeing of workers, dangers in the working environment must be identified and evaluated, and measures must be taken so as ⁶ to remove or minimise risks. Employers are required to make a suitable and sufficient assessment of the risks. A “risk assessment” is intended to be a careful examination of what, in the nature of day-to-day work, could cause injury or loss of life, so that decisions can be made as to whether enough measures have been taken or if more should be done to prevent harm.

1. health and safety
2. seafarers
3. risks
4. onboard
5. assessed
6. to manage risk *to remove or minimise risks*
7. shipowners
8. must
9. operations - ...-..... ..
10. harm
11. If
12. sufficient precautions

Writing 5.B.2

To ensure the health and safety of seafarers.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

..... *have been taken or whether more should be done.*
















Observation skills 5.B.3

Are these two seafarers equipped with the same PPE?



A) 2 O/N Bart Peterson

B) F/T Hercules Tsao

1. Head protective equipment		a. _____
2. Hearing protection		a. _____
		b. _____
3. Face and eye protective equipment		a. _____
		b. _____
4. Respiratory protective equipment		a. _____
5. Hand and foot protective equipment		a. _____
		b. _____
6. Body protective equipment		a. _____
		b. _____
		c. _____
		d. _____
7. Protective equipment against drowning and hypothermia		a. _____
		b. _____
		c. _____

2. Permit to work system

Work to be done	<i>Entry into enclosed space</i>	Location	<i>Bilge keel (ladder entry via engine room crank shaft)</i>
Authorised person in charge			
Period of validity of permit	<i>4 hours</i>	Crew detailed (names)	<i>2 O/N Peterson</i>
Authorising Officer		<i>F/T Tsao (rescue party)</i>	
(signed)	<i>Phatia</i>	<i>18/12/09</i>	

Listening 5.B.5 Dialogue 2 O/N Peterson and F/T Tsao

Has a risk assessment of the proposed work been carried out?

Entry into enclosed or confined space		Checked
1	Space thoroughly ventilated	1
2	Atmosphere tested and found safe	2
3	Space secured for entry	3
4	Rescue and resuscitation equipment available at entrance	4
5	Testing equipment available for regular checks	5
6	Responsible person in attendance at entrance	6
7	Communication arrangements made between person at entrance and those entering	7
8	Access and illumination adequate	8
9	All equipment to be used is of appropriate type	9
10	Personal protective equipment to be used:	10
	Hard hat, safety harness as necessary	11 (i)
11	When breathing apparatus is being used	11 (ii)
	(i) Familiarity of user with apparatus is confirmed	
	(ii) Apparatus has been tested and found to be satisfactory	

Write out the question posed for each item 1 to 11 as you hear it in the dialogue.



A team of three crewmembers were carrying out maintenance work inside the forepeak tank. At that time, the vessel's pitching and rolling movements were particularly heavy in the forepeak tank. The Bosun and one Ordinary Seaman were working near the shipside shell while another Ordinary Seaman was assigned to sweep off the rust debris close to the outer edge of a stringer, some 5 metres away. Two portable lights were used to illuminate the area in the vicinity of where the Bosun was working, but not where the lone Ordinary Seamen was working. The tank was empty of water and the crew had opened the manholes to ensure good ventilation. Some time after they had started work, another Ordinary Seaman came to assist the team. He saw the Bosun and one Ordinary Seaman but there was no sign of the other Ordinary Seaman. He was eventually found lying unconscious at the bottom of the forepeak tank some 15 metres below the working position. He was subsequently certified as dead. The deceased was wearing a pair of safety shoes and a safety harness, although the safety belt of the safety harness had not been secured to any anchor point. His total sea experience was less than four months. The edge of the stringer plate on which he was working was protected by guardrails. It was also found that the floor of the stringer plate was wet and muddy.

(Risk assessment) *Firstly, the three crew members should have carried out a risk assessment of the proposed work.*

1.(illumination) *Secondly,*

2. (a responsible person in attendance) *Thirdly,*

3.(communication arrangements) *Fourthly,*

4.(familiarity of the user with apparatus) *Finally,*

Role Play 5.B.7

Imagine that it is before this incident, one student should play the role of the Chief Officer and ask questions of the three crew members. This time, you had better do it the safe way!

Has/have..? \longrightarrow *Yes.*
 \longrightarrow *No...* \longrightarrow *should/must/ought to/had better/have to...*

Check List / Isolation Data

.....risk assessment of the proposed work been carried out.....

Checklist

- 1 space thoroughly ventilated
- 2 atmosphere tested and found safe
- 3 space secured for entry
- 4 rescue and resuscitation equipment available at entrance
- 5 testing equipment available for regular checks
- 6 responsible person in attendance at entrance
- 7 communication arrangements made between person at entrance and those entering.....
- 8 access and illumination adequate
- 9 all equipment to be used is of appropriate type
- 10 personal protective equipment to be used: Hard hat, oxygen metre and safety harness as necessary
- 11.....familiarity of user with apparatus is confirmed
- 12apparatus has been tested and found to be Satisfactory

Answers Key 5A

Listening 5.A.1 p.2

1. have to be
2. must be
3. must
4. Code of Safe Working

Practices

5. COSWP
6. own safety
7. safety of others
8. should
9. should not
10. have to
11. must
12. should

Matching 5.A.3p.4

1. .B/iii
2. .A/v
3. .C/ii
4. .E/i

Matching 5.A.4 p.5

1. .G
2. .C
3. .B
4. .A
5. .F
6. .D
7. .H
8. .E

Matching 5.A.7 p. 7

1. .A
2. .C
3. .E
4. .G
5. .B
6. .E

Writing 5.A.8 p. 8

1. . kept
2. . cleared-up
3. . stood
4. . certified
5. . placed
6. . performed

Listening 5.A.2 p.4

1. enclosed space
2. unwell
3. respiratory equipment

Captain's Questions 5.A.5 p.5

1. Red
2. Yellow
3. Green
4. Sentence B warning
Sentence C mandatory
Sentence A prohibition

Writing 5.A.9 p. 8

2. .wear/worn/wear
3. . wear/worn/wear
4. . obtain/obtained/obtain
5. . wash/washed/wash
6. . use/used/use

Speaking 5.A.10 p.9

Watch/listen to CD

Reading 5.B.1 p. 11

1. general wellbeing
2. workers
3. dangers
4. the working environment
5. evaluated
6. to remove or minimise risks
7. employers
8. are required
9. day-to-day work
10. injury or loss of life
11. whether
12. enough measures

Observation 5.B.3

No, they do not have the same PPE; Seafarer 2 O/N Bart Peterson is not equipped with ear defenders.

Writing 5.B.2 p.12

To ensure the **health and safety** of **seafarers**, dangers **onboard ship** must be identified and evaluated, and measures must be taken so as ⁶ to remove or minimise risks. Employers are required to make a suitable and sufficient assessment of the risks.

A “risk assessment” is intended to be a careful examination of what, in the nature of day-to-day work, could cause injury or loss of life, so that decisions can be made as to whether enough measures have been taken or if more should be done to prevent harm.

Listening 5.B.4 p.13

1. a. hard hat
2. a. ear defenders
b. ear plugs
3. a. goggles
b. face mask
4. a. breathing apparatus
5. a. safety gloves
b. safety boots

Listening 5.B.4 cont. p.13

6. a. protective overalls
b. safety harness
c. protective apron
d. high visibility jacket
7. a. lifejacket
b. life ring
c. immersion suit

Listening 5.B.5 p. 14

1. . Has the space been ventilated thoroughly?
2. . Has the atmosphere been tested and found to be safe?
3. . Has the space been secured for entry?
4. . Have rescue and resuscitation equipment been made available at the entrance?
5. . Has the necessary atmospheric testing equipment been made available in order to make regular checks?
6. . Has a responsible person been nominated to be in attendance at the entrance to the enclosed space?
7. . Have sufficient communication procedures been arranged between the responsible person at the entrance and those who will enter?
8. . Has the means of access been made safe and is the space sufficiently illuminated?
9. . Has all the equipment been checked to ensure it is of the appropriate type?
10. . Has the necessary PPE been allocated?
11. . i) Have the people involved been made familiar with the correct use of breathing apparatus?

ii) Has the breathing apparatus been tested and found to be satisfactory?

Writing 5.B.6 p.15

The three crew members should have made arrangements for...

1. ...the access and illumination to be adequate.
2. ...a responsible person to be in attendance at the entrance.
3. ...communication between person at entrance and those entering.
4. ...confirming the familiarity of the user with the apparatus/PPE.

Role Play 5.B.7 p.16

Watch/listen to CD

New Marine English

Unit 5: Copyright acknowledgements

Cover page:

Cartoon image: courtesy of the Nautical Institute/Lloyds Register Human Element Bulletin 'Alert!'

Page 1

Page 3

Photograph from article 'Ships are inherently dangerous places' and Cartoon image of seafarer: courtesy of the Nautical Institute/Lloyds Register Human Element Bulletin 'Alert!'

Image of *The Code of Safe Working Practices for Merchant Seamen*: courtesy of the UK Maritime and Coastguard Agency.

Page 4

Images of safety signs: *The Code of Safe Working Practices for Merchant Seamen*: courtesy of the UK Maritime and Coastguard Agency.

Page 5

Images of safety signs: *The Code of Safe Working Practices for Merchant Seamen*: courtesy of the UK Maritime and Coastguard Agency.

Cartoon image: courtesy of the Nautical Institute/Lloyds Register Human Element Bulletin 'Alert!'

Listening 5.A.3: based on an original exercise in Marlins Study Pack for Seafarers 2 (4.7).

Page 6

Page 7

Images of safety signs: *The Code of Safe Working Practices for Merchant Seamen*: courtesy of the UK Maritime and Coastguard Agency.

Page 8

Speaking 5.A.12: based on an original exercise in Marlin Study Pack for Seafarers 2 (4.11).

Page 12

Exercise 5.B.3: Image courtesy of Van Oord, Ltd./ M.V. Nordnes website .

Methods and Means for Analysis of Crew Communication in the Maritime Domain

Robyn Pyne*, Thomas Koester*¹

Received June 2005

Abstract

The *Human Element*, among a group of maritime human factors terms, is used widely within the commercial maritime environment to incorporate many issues being addressed by maritime research institutions and industry bodies. In accident investigation losses are attributed frequently to *Human Error*, which itself has a variety of identifiable categories e.g. *Human Communicative Error*. This paper describes an analysis of a number of maritime accident reports in which a failure of effective crew communication played a central role in the causal chain. The analysis is based on an aviation industry accident investigation taxonomy, *ADREP 2000 Taxonomy* [8] and psychological theories of professional communication [13]. The paper discloses, accentuates and exemplifies the structure of problems related to maritime crew communication and problems related to different cultures and languages. It also explores the value, contribution and limitations of formalised taxonomies and analysis systems to maritime training authorities, when they are applied as tools in the analysis of accident reports. It also looks to highlight the need for further research into the sociolinguistic aspects of shipboard operation within the *shipboard society* not just during times of restricted manoeuvrability, but during everyday working and social communications in pursuit of recommendations to aid the reduction of occurrences of *Human Communicative Error*.

1. Introduction

1.1. Human Error, communication and multi-cultural crewing issues

With no formally accepted international definition the term *Human Element* is often used interchangeably with *Human Factors* (or *human factors*), the former being a research area with specific interest in cognitive science and ergonomics and the latter encompassing "anything

* The University of Plymouth Business School, The University of Plymouth, Devon, PL4 8AA, England
* ¹ FORCE Technology, Hjørtøkærvej 99, DK-2800 Kgs. Lyngby, Denmark

human' [12]. The International Maritime Organisation (IMO) has been addressing what it terms the *Human Element* since 1991 resulting in the adoption of specific strategy and policy at each jurisdictional level in countries ratifying its conventions. According to the UK Maritime and Coastguard Agency (MCA) 'Human Element Strategy', *Human Element* can be considered as:

"Ship personnel/human resources; Ship design and automation; Port operations e.g. cargo loading/unloading; Navigation and traffic management; and Organisational factors." [5]

The United States Coastguard defines the *Human Element* as:

Human and organisational influences on marine safety and maritime system performance [16].

The five key areas listed by the MCA make up the term *Human Element* from their operational and legislative point of view, while simultaneously representing five human and technological system fields [5]. The US Coastguard's definition of *Human Element* is, on the other hand, intended for use as non-regulatory terminology.

Another strong use of the term *Human Element* as a concept has been established by the Nautical Institute and Lloyds Register combined 'Alert! Bulletin' and their 'International Maritime Human Element Forum' projects. In this context the term *Human Element* is used to incorporate:

The Human Element is a critical feature of all aspects of ship or system design and operation... Poor ship design, bad ergonomics, equipment failure, fatigue, stress, boredom, commercial pressures, cultural differences, differing equipment designs, and a lack of proper training in the operation of equipments, all affect the way in which a ship is operated [14]

Two other terms have also been introduced in this section, these are *Human Factors* and *Human Error*. As far as each of these terms is concerned example definitions should also be explored:

Human Factors: *Aspects of human capabilities (physical, cognitive, psychological) and performance as applicable to the design of organisations, systems, and devices of all kinds* [16].

Human and Organisational Error: *Unacceptable or undesirable performance on the part of an individual (Human Error) or group (Organizational Error) that can result in unanticipated or undesirable effects* [16].

Other industry bodies, than those included in the implementation of IMO policy, are showing increasing interest in managing *Human Factors* in the commercial maritime environment. The Royal Institute of Naval Architects (RINA) has been making:

Increasing efforts to gain awareness of human element issues and to improve their understanding of how and why their designs influence

human behaviour [16].

The importance of reducing *Human* and *Organisational Error* through the management of *Human Element* and *Human Factors* was the key focus of their conference programme in February 2005 'Human Factors in Ship Design Safety and Operation'. Taking the view that *Human Error* is a symptom of deeper problems within an organisation or system, RINA is giving weight to the debate surrounding the labelling of accidents and near misses as simply being down to the failure of the individual or team of individuals to perform a task desirably. With a focus on ship design and man-machine interface, factors such as poor design, poor training and poor or inadequate management systems are being blamed. This has resulted in those concerned classing what has traditionally been called simply *Human Error* now as *Organisational* or even *Systematic Error*:

Sensible application of ergonomics and human factors can provide an opportunity to both reduce costs and improve safety [16].

The definitions of *Human Element* explored above are the result of an institution's perception of the *Human Element* based on their own research and that of others. The MCA regard *Human Element* as a regulatory factor, needing to be addressed in order to develop effective regulation with which to manage its influences. RINA, on the other hand, are looking to improve best practice and to educate naval architects of the influence of *Human Factors* on ship design in order to reduce *Human* and *Organisational Error* in the commercial maritime industry. Each of the example definitions given above are characteristic of many of the other uses of the term in that they do not describe, in the true sense of the word, an *element* – a basic constituent; incapable of being analysed into any simpler form, but more a cross disciplinary mixture or compound of elements. It is for this reason that *Human Element* and *Human Factors* are often used interchangeably, as when referring to a number of attributing issues inescapably working together it has become desirable to pluralize.

In the advent of a dialogue being fostered between maritime industry academics to decide upon the correct use of these terms - *Human Element*, *Human Factors* and *Human Error* - for the sake of this paper the definitions explored above have been used in this context. *Human Element* shall describe the holistic approach to the subject in using the word 'element' to actually refer to a group of factors relating to ship design or operation, *Human Factors* will be used to describe the list of components making up the *Human Element*, with a single component being referred to as a *Human Factor*, and *Human Error* and *Organisational Error* will be used in reference to unacceptable or undesirable performance on the part of individuals or groups respectively that result in the occurrence of an *Incident* - an *accident*, *major* or *serious injury*, or *hazardous incident* as defined by the UK Marine Accident Investigation Branch (MAIB).

Accidents and incidents in the maritime domain are often caused by a break down in the socio-technical system which constitutes and characterizes the work in the domain. The ingredients in this system are humans (e.g. crew members), groups (e.g. the crew), technology (ship, instruments, equipment, tools etc.), work practice (procedures, conventions, traditions), organization (management, company culture, pressures etc.) and work environment (light, noise, vibration etc.). A break down in the socio-technical system could be related to or caused by poor design of equipment (human – technology), inconsistency between work practice and written procedures (work practice – organization), crew stress caused by company pressures (human – organization), poor communication between crewmembers (human – group) or fatigue caused by

vibrations and noise (human – group – work environment). The network is illustrated in fig. 1 below [9], [10], [11].

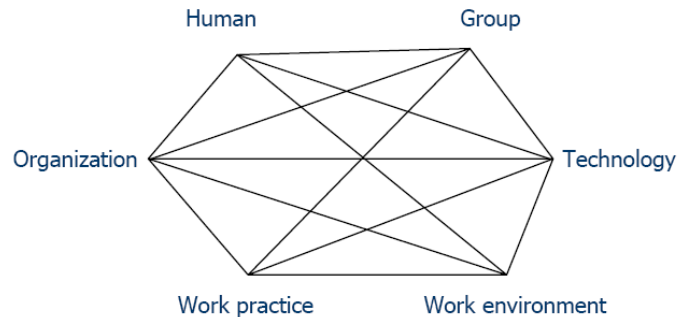


Fig. 1. The Socio-Technical Network

It is evident from studies of maritime accident reports where, in the chain of causation, ‘human error’ has been identified as a significant factor, that it is possible to break down this category further and to identify that crew communication failure (human – group) has played a key role in the incident [2]. Poor communication between crewmembers from the same culture who are speaking the same language can, through misunderstandings and mistakes, be a threat to the overall safety of a vessel and pose an additional threat if one considers the risk of subsequent pollution. If one adds the additional variables of crews using English as a second language and the cultural differences which may be experienced, then the odds of miscommunication may be increased. In turn, it is recognised that maritime safety can be enhanced by the improvement of crew communication, facilitated through training in the use of Standard Marine Communication Phrases (SMCP) [6].

Navigation is mostly performed by one person, an individual, working alone. When a ship enters or leaves port or when manoeuvrability is restricted the computational requirements of the task are assumed to exceed the capabilities of any one individual, so navigation is carried out by a team of individuals working together and the need for effective communication, in one common language, is paramount [7].

Navigators will work in a bridge team when required to do so in order to ensure the safe operation of a vessel. During such times e.g. when manoeuvrability is restricted, miscommunication can cost lives, loss of cargo, and pollution. Hutchins [7] writes about *Learning to Navigate* and describes navigation as an activity normally carried out by an individual, working alone, who is joined by other deck crew when the computational requirements of the task are assumed to exceed the capabilities of one Navigator. Examples of such a time include times of restricted manoeuvrability, when a ship enters or leaves port or when there is heavy congestion of maritime traffic. At these times it is common for a Pilot to be onboard and it is through the presence

of a Pilot that the most comprehensive crew communication research project to date, the *MARCOM Project*, collected some of its data. Data were collected from the Pilot's own experiences of mixed nationality crews' use of English and Maritime English and from observations made during periods of pilotage, when a researcher joined the vessel with the Pilot.

Research into the pros and cons of multicultural crews, is attracting increasing interest from across the widespread maritime research community and industry alike. In 2004 the journal *Maritime Policy and Management* detailed the existence of three major studies carried out in this field, the most relevant of which to this paper is the work completed by the Seafarers International Research Centre (SIRC), at Cardiff University in the UK entitled *Transnational Seafarer Communities*. The issues arising from these recent research publications were those of onboard culture and language as it is commonplace on ocean going vessels engaged in world trade that staff will frequently come across crews and other industry groups whose members come from a number of countries and related cultures [4].

1.2. Accident Investigation and Human Communicative Error

Much of the work carried out in the field of marine accident investigation reflects what is underway and has already been done in the aviation industry, which is generally viewed by the marine industry as being superior in terms of its advancement in research and policy making and its overall safety record. It is for this reason that a taxonomy used in the investigation of accidents in the aviation industry the ECCAIRS ADREP 2000 taxonomy of explanatory factors - has been applied in the analysis of maritime accidents in search of a further breakdown of *Human Communicative Error (HCE)* into relevant categories. HCE can be defined as *Human Error* which occurs as a result of a failure in communication, be it ship to ship, ship to shore or intra-ship.

In order to illustrate the failures in communication and the role of formal taxonomies, this paper describes a number of accident reports in which *HCE* has been cited as a factor in the chain of causation.

1.3. Objectives

The main issues surrounding *culture and the work context* are discussed by means of a literature review in Section 2 of this paper. Section 3 contains any references to methodology and features *concepts suitable for use in analysis of marine accidents*. Section 4 incorporates a brief summary of each accident and the analysis of secondary data from accident reports with the ultimate aim of breaking down the *HCE* involved and classifying it using the ADREP 2000 Taxonomy.

Given that this paper has been written with its firm foundations set in the hypothesis that the interaction of multicultural crews onboard has an effect on the ability of the crew to communicate effectively, the concerns regarding *culture* and *HCE* are of utmost importance and relevance and are integrated into the investigation and analysis.

Conclusions have been drawn from the secondary data analysis contained within section 4, which incorporates a brief summary of the issues surrounding multi-cultural crew communication and why the ADREP 2000 Taxonomy is a suitable classification for maritime accidents.

2. Culture and the work context

2.1. Hofstede's cultural dimensions

There are plenty of studies detailing the culture differences in the context of employment. One of great significance is *Cultures and Organisations: Software of the Mind* [3], which is an account of a study of how values in the workplace are influenced by culture. From 1967 to 1973, while working at IBM as a psychologist, Hofstede collected and analysed data from over 100,000 individuals from forty countries using the complexity of such a multinational corporation as IBM as a clear canvas for such a study. An industry such as shipping is unmatched in its complexity, which may be so much the case that it limits the possibility for variables to reflect one another to a sufficiently scientific extent for such analysis. From the IBM results Hofstede developed a model that identifies four primary dimensions to differentiate cultures: *individuality*, *masculinity*, *uncertainty avoidance*, and *power distance*. He later added a fifth dimension, *Long-term Orientation*. In his 1984 text Hofstede investigated the *International Differences in Work Related Values*, a study which was updated in 2001. Hofstede's studies focused on the influence of national culture on the sub-cultures of the worldwide organisation, which he also executed by questioning and observing employees of IBM. His conclusions have shed valuable light on key cultural differences between nations in the way in which they conduct themselves in the workplace. Hofstede identified these four key dimensions in order to distinguish between the differing values and attitudes of those within the bell curve which represents the mainstream of a culture. In short, Hofstede's dimensions are generalisations about the members of a society or cultural group. A summary of each relevant dimension and its contextualisation into a team setting, such as that found on the bridge of a ship, follows:

Power distance – Low power distance helps the creation and maintenance of self-directed teams, since empowerment is easier to achieve in this culture. Countries with high power distance are ones where employees are seen as frequently afraid of disagreeing with their bosses.

Individualism – Low individualism or a collectivist society is more adaptable to the creating of self-directed teams since the team spirit must overcome the individual needs. Individualist cultures are expected to act according to their own interest, and work should be organised in such a way that this self-interest and the employer's interest coincide.

Uncertainty avoidance – For teams to reach self-direction or a high level of participation, the society must have low uncertainty avoidance otherwise the team members will be afraid to take necessary decisions [3].

These dimensions can be related to the operational requirements of the specific work context. The 4th dimension – *Masculinity* – is not considered as relevant for this paper nor is the 5th dimension of *Long-term Orientation*; these have therefore been omitted.

This paper investigates the requirement for effective communication in the maritime work domain as there are some inferences that each of these dimensions may also influence communication in the multi-cultural work setting. A fear of questioning the actions of a superior is a characteristic related by Hofstede to cultures with high power distance. The subsequent failure to communicate because of this perception of power distance and failure to indicate to a superior that there may be a problem with his or her actions, in principal allowing an accident to happen, is just one example explored through the cases of marine accidents contained in section 4 – *See Bunga Teretai Satu*.

2.2. Inter-cultural Communication

Intercultural communicative competence is vital because people's communication styles are inherently culturally bound [3]. The STCW convention and its amendment in 1995 theoretically dissolve such divides as value and culture in training and education, but in reality these factors still thrive. Discussing culture is a sensitive issue and to avoid slipping into stereotyping this paper in referring to a particular nationality, is referring to a bell curve of a culture. In this bell curve the people in the centre represent the mainstream, which should be interpreted with an awareness that cultures are made up of individuals whose behaviour can vary greatly, [7]. The 1995 major revision of the STCW Convention saw the first inclusion of specific requirements for English Language certification. Communication lapses identified as *Human Error* in the causal chain of accidents have led to the use of English as the common language under the revised STCW Convention 1995.

Setting aside the further issues of loneliness, stress and fatigue brought about by the reduction in numbers as a result of technological advances, the 80% of the world's merchant ships which have become multilingual and multi ethnic in terms of crew composition [2] are facing the reality of those very concerns relating to the *Human Element* as outlined by Horck [4], Hughes [6], Hofstede [3] and Hutchins [7].

"If there are also problems of communication contributing to a lack of mutual confidences, suspicions and misunderstandings, then the opportunities for human errors leading to dangers to the ship, the people on board and the environment, are greatly increased." [2]

The need for clear verbal communications between parties in the commercial marine environment is multi faceted as the ship is the working environment, learning environment and social environment for its personnel. Those on board must communicate between ship and shore when in coastal waters, between ships in areas of congestion or where avoiding action is required, or even during search and rescue activities. During periods of pilotage, English is frequently used as a common language and both Pilot and crew must be able to communicate effectively to ensure safety. Those working onboard passenger vessels must have a strong command of a common language in order to communicate with passengers. Communication on an intra-ship level takes place daily between personnel during operation of the vessel – when giving and carrying out orders under "normal" or "emergency" situations – and when the multinational crew must interact to

maintain "social harmony" in an off duty context and in their everyday "teamwork" to ensure effective day to day operation [2].

2.3. Potential Limitations

As with any study of activity in any *context* – the circumstances in which an event occurs e.g. an occurrence of an accident -the primary debate surrounding the observation of human behaviour, specifically that of cultural interaction among mixed nationality crews in relation to its affect on English language competence, for scientific analysis, centres around one fundamental question:

"How can one analyse and interpret data that record and describe human behaviour and discourse?" [1]

The written accounts of marine accidents are recorded in official Accident Reports and any analysis of data in this paper must come from these written accounts. The ability of these reports to record the relevant information for discourse and communication analysis is limited, as they are usually based on log books, charts and whiteness accounts and are retrospective. One difference between shipping and aviation is the use of the black box flight recorder which records intra-cockpit speech and external verbal communications. Such devices are available in shipping, but their use is limited and is not enforced by statute, therefore data from this source is not readily available to marine accident investigators.

3. Methodology

3.1. Concepts suitable for analysis of HCE in marine accidents

There are two principal approaches to exploring the issues relating to culture and language issues that were identified in the literature review. The first is a post accident approach and involves the analyses of maritime accidents and indications of cultural issues and HCE in safety critical situations. These analyses are based on accident reports and the technical terminologies contained within them reflect the fact that investigators are often navigators or engineers. This approach suits analyses which incorporate the use of formal taxonomies and has the inclination to fall within the quantitative bracket of research as its results are often suitable for manipulation using statistical programmes in order to generate frequency descriptives and to establish statistical associations. The ADREP 2000 taxonomy suggests a terminology based on psychological concepts, rather than the technological ones used by the navigators or engineers who usually investigate marine accidents, which are suitable for description of the human element and human factors involved in an accident. The authors of this paper believe that the development of the marine accident investigation process to include Industrial Psychologists and Human Factors specialists could aid the inclusion of such psychological terminology into accident reports and would subsequently make this information source more suitable for analysis using the ADREP 2000 taxonomy.

The second of these approaches to exploring issues relating to culture and language in the marine

environment is a qualitative one, which studies culture and language in everyday life. By studying crew communication and behaviour and by interviewing the crew onboard multi-cultural vessels the researcher can observe the issues relating to culture and language in non-safety critical situations and inform how this behaviour and discourse may relate to or influence communication in safety critical situations. This paper utilises the former approach.

Another relevant example of a system of concepts suitable for use in the analysis of accidents where communication or language was important is the communication model by Metze and Nystrup. Metze and Nystrup defined four dimensions of verbal communication in a professional context. Any communication sequence (conversation, statement, order, question, answer etc.) can be analyzed according to these four dimensions:

1. *Cognitive* (knowledge and sense, exchange of exact information) – *affective* (feelings and intuition)
2. *Expanding* (long conversation or dialogue, questions which lead to comprehensive answers) – *limiting* (closing the conversation as quickly as possible, short answers, yes/no)
3. *Confronting* (focus on problems and conflicts) – *concealing* (hiding problems and conflicts)
4. *Listening* (paying attention to what is said and showing that by gestures or answers) – *not listening* (not paying attention, indifferent, no eye contact)

In most professional contexts the communication is preferred to be cognitive, confronting and listening. It whether the communication should be expanding or limiting varies depending upon the context and purpose of the communication. The command/confirm-communication, which is used on the bridge, is an example of limiting communication, which - of course - is appropriate in the given situation. The applicability of the ADREP 2000 taxonomy and the communication model by Metze and Nystrup will be illustrated with a few empirical examples in section 4 of this paper.

3.2. Accident classification from taxonomy

A quick browse through maritime accident reports from USA, Canada, UK, Australia and Denmark shows several examples of accidents in which the human element and culture or language related problems played an important role in the causality of the accident. The following examples can be mentioned:

- Problems related to multi-cultural crews (e.g. the Bunga Teretai Satu accident, the death of a crew member on board Sally Maersk, and the Scandinavian Star)
- Problems related to different cul-tures/languages among crew and pilot (e.g. the Bright Field accident)
- Problems related to different cul-tures/languages among crew and passengers on passenger vessels (e.g. the Skagerak accident and the Scandinavian Star accident)
- Problems related to different cul-tures/languages with respect to external communication, VHF communication with other vessels (e.g. the Royal Majesty accident)

It is possible to assume that the following mentioned examples also could be found if further re-

search is done:

- Problems related to different cul-tures/languages with respect to external communication, VHF communication with VTS stations.
- Problems related to different cul-tures/languages with respect to crew interaction with equipment or procedures.
- Problems relating to everyday communication too as this is where a lot of problems stem from.

4. Results and discussion

4.1. Problems related to multi-cultural crews

The grounding of the Malaysian flag container ship Bunga Teratai Satu on the Great barrier Reef occurred when a waypoint alteration was not made. The significant act identified by the accident investigators to have caused the waypoint alteration to be missed, was the telephone call made by the Pakistani Mate and his wife to their family. The mate had developed a practice of asking the AB from Myanmar to plot the ship's position from the GPS every hour when the ship was in open waters. As the Pilot had left the ship and they were out of the compulsory protection zone, but not onto their next waypoint, the AB assumed his role and proceeded to plot this position.

The position plotted was adjacent to waypoint 34 on the ship's passage plan, where the ship's course was due to be altered. According to the AB, he kept expecting the mate to come back into the wheelhouse to alter course. But the mate did not re-enter the wheelhouse until about 0715, whereupon he and his wife proceeded to make some coffee at the sink at the port side of the wheelhouse. At around 0717, after making coffee, the mate went to the chart table and checked the 0700 position. He looked over the chart table console and told the AB that he had made a mistake in plotting the position. Shortly afterwards and in desperation he told the AB to "change to hand steering" and shortly after the vessel was aground.

The AB was obviously an intelligent young person with some six years seagoing experience. He had learnt to plot GPS positions but was not familiar with chart symbols or issues such as scale, or time/distance estimations. He did not realise the ship was standing into danger. He resumed his lookout duties assuming that the mate would make the appropriate alteration in due time. Such an attitude reflects a large "power-distance" as described in section 2.1 according to Hofstede [3] and in their account the accident investigators noted that there existed a strict hierarchy between the Pakistani senior officers and the Malaysian, Indonesian and Myanmar junior officers and crew. It was important in the national culture of the crew that the AB although he knew that something was wrong -did not question the decisions of his superior. The ADREP 2000 taxonomy classifies this problem as follows:

202030000 Cultural issues.

Factors related to cultural issues, e.g. crew mix, authority gradient, cultural issues and

crew resource management.

It is less likely that this problem could occur with an all Scandinavian crew because there are few differences in culture, nor can this culture be characterised by a high 'power distance' [3].

Using the Metze and Nystrup model, the communication on the bridge before the grounding could be described as cognitive (about facts), limiting (com-mand-confirm style with no room for questions from the AB), concealing (the AB concealed his awareness about the mistake made by his superior due to the cultural factors described above) but - in general -listening. The cause of the accident could be found in the *limiting* and *concealing* qualities of the bridge communication. The appropriate ADREP 2000 category is:

501010100 The interface between humans in relation to communication between crew members.

Factors related to the interface between humans in relation to communication between crew members.

In the incident which occurred on board the M/V Sally Mærsk in June 2000 on a voyage from Hong Kong to Long Beach, a repairman from Poland suffered from pain in his back and fever. Due to poor English language skills he asked his colleague – another repairman from Poland – to act as an interpreter for him during the medical consultation with the chief officer. The sick repairman had an injury in his back few days ago. His colleague was aware about this and assumed that the pain was caused by the injury. The sick repairman explained and asked his colleague to translate that he had pain and felt sick with fever, but the information about fever was lost in the translation and the chief officer got the impression that the problem was the pain assumable caused by the injury. The chief officer prescribed mild pain killers as the only treatment. The Polish repairman paid several visits to the sick repairman in the following two days. The sick repairman complained about his illness and the fever which had become worse. During the last visit the sick repairman seemed to be asleep and his colleague left him without talking to him. Later that day the sick repairman was found dead and the cause of death was pneumonia.

4.2. Problems related to different cultures/languages among crew and between the crew and the Pilot

The communication problems in the Bright Field case are quite similar to the problems in the Bunga Teretai Satu case in relation to Hofstede's cultural dimensions and the phenomena he describes as 'power distance'. While the Bunga Teretai Satu case was a matter of communication between crewmembers from the same culture, the Bright Field case illustrates a situation with a crew and a pilot from different cultures: American and Chinese. The word "no" is a very impolite word to the Chinese. It is therefore the cultural practice of Chinese crews that they always answer "yes" - especially to an authority such as a pilot - even though they are well aware that the correct answer is "no". This is in fact a very extreme example of concealing communication according to the model by Metze and Nystrup.

The correct ADREP 2000 taxonomy classification of the problem is again:

202030000 Cultural issues.

Factors related to cultural issues, e.g. crew mix, authority gradient, cultural issues and crew resource management.

Further, the pilot suffered from a lack of information due to the fact that he was not able to understand the communication between the engine room and the bridge, which was in Chinese. He was prevented from recognition of the engine problems from the bridge/engine communication and he therefore suffered from information deprivation.

The correct ADREP 2000 taxonomy classification of this problem is:

501010500 The interface between humans in relation to language.

Factors related to the interface between humans in relation to the use of a particular language, e.g. English in a French speaking area.

Using the Metze and Nystrup model, the communication on the bridge before the collision could be described as cognitive (about facts), limiting (com-mand-confirm style), concealing (the engine problems was concealed with the expression "yes sir" used consequently even if the correct answer was no) but - in general - listening. The cause of the accident could be found in the *limiting* and *concealing* qualities of the bridge communication.

4.3. Problems related to different cultures/languages among crew and passengers on passenger vessels

The ferry Skagerak foundered in heavy weather in 1966 on route between Norway and Denmark. The passengers and the crew were all saved due to a remarkable effort from the crew as well as from the vessels and helicopters engaged in the search and rescue operation. The mustering of the passengers was not done using loudspeakers. A member of the crew knocked on the door to every cabin and asked the passengers in Norwegian or Danish to don their lifejackets and go to the mustering stations as quickly as possible. A couple of French speaking passengers did not understand the instructions given and assumed that the crewmember talked about the arrival. They therefore dressed carefully and prepared for the arrival and went to the passenger area where they found the other passengers dressed in pyjamas and lifejackets. Although the situation now can be considered amusing - the passengers were in fact saved - it is evident that the problems with the communication between the crew and the passengers could have had fatal consequences.

The ADREP 2000 categories of explanatory factors for this particular example from the foundering of Skagerak are:

501010500 The interface between humans in relation to language

501011100 The interface between humans in relation to aural/oral interpretation/misinterpretation

Factors related to the interface between humans in relation to interpretation/misinterpretation associated with communication.

The communication model by Metze and Nystrup cannot directly be applied in this example because the model is based on two-way communication. The communication in the example was only one-way: From crewmember to passengers. It is however likely that the communication was *limiting* in such an extreme way that the passengers did not dare to ask the crewmember about the instructions. It was probably also *cognitive* due to the context and it was most likely *not-listening* -otherwise the misunderstanding would not have occurred. We do not know if it was *confronting* or *concealing*, but given the circumstances and the need for an urgent message to be conveyed there was probably not time to formulate the statement in a concealing way. The limiting and not-listening properties of the message did clearly contribute to the misunderstanding of the message. If the passengers had shown (listening) that they did not understand the message or if the crewmember had used an expanding way of communicating, the misunderstanding would probably never have occurred in the first place.

The ferry Scandinavian Star burned out completely on a voyage from Norway to Denmark in 1990. A lot of the passengers and crewmembers died in the fire, and the accident was considered to be one of the worst passenger ferry disasters ever in European waters. Witness testimonies express problems related to crew-passenger communication and crew-crew communication due to different languages. The captain even complained about the poor English language skills of the crew in a telefax to the shipowner before the accident occurred. The appropriate ADREP 2000 category describing this problem is:

501010500 The interface between humans in relation to language.

4.4. Problems related to different cultures/languages with respect to external communication, VHF communication with other vessels

The grounding of Royal Majesty on Rose and Crown Shoal near Nantucket, Massachusetts on 10th June 1995 is a very complicated case with a number of human factors issues. The issue to be used in this analysis is the communication between M/V Royal Majesty and a group of Portuguese fishing boats and the ship to ship communication between the fishing boats on VHF channel 16 a short time before the grounding. The M/V Royal Majesty was off route due to a malfunction of navigation equipment on the bridge, but the crew were unaware of this malfunction due to false indications from the navigation equipment. At a certain point, the crews on board a group of Portuguese fishing boats realised that M/V Royal Majesty was heading towards danger and tried to call it on channel 16. Because they called a vessel on a certain position, and the crew on board M/V Royal Majesty was convinced that they were in another position, the crew on M/V Royal Majesty did not respond to the call - the call was made in English. The call in English did not indicate any danger, but the ship to ship communication within the group of Portuguese fishing vessels did indeed indicate danger, but this communication was in Portuguese and was not understood by the crew on board M/V Royal Majesty. There is a possibility, that the crew would have paid attention to it, had the communication been in English and there is a further possibility that the crew might had been alerted that their vessel was off course.

Sections of coastguard transcript of VHF-FM radio transmissions:

2042 *fishing vessel (f/v) Sao Marcos [in English]*: "Fishing vessel, fishing vessel call cruise boat."

2043 *f/v Rachel E [in Portuguese]*: "Are you there Toluis [nickname of Tony Sao Marcos]?"

f/v Sao Marcos [in Portuguese]: "Yeah, who is this?"

f/v Rachel E [in Portuguese]: "It's Antonio Pimental. Hey, that guy is bad where he is. Don't you think that guy is wrong in that area."

f/v Sao Marcos [in Portuguese]: "I just tried to call him. He didn't answer back. He is very wrong."

f/v Rachel E [in Portuguese]: "I've been watching him for the last half hour. He was a big contact on my radar. I picked him up 8 miles away."

[source unknown] [in English]: "Channel 16 is a distress channel and this is international, please change your channel, please change your channel."

2045 *f/v Rachel E [in English]*: "Calling the cruise boat in the position 41 02N, 69 24W. Over."

40 seconds later *f/v Rachel E [in English]*: "Calling the cruise boat 41N, 69 24W. Over."

Again the appropriate ADREP 2000 category describing this problem is:

501010500 The interface between humans in relation to language.

5. Conclusions

The issues surrounding intercultural crews and the potential for HCE were identified in the literature review and examples have been given from maritime accidents of problems related communication, language and culture. These examples have been analysed successfully using the ADREP2000 taxonomy and the psychological model of professional communication formulated by Metze and Nystrup.

The need for clear verbal communications between parties in the commercial marine environment is multi-faceted as the ship is the working environment, learning environment and social environment for its personnel. The multinational crew must interact and communicate in a common language to maintain "social harmony" in an off duty context and in their everyday "teamwork" to ensure effective day to day operation. The most commonly recognised failure occurs with the level of understanding of English between ship to ship and/or ship to shore under conditions of restricted manoeuvrability, or when under critically congested circumstances where little time or space can be afforded for mistakes to be made. It is apparent from the examples of accidents that seafarers cannot be expected to communicate in a variety of languages, using

some English of non standard origin and then be expected – under the stressful circumstances of restricted manoeuvrability or emergency operations – to revert to using a standard marine vocabulary and to remove any redundant language.

It is possible to minimise the amount of accidents directly related to poor communication by improving crew communication through training and education of the crew, improved procedures for communication, better selection of personnel and improved design of maritime equipment and technology including means for communication (e.g. telephones, VHF, radios etc.). Any effort of improvement of crew communication should be based on fundamental knowledge about the dynamics of crew interaction and communication as can be obtained from analyses of maritime accidents using psychological terms and concepts as exemplified in this paper.

6. References

- [1] Engestrom, Y. (1996). *Developmental Studies of Work as a Testbench of Activity Theory: The Case of Primary Care Medical Practice*. Cambridge University Press, New York, USA.
- [2] European Union-DG VII (1999). *MARCOM Project: The Impact of Multicultural and Multilingual Crews on Maritime Communication Final Report - Volume 1*. Transport RTD Program, Brussels, Belgium.
- [3] Hofstede, G. (1997). *Cultures and Organisations, Software of the Mind - Intercultural Co-Operation and Its Importance for Survival*. McGraw Hill, London, UK.
- [4] Horck, J. (2004). An Analysis of Decision-Making Processes in Multicultural Maritime Scenarios. *Maritime Policy and Management*, **31**, 15-29.
- [5] Hughes, E. (2003). *Human Element Strategy - Draft*. Maritime and Coastguard Agency, Southampton, UK.
- [6] Hughes, T. H. (2000). *The Use of English as a Standard Marine Language in Ship to Ship and Ship to Shore Communications*. Vainio, J. (Ed) *The Second International Conference on Maritime Terminology*. Turku, Finland. Centre for Maritime Studies - University of Turku. pp 17-23.
- [7] Hutchins, E. (1996). *Learning to Navigate*. Cambridge University Press, New York, USA.
- [8] ICAO. (2004). Eccairs 4 Data Definition Standard. *Explanatory Factors. International Civil Aviation Organisation (ICAO), ADREP 2000 Taxonomy*, <http://eccairs-www.jrc.it/Support/Downloads/Files/Documentation/Release40Taxonomy/R4CDExplanatoryFactors.pdf>. 28th June 2004, (September 2004), PDF.
- [9] Koester, T. (2005). *Den menneskelige faktor (The Human Factor)*. Vedligehold, drift & økonomi (Maintenance, Operation & Economy). No. 9. December 2005. pp. 28-29.

- [10] Koester, T. (2005). *Human Factors in the Maritime Domain (Draft)*. PhD Dissertation in preparation. Aarhus University and FORCE Technology, Denmark.
- [11] Koester, T. (2005). *Menneskelige faktorer (Human Factors)*. In: Koester, T. & Frandsen, K. Introduktion til psykologi - teori, anvendelse, praksis (Introduction to Psychology - theory, application, practice). Copenhagen: Frydenlund.
- [12] Luthoft, M. (2004). *"Technology Is Great When It Works" Maritime Technology and Human Integration on the Ship's Bridge*. PHD, University of Linköping, Sweden.
- [13] Metze and Nystrup (1984). *Samtaletræning: Håndbog i præcis kommunikation [Discourse Training: Handbook in Precise Communication]*. Munksgaard., Copenhagen, DK.
- [14] Squire, D. (2004). He Alert! <http://www.he-alert.org/faq.aspx>.
- [15] RINA. (2004). Human Factors in Ship Design, Safety and Operation.
- [16] <http://www.rina.org.uk/showarticle.pl?id=7524&n=406>.
- [17] Valentine, D. (2003). Prevention through People. <http://www.uscg.mil/hq/g-m/nmc/ptp/>. March 2003, (January 2004), web page.

**A COMMUNICATIVE LEARNING AND TEACHING STRATEGY
FOR ENGLISH FOR SPECIFIC PURPOSES IN CHINESE
MARITIME HIGHER EDUCATION INSTITUTIONS**

Robyn Pyne

Associate Lecturer and PhD Candidate

The University of Plymouth/Dalian Maritime University

The University of Plymouth (Shipping and Logistics Group), Drake Circus,

Plymouth, Devon, PL4 8AA

robyn.pyne@plymouth.ac.uk

Tel: 0044 (0)1752232867

Fax: 0044 (0)1752 232249

Xuejun Gong

Associate Professor

School of Foreign Languages, Dalian Maritime University

1 Linghai Road, Dalian, China, 116026

xuejungong@yahoo.com

Abstract

In the fields of Navigation and Marine Engineering, the final certification examination for Maritime English (ME) competency is comprised chiefly of multiple choice and true/false questions. Evidence presented in this paper illustrates how this assessment approach fosters a surface style of learning on behalf of the students and how teaching is forced to adopt this style also. One of China's largest educators of Navigation and Engineering students, Dalian Maritime University, is presented as a case study for this discussion. Empirical findings from longitudinal ethnographic action research by two educational practitioners – one English and one Chinese – are reported in pursuit of promoting the development of an alternative learning and teaching concept. This paper champions the development of a student focused, communicative approach to programmes taught in English in Chinese maritime higher education institutions as a solution to enhancing the depth of students' ESP learning. Practical applications for course coordinators and teachers are given great consideration in the paper and International Maritime Organisation (IMO) model course based competency targeted teaching units are presented as a solution.

Keywords: Assessment, motivation, communicative teaching, curriculum development

1 Introduction

In 2005 the BIMCO/ISF manpower survey figures confirmed China's position as the largest exporter of maritime labour. In the 2000 and 2002 surveys this was not the case, but in this short space of time China's maritime labour supply has grown considerably. The most frequent category of the total maritime manpower supply from China (122,208) is for ratings (79,504) over officers (42,704). The Philippines lie second for their total supply (120,399) having been overtaken by China with their supply of officers (46,359) exceeding that of ratings (74,040) (BIMCO/ISF 2005). Factors for the decline in the employment of Filipinos are cited frequently as being in relation to the highly litigious climate of operation with mounting claims for compensation for injury and falsification of documentation (Zhao & Amante 2005; Lloyds Register Fairplay 2001). Factors cited for the increased employment of Chinese seafarers relate to wage rates and rising competency levels (MOC 2005). One stark comparison between these two groups is that Filipinos use English as a second language (ESL), whereas for the Chinese English is a foreign language (EFL). The major criticism and the major restriction in Chinese seafarers' employment mobility in the global fleet is the perception that they possess limited ability to communicate in English. Manning agents involved in this study indicate that growth in seafarer export would be even greater if all of their new recruits could perform well in appropriate English tests. This poses a great problem for the maritime industry, as it needs highly professional individuals who are prepared to learn and adapt to situations. Cadets surveyed (Progoulaki, Pyne and Theotokas 2008) expressed a desire to work for five to eight years onboard before seeking a shore career. The majority wished to serve a minimum contract period of five years. This means that the industry has little time to take on cadets and raise their professional and language competencies simultaneously. The time for raising language competency lies during the time studying at maritime training institutions. High student numbers and few teachers means that this is a tricky situation to address. Teachers may not receive extra money or time to prepare for what is a more complicated class, but are expected to do so with little reward to motivate them. A revised solution is required.

It is the aim of this paper to explore ESP learning styles at one case institution in order to address the deficit between Chinese maritime cadets' 'communicative competence' and their 'communicative success'. Section two of this paper defines 'communicative competence' and 'communicative success' and looks to the i) relevant literature to outline the status quo of *teaching and learning of Maritime English at Chinese MET institutions*. This information is presented in combination with case study examples from the aspects of ii) the students, iii) student learning strategies and iv) exploring why assessment is fostering the rote learning stereotype, which acts to provide the rationale for the research that took place. Section three addresses the *research approach* taken including information about the research project staff's objectives and describes the action research paradigm employed. Section four presents a hypothesis based on the *findings and discussions of the research and practical applications for Maritime English course design* by discussing the language learning strategies employed by Chinese Students of EFL, maritime and non-maritime, both at the Chinese case institution and in at higher education institutions in the UK. Section five describes experiences of *classroom trials of communicative learning* featuring two key groups of Deck Cadets, Master Mariners

and Maritime Safety Administration (MSA) civil servants. Section six provides the paper's conclusions and is followed by a list of references.

2 The Teaching and Learning of Maritime English at Chinese MET Institutions

a) Communicative Competence and Communicative Success

Originally formulated by Hymes (1972), 'communicative competence' involves judgements concerning what the mind can manage in terms of grammatical structuring, what is required to achieve the linguistic goal in question and what society will accept: 'Competence is dependent on both knowledge and use' (Hymes 1972: 282). 'Communicative success' is the situation when all of these aspects have been applied, successfully and the linguistic goal fulfilled. Linguists stress that competence does not automatically equal success. This is important in ESP teaching and assessment as these two essential elements should not only foster and measure competence, but also seek to promote and assess success in context.

b) The Students

According to Zhao (2000), there is question as to whether the young men recruited to study Navigation and Engineering courses in China are going on to be 'high quality' officers and crew or just 'cheap labour'. In 2005, Zhao & Amante followed-up these claims with an in-depth study of maritime education and training (MET) institutions in China and the Philippines. They reported that the young men recruited into the MET system in China were not as well educated as those studying other subjects and that support for them in terms of scholarship was inadequate (Zhao & Amante 2005). Empirical data from 2006 to 2008 backs-up this claim to some extent, but questions the severity of Zhao & Amante's claims. Progoulaki *et al* (2008) concur with Zhao and Amante (2005) and report that from a sample of students at China's largest training institution, Dalian Maritime University, the majority have peasant farming parents and as a result could not expect to have had access to the best schools, as a result of having been brought up in the less economically developed country-side. Zhao & Amante (2005) reported finding no urban students from the affluent coastal provinces among their survey, but 5% of students interviewed for the Progoulaki *et al*'s (2008) study are reported as being from urban backgrounds.

One discovery from the empirical data is that rural students are usually hard working and have overcome some form of challenge to reach the institution. In their educational backgrounds they have done relatively well, but had not been exceptionally high achievers in their high schools. Those from urban backgrounds showed a trend between extremes. Some described themselves as 'lazy' and pre-occupied with other, non academic activities and hobbies e.g. practising and performing guitar music, and that they just didn't study very hard at high school. Whereas, the other extreme were a group of very hard working individuals who were promoted to the top classes and pigeon holed for civil service jobs. For the majority of rural students, getting into a university to study was their key motivation to pursue Navigation and Engineering courses, with fewer

Navigation than Engineering students stating that they had any idea prior to arriving about their major or any genuine desire to work onboard merchant ships. Some urban candidates had seafaring relatives and although fewer in number than their rural counterparts, possessed more positive motivations to work at sea. Among those interviewed, there was a subtle difference between Engineering cadets and Navigation cadets, with the former group being more likely to have come from urban dwellings and to have selected their major based on informed choice and a desire to become a Marine Engineer. Some explanation for this was that it is viewed as a profession in China to be an engineer receives societal praise. For engineering there is a higher score requirement in the 'Gaokao' – the Chinese university entrance examination – and as a result these Engineering students have more choice of university courses upon graduation from highschool.

c) Student Language Learning Strategies

In all fields of language learning, strategies that go beyond cognitive processes, to include social and other elements of a communicative strategy, are common for the student. The maritime students in question, albeit unbeknown to all of them, in studying English are in pursuit developing their communicative competence. The maritime industry itself is demanding communicative success from Navigation and Engineering graduates. The institution and the students themselves impart conscious and subconscious strategies towards achieving this goal. Oxford (1990) classifies these language learning strategies and their orientation towards the development of communicative competence into a taxonomy, which at the top tier consists of 'direct' and 'indirect' strategies (Figures 1 and 2). Each of these two groups is subdivided into three further categories (Table 1). In this taxonomy, 'metacognitive' strategies are understood to help learners to regulate their learning. 'Affective' strategies concern themselves with the learner's emotional requirements e.g. anxiety, while 'social' strategies lead to increased interaction in naturalistic settings which act to foster acquisition of the target language. 'Cognitive' strategies describe the actions of students to conceptualise in order to make sense of what it is they are learning, 'memory' strategies are those used for storage of information e.g. lists of vocabulary. 'Compensation' strategies resolve to fill gaps in their knowledge and to fill their speech in order to allow them to continue communication.

Table 1: Language Learning Strategy Taxonomy

Strategy	Description
<i>Direct</i>	
Memory	Creating mental linkages, applying images and sounds, reviewing well, employing action.
Cognitive	Practising, receiving and sending messages strategies, analysing and reasoning, creating structure for input and output.
Compensation	Guessing intelligently, and overcoming limitations in speaking and writing.
<i>Indirect</i>	
Metacognitive	Centring learning, arranging and planning learning, evaluating learning.
Social	Asking questions, cooperating with others and empathising with others.
Affective	Lowering anxiety, encouraging self, taking stock of 'emotional temperature'.

Source: adapted from Oxford (1990).

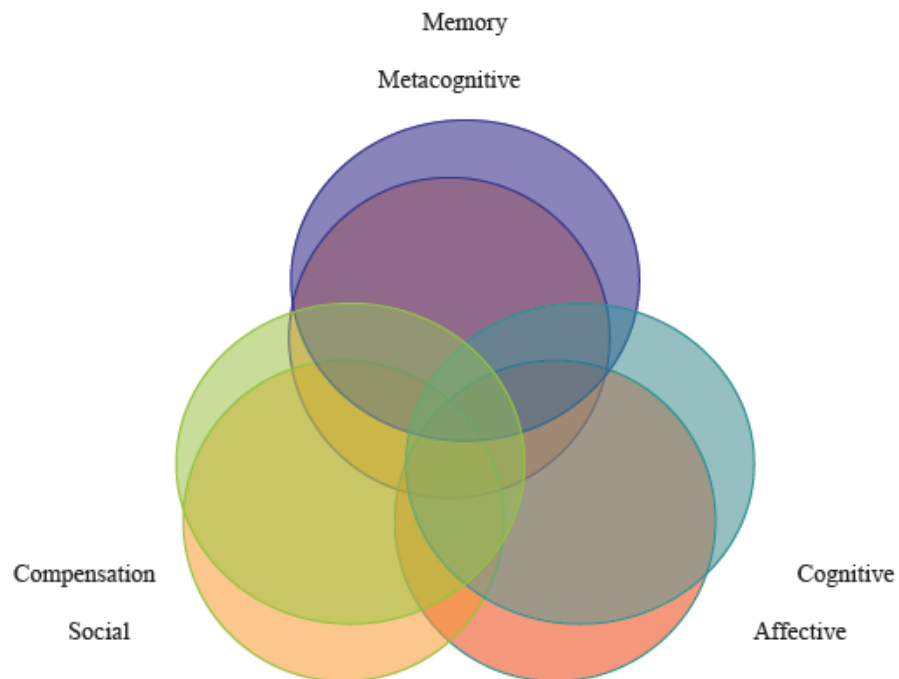


Figure 3 – Overlay of Direct and Indirect Strategies to form a Communicative Strategy

d) Why Assessment Is Fostering The Rote Stereotype Conundrum

Success in the MSA exam for a 'Class A' Certificate of Competency (COC), permits access to much sought after international employment. As a result the exam must feature an English language element in line with the Standards of Training and Certification of Watchkeeping (STCW) convention. However, the industry continues to state that English language competence is still the greatest challenge for preparing Chinese cadets for the global labour market. It is hard to grasp why this disparity still exists with so many years of the same complaint being received. There have of course been advances and improvements in teaching e.g. the increase in number of native speaking English teachers, resulting in the best students becoming better. Yet, these better students rarely go to sea and are among an ever increasing in frequency 10% cream off the top of the pool, who go on to enter postgraduate education or the civil service. In addition as the numbers of recruits entering maritime institutions increases each year due to steep industry demand for manpower, sadly the worst students have become decidedly worse. Lower entrance requirements have been adopted to allow for higher student intake and more institutions have been approved and have had their status level raised to that of 'university' (CMET 2007).

The student demographic is more likely than a decade ago of coming from inland rural areas. There is nothing in the STCW to say that Navigation or Marine Engineering students must have grown up next to the sea and have it running through their veins, but there is a difference between the primary and secondary education standards between the poorer and less economically developed inland provinces in the West and the richer coastal cities of the East. In the coastal cities and in the Eastern provinces of China the standard of schools is much higher. In observations, those students who do the best with little effort are usually from the East and have lived in cities, are supported by professionally employed parents and went to good schools with the addition of native speakers as oral English teachers. Those who perform poorly or who have had to put in exceptional effort to succeed are from the West, have peasant farming or unemployed families and are in a lot of debt to have reached university in the first place (Progoulaki *et al*, 2008; Zhao & Amante 2005).

Unfortunately and indiscriminate of their Western or Eastern origins, despite the students' own desires to manage their learning and to manipulate these learning strategies to their optimum, there is great pressure upon them to learn by rote. Ramsden (2004:177) describes a situation where 'if students perceive that their learning will be measured in terms of reproducing facts or implementing memorised procedures and formulae, they will adopt approaches that prevent understanding from being reached'. The test of ME in China is presently based on multiple choice questions and preparation for the examination consists of memory cramming for this examination from a question pool. It is recognised widely at the institution, by its teachers and by its students, that this is not a healthy way to examine competence, but that with such high numbers of students and without a change in the exam there is no choice for the teachers and the institution but to continue to foster this approach. This assessment mode is certainly to blame for the rote conundrum. Observation activities at the case study institution raised comments from senior English teaching staff that examinations were necessary in the existing system to 'motivate' the otherwise assumed to be un-driven students. Reading around the topic

after the research interviews had been carried out revealed a further theory of Ramsden (2005), which provides insight and much reasoning to the behaviour of staff and students in this situation.

In this view, because students are fundamentally lazy and the bright ones few and far between, assessment performs a vital secondary function of motivating the students; the threat of failure in a competitive situation is required to stimulate them to attend lectures and practicals and to do at least some private study'

Ramsden (2005:177)

There is great awareness among staff and students of the importance of the English element of the education programme for Merchant Marine Cadets, but at present there is a lack of empowerment for the institution's staff and their students to change the system to facilitate greater depth learning of language. The bottom line is that until the style of assessment changes, the teaching of Maritime English in institutions is stagnant to change.

3 Research Approach

3.1 Project Staff

Despite having highlighted the stale-mate situation between the formal MSA examination for a COC and teaching methods in the former section, research activities continue and on a practitioner level, where feasible, change has been observed. The year 2006 saw the beginning of a collaborative research programme involving the authors of this paper and their colleagues at Dalian maritime university. A sample from the twenty strong group of teachers from the School of Foreign Languages, whose time is shared between teaching College English texts and Maritime English, took part in an action research project (see section 3.2) to peer evaluate their teaching and to promote best practice. The principle author of this paper led this project, funded by the UK Economic and Social Research Council's research degree scholarship scheme. Supported by the Dean of the Navigation College and the Vice Dean of the College of Foreign Languages, in 2006 half of the Maritime English teaching group were involved in initial problem framing observations and in 2007 six volunteered to take part in follow-up classroom peer teaching observations and reflective documenting. In 2008 all of the staff took part in a survey relating to their professional opinions regarding the past and present situation of Maritime English teaching at the institution.

During the former academic period in 2007, the secondary author of this paper instigated a research investigation of his own to explore the learning strategies employed by his student charges. He had exposure as a teacher of the same College English materials to both Marine engineering students of English and those who were taking English as their major. He was inspired at the time to investigate if there were any differences in their approaches to learning and what effect this might have on their academic performance.

3.2 Action Research Strategy

Action research was used for this research investigation. Such an approach can be useful when the action being studied can contribute towards improvements and when a project transcends a number of stages consisting of planning, acting, observing and reflecting, and the investigation itself calls on the consultation of outside parties and their wider participation in the project (Carr & Kemmis 1986). Education is not a field in which activities and pursuits necessarily go well or as planned at a first attempt. It is a cyclical process of planning, acting and reflecting. In delivering a new aspect of the curriculum through a disciplinary context and with the introduction of new teaching modes, this process can be of great importance to the success of current and future teaching activities. Further definitions of action research can be drawn from Cohen, Lawrence & Morrison (2000), whose work provides a synopsis of contemporary applications of this research approach in educational settings. Included in their summary are definitions by Hopkins and Ebbutt from the 1980s that describe the combination of action with research as having the result of ‘disciplined inquiry’. Through this disciplined inquiry, practitioners make attempts to ‘understand, improve and reform’ practice (Choen *et al.* 2000: 226). In the instance of the research project described in this paper, the action research approach served to make a ‘small-scale intervention in the actioning of the real world and a close examination of the effects of such intervention’ (Choen and Manion in Choen *et al.* 2000). The most apt definition that made this approach appealing in achieving the objectives of this study was that of Kemmis and McTaggart, also read in Choen *et al.* (2000), which outlines ‘to do action research is to plan, act, observe and to act more carefully, more systematically, and more rigorously than one usually does in everyday life’.

By entering a situation in which the desire for it to change has been expressed by more than one party, but that was continuing to act in the same manner, problem framing was a necessary as an important step in the process. The key characteristics of action research appropriate to this study are:

- Its use of data in an ongoing cyclical process
- Its use of case study
- Its focus on concerns that of immediate concern to practitioners
- Its avoidance of potentially damaging isolating and controlling of variables
- Its inclusion of evaluation and reflection
- Its strive to render the research usable and shareable by participants
- Its incorporation of rich dialogue and discourse
- Its strive to be emancipatory

(Choen *et al.* 2000)

4 Findings and Discussion of Practical Applications for Course Design and Teaching

4.1 The Learning Strategies Employed by Chinese Students of EFL

One study executed by the secondary author of this paper focused on the six language learning strategies of Oxford (1990) as employed by Marine Engineering students and students majoring in English. Surveying was carried out during the teaching programme to establish how students approached their learning of English in light of Oxford's strategies as outlined in section 2.3 of this paper. When comparing the students from Marine Engineering majors with English majors, the English majors employ language learning strategies more frequently than the Marine Engineering majors. Overall, from among the six learning strategies, memory strategy, cognitive strategy and meta-cognitive strategy are most highly used in the learning process, and there is no obvious correlation between students' learning outcomes and use of compensation strategy. The survey results show that there is no correlation between the compensation and memory strategies, and that there are obvious correlations among the other five learning strategies; cognitive, compensation, metacognitive, social and affective. Results highlight also that there is no specific correlation between the use of compensation strategy and students' academic achievement.

In light of learning outcomes, memory strategy is the most powerful strategy for the students. As a result of his findings the teacher in question concluded that for enhancement of learning outcomes memory strategy should be strongly encouraged in the teaching process. This is very apt and appropriate for the Chinese system where the assessment reflects these outcomes and final assessment success in examinations is based on memory. In light of their performance in these tests, in contrast to memory strategy, cognitive strategy and meta-cognitive strategy, emotional strategy and social strategy have less influence on students' performance. In terms of final assessment overall, memory, meta-cognitive strategy and cognitive strategy are the most influential strategies in learning. Emotional strategy and social strategy are the next most effective and compensation strategy plays little or no role in students' achievement test.

These findings are very contradictory to the thinking of Western Educators, who would hope to see greater importance placed on other strategies than memory to achieve the learning outcomes of their teaching programmes and for this to relate also to the students' level of success in corresponding assessment. In 2006, it was presented to IMLA by Pyne, Dinwoodie & Roe that although suitably qualified and tested for language proficiency, the 'language competency' variable remained a concern for Chinese postgraduate students studying outside of China. In a five year survey, backed-up by national data in year five, for four out of the five years Chinese students over other nationality groups expressed particular concern for the 'language competency' variable. One suggestion as to why this remained a weakness is that a statistically significant number of Chinese students over other nationalities expressed in relation to the 'social' variable being nothing other than 'unimportant' for them in achieving their transferable skills goals, including the 'language competency' variable. With other minority groups, the 'social' variable along with 'accommodation' is 'very important' when these students are seen in small numbers in class sets. Reasons given by the other nationality students

for their emphasis on 'social' and 'accommodation' concerns, indicate that a lack of social opportunities for interaction is negative for their achievement of transferable skills, including the 'language competency' variable. Qualitative responses revealed that this response is heightened when their accommodation is not facilitative of social language learning strategies being employed. For the Chinese, on the other hand, they expressed little concern for the 'accommodation' variable in being a chance to enhance their language skills and results showed preference for accommodation with other Chinese students for 'social' reasons instead. Interestingly, the Chinese students' preference for organised activities within the curriculum, such as field trips, was statistically significant over other nationalities. Qualitative data revealed that they see sense in structured means for introducing social strategies to their language learning.

At the Chinese case institution, some EFL students create their own social learning opportunities through volunteering to aid foreign teachers, by making friends with foreign students and by organising 'English corner' events. Involvement at these events is usually through the structure of the 'student union' groups. The student volunteering union will organise an aid for a new teacher or a language friend for a foreign student. The English corners are organised by a similar union group with their interest in learning English. Its members schedule English corners, at which all communication is in English and students will raise a topic for discussion. A foreigner attending one of these events is like prey to hungry lions. English corners are common across China, run both commercially and by student groups. What is common about their make-up is that they are popular, deliberate and recognised events with clear leadership. At the case institution, these were attended well by students from non-maritime majors, in particular those who wished to study overseas in the near future. They were not attended well by maritime majors.

These empirical findings have lead to the hypothesis:

Chinese learners of EFL at undergraduate and postgraduate level do not demonstrate personal responsibility for facilitating their language learning through social and emotional learning strategies.

This hypothesis is the basis for creating a communicative learning context within the classrooms at the case institution and the subject of the commentary in the following subsection.

5 Classroom Trials of Communicative Learning With Deck Cadets, Master Mariners and MSA Civil Servants

Classroom trials of communicative teaching took two forms during the research period of two years at the case institution. The first group of students were those enrolled on Navigation courses in preparation to become officers in the Merchant Navy. The second was a group of civil servants in the MSA. The second group consisted of two sub groups, A - Master Mariners and Chief Engineers and B - graduate employees most of whom had been in post for three years. In both groups A and B, a majority proportion of students were formerly undergraduate students at the case institution.

5.1 Group one – Deck Cadets

Group one study activities targeted subgroup ‘A’ first year, and subgroup ‘B’ final year students in their study of Standard Marine Communication Phrases (SMCP). For both of these subgroups ‘communicative competence’ is measurable based on their College English Test (CET), with ‘communicative success’ being measurable through in-class activities.

5.1.1 Navigation Students Subgroup A

At the outset of the study year, this group of freshman students are very remote from the topic of Navigation. Some may have backgrounds allowing for existing knowledge of Navigational concepts, but the majority do not have this experience. As a result they are concerned primarily, at this stage, with learning the basics of maritime terminology in their own language. Teaching units developed from the IMO model course syllabus were used throughout one teaching term, with the objectives of:

- Eliciting and strengthening maritime vocabulary
- Contextual use of target language
- Needs analysis for feedback into general English learning

The classroom revealed that these students had a rigid and set expectation of learning English to include primarily a list of new words that could be learnt through self study in the confines of their dormitory. This was expressed by the group’s monitor, who boldly raised the statement ‘I don’t think we are learning anything’ at the end of the first class. This was discussed further and it came to light that he questioned the ‘learning’ taking place as it didn’t fit with the group’s expectation of what learning English involved. The students had little exposure to foreign teachers and those with whom they had contact were using a set text. There was no textbook for this course, which caused some concern among the group. Instead, what took place were carefully planned activities based on the more basic aspects of the IMO model course with the aims of warming up the class to engage them, eliciting vocabulary and reinforcing its use, and then using it in very simple contextual situations. Another expectation of the group was of the strong discipline that should be enforced by the teacher, to make the students learn, and that while in the classroom it is the teacher who should be doing the talking. This was evident as when the break time bell rang, there was a flood of questions and free use of the target language, but when class started up again they were in recipient mode only. This highlighted the need for training for the group in the new role of the classroom for communicative learning and what would be expected of them each week. It also meant that lesson plans evolved from one another to meet the group’s ability and needs, and preparedness to learn outside of their comfort zone. After the initial classes had taken place the group became accustomed to the style of learning, keeping vocabulary lists of their own for new words and drawing on these for future tasks.

5.1.2 Navigation Students Subgroup B

Teaching units were expanded upon for this more advanced group of learners. Their immediacy to employment also meant that particular attention was given to pronunciation and immediate correction of errors.

- Eliciting and strengthening maritime vocabulary
- Contextual use of target language
- Pronunciation
- Immediate correction and drilling

Experience with this group over one teaching term revealed that they varied considerably from the freshman class as they had studied a series of texts for ME already. Their studies of ME had begun in the second semester of their third year in preparation for the MSA competency examinations. This constituted studying a multiple choice question bank under the guidance of a teacher from the foreign languages college. The majority of teachers involved in these lessons were English teachers with academic knowledge of Maritime English through their career experience and their own dedication to learning about the topic. Two of this twenty strong group were experienced as navigators and had qualification and experience teaching ME. The students' level of background knowledge and their exposure to foreign teachers already, made them a more flexible group to work with in terms of the communicative teaching approach being employed. However, when it came close to the examinations they regressed to learning by rote from their question bank textbooks and attendance dropped considerably.

5.2 Group Two – MSA Civil Servants

Group two study activities targeted MSA civil servants. The majority of students in Subgroup 'A' were recruited into the MSA as graduates of 22 to 23 years of age having passed the civil service entrance examinations. At the time of the research they were of average age 26, with a few exceptions who had served onboard in a previous career and who were of an average age of 34. Whereas subgroup 'B' were all civil servants concerned directly with maritime safety and with sea service as 'Class A' unlimited COC Master Mariner/Chief Engineer and had an average age of 39 years. Both groups were being prepared for the International Language Testing System (IELTS) examinations, but for different reasons.

5.2.1 Civil Servant Subgroup A

This group of students were on a clear career development path and were perspective postgraduate students on a World Maritime University maritime environmental management and protection related programme. Success in the three month English programme and securing an IELTS score of 5.5 would permit them to progress onto the Masters degree programme. Many of the students were graduates of Dalian Maritime University and other key maritime institutions in China.

This class was very much an exam class and from the outset its focus was the IELTS date three months away. Text books were issued to students for the purposes of understanding the exam and for practice with exercises. Initially, the students were very receptive to the chance to be examined and to find out their current level and skills. However, they were reluctant to take early advice from teachers as to how to study and improve themselves over the given time period. There was great focus on the advice given by the book on all aspects of preparing for the test, but for each student their needs were different. Nerves were the greatest challenge for all of them at the beginning. Some of them saw the mock examination appointments as the chance to get over their nervousness of meeting face to face with the examiner and having to perform well in three parts of the test, but relied on the textbook for guidance and advice of how and what to study. The sense of immediacy was missing for some candidates, who seemed intent on doing what the book said when the time came as a means to pass the test. A minority took heed and persevered with the tasks they had been set. For the majority, it took repeated attempts to gain cooperation with unfamiliar study methods and repeated failure in mock tests on the same fault to drive home to them their individual study needs and the misguidance of the textbook in certain contexts. Time was wasted at the beginning of the preparation period due to these barriers to learning.

5.2.2 Civil Servant Subgroup B

This group of students were on a varied career development pathway and those most successful in the programme would potentially have the chance to represent China at the IMO and others to take part in international conferencing. This older cohort had a differing educational background than subgroup A, in that they studied in maritime training institutions before they were universities and they did not experience as much language learning prior to their graduation. The very real possibility for selected group members to attend IMO meetings and to receive promotion upon their return to work as a direct result of their performance was a great incentive to them to learn and to be open to their teachers. Their experiences onboard and in multi-cultural settings also assisted them in accepting the individual approaches of their three foreign teachers for oral, written and ESP classes. This group were keen to learn and adaptable to context at the outset. A communicative classroom was easily achieved and their professional background aided the group's discipline during activities, which each had a leader and clear objectives to be achieved. Their experience onboard was explored through group and individual discussion to reveal their language learning in context for the sake of achieving professional objectives was a strong motivation for them to have made the improvements in their English so far. All had been immersed previously in a working environment using English as the dominant and common language.

However, as time went on they became accustomed to the university environment and the influence of the other students around them in their shared accommodation. When it was announced to them half way through the course that they too should prepare for the IELTS examination, for the majority their desire to learn was overtaken by their preparation for the examination. Discipline had to be instilled with class registers being taken for dwindling attendance and reported to senior teaching staff. Poor achievers dropped out of classes and stopped attending with others having intermittent attendance,

favouring time alone with their exam textbooks over what became perceived as learning for learning's sake in the classroom.

6 Conclusion

Chinese students of EFL when in a native speaking country have the opportunity to employ social strategies to learning, but survey data suggests that they do not optimise this opportunity. On the other hand, Chinese students of EFL studying in China have few opportunities to employ social strategies, involving native speakers, to their language learning. In China the EFL students' scope for social strategy differs from when in a native speaking country. Their optimisation of these opportunities does not differ. In both cases, a small minority group take the opportunity through structured means to make foreign friends and to socialise with teachers in order to improve their spoken English. A small proportion of Chinese EFL students in China make chance acquaintance with foreign students and teachers and even fewer do this when in a native speaking country. When compared with other nationality EFL students, there is a significant difference in attitudes and behaviour to socio-linguistic concerns.

The revised solution to the issue at hand could be to address Maritime English at an earlier stage with the students. During trials of teaching with Freshman students, it is very possible for them to learn content and language at the same time and to have language reinforced through a carefully planned curriculum. By leaving their ME learning to the second term of the third year of study, students are forced into the rote conundrum and to learn for multiple choice exams that are not facilitative of the depth of knowledge required of ESP for communicative success to be achieved. The key proposal to this is adopting the IMO model course and by designing communicative teaching units at appropriate elementary, intermediate, upper intermediate and advanced levels. At elementary and intermediate levels foreign, non-specialist, teaching staff can be involved in their delivery in the first and second years of university study of Navigation and Marine Engineering. At intermediate and advanced levels, professional English teachers with experience of teaching Maritime English or professional Navigators and Engineers with adequate training to teach English are required and native speakers can provide a supporting role for general, and in particular oral and listening classes.

References

- Carr, W. & Kemmis, S. (1986) *Becoming Critical: Education, Knowledge and Action Research*, RoutledgeFalmer, London.
- CMET (China Maritime Education and Training Research Group) (2007) *Research report on the development and reform of the Chinese Maritime education system*, (yet to be published), Dalian Maritime University Press.
- Cohen, L., Lawrence, M. & Morriison, K. (2000) *Research Methods in Education*, Routledge Falmer, London.
- Cole, C. and Trekner, P. (2007) *Yardsticks for Maritime English Assessment Purposes –a uniform tool for students, teachers, offices and end-users*, Proceedings of the International Maritime English Conference (IMEC) 2007
- Liu, M. (2007) *Seamaster – An Innovation to Improve Maritime English Training in China*, Proceedings of the International Maritime English Conference (IMEC) 2007
- Lloyds Register Fairplay (2001) *Manning in crisis – competition pulling the Philippines down*, 11th October 2001, pp. 18 – 21
- MOC (The Ministry of communications of the People's Republic of China) (2005) *The 2005 Report on China's Shipping Development*, The Press of People's Communication: Beijing [in Mandarin].
- Hymes, D. (1972) On communicative competence. In Pride, J. & Holmes (eds), *Sociolinguistics*. Harmondsworth: Penguin, pp. 269-293
- Oxford, R. (1990) *Language Learning Strategies: What Every Teacher Should Know*. New York: Newbury House Publishers.
- Progoulaki, M., Pyne, R. & Theotokas, I., (2008) Cooperation and competition in the global market: Manning issues of Chinese and Greek Fleets, *Proceedings of the International Association of Maritime Economists (LAME) conference April 2008*, Dalian, China.
- Ramsden, P. (2004) *Learning to Teach in Higher Education*, 2nd Ed. RoutledgeFalmer, London.
- Zhao, M. (2000) Chinese Seafarers: Value for Money of Cheap Labour? *Maritime Review 2000*. Seafarers International Research Centre (SIRC), Cardiff.
- Zhao M., and Amante. S. (2005), Chinese and Filipino Seafarers: A Race to the Top or the Bottom? *Modern Asian Studies*, July, (39), Cambridge University Press, Cambridge, pp.535-557.

Acknowledgement

This paper is written with great thanks to the staff of the Foreign Languages and Navigation departments of Dalian Maritime University, who participated in research activities and worked as colleagues alongside the principal author. Great support was also provided by the institutions International Cooperation and Exchange Office who provided accommodation for the duration of field research at the institution. Research expenditure was covered by the UK's Economic and Social Research Council. Thanks are also given to the supervisory team from the University of Plymouth: Professor Michael Roe and Dr John Dinwoodie.

Enhancing the intercultural competence of postgraduate logisticians

ROBYN PYNE, JOHN DINWOODIE* and MICHAEL ROE

International Shipping and Logistics Group, University of Plymouth Business School,
Cookworthy Building, Drake Circus, Plymouth, Devon, PL4 8AA, UK

This paper reports a national survey of logisticians studying for Masters awards at three UK universities which service increasing global demands by aspiring logisticians seeking enhanced competence to manage international supply chains. Initial longitudinal surveys at one university, later extended to several universities nationally, canvassed the opinions of postgraduate logisticians both at enrolment and several months afterwards, regarding approaches which might enhance their intercultural competence skills. Four prime hypotheses tested the importance of socio-cultural and language-related variables between different years of the survey and nationality groups. After several months of study, some participants reported increased confidence in communicating with students from other nationalities and cultural backgrounds. To assist academics in enhancing the intercultural competence of postgraduate logisticians, thoughtfully managed group work and other opportunities to encourage beneficial social interaction are discussed.

Keywords: Intercultural competence; Postgraduate logisticians; National survey

1. Introduction

Successful managers must be competent in establishing long-term relationships, as growing international trade draws more logisticians into building such relationships across cultural divides (Huang *et al.* 2003). In many international transactions, the English language typically underpins discussions and documentation framed within a Western business culture and value-set (Robinson 2006). Logistics programmes at a UK institution offer international students opportunities to enhance their intercultural competence and prime themselves to manage international supply chains, through Masters-level study in a Western culture (Dinwoodie 2000, 2001). In a UK postgraduate classroom, participants may experiment in forming business relationships and learn international bargaining procedures in situations which mirror professional business processes. Modern logistics programmes develop academic skills

*Corresponding author. Email: jdinwoodie@plymouth.ac.uk

in writing critical rhetoric for conventional assignments, and also enhance transferable skills through deep and transformative learning processes (Turner 2006).

Socio-cultural and language proficiency variables are known to influence the academic success of international students. In contrast to language proficiency, 'cross-cultural competence' (Huang *et al.* 2003) is little-researched, due to complications associated with conducting social research activities. English language competence, measured on a numerical and internationally recognised scale, favours rigorous statistical analysis. However, because there is no standard, quantifiable measure of transferable skills, including intercultural competencies demanded of participants in postgraduate logistics courses, competence is difficult to assess. An ability to converse and achieve objectives during assessed activities can be observed in students undertaking group working (Chamberlain and Hope 2003, Hork 2004). In addition, students may be surveyed regarding their expectations and experiences in this setting (Dinwoodie 2000, 2001; Cathcart *et al.* 2006) generating ranked responses allowing some statistical manipulation. Set against the paucity of research into intercultural competence, attributable to results which are rarely quantifiable and trends towards more qualitative research in education, this paper offers timely findings for institutions engaged in preparing logisticians to manage intercultural work environments.

Initial data collection proceeded using a primarily quantitative questionnaire applied longitudinally to three student-cohorts at 'University One', a UK institution. This afforded some statistical manipulation and inference of exploratory conclusions. Variables of interest to teaching and learning included 'socio-cultural factors' identified from the literature (section 2), accommodation and language concerns, and over time, the group demography and dominant nationality also changed. After surveying four cohorts at University One, several hypotheses had emerged. To validate findings, all major UK institutions offering Masters-level awards in logistics, transport and supply chain management were invited to participate in surveys in year 5. Of nine institutions approached, despite considerable interest, several declined, indicating that educating postgraduate 'logisticians' was not their prime business activity. Sections 3 and 4 of the paper outline the research approach and dataset. Results are presented in section 5 and conclusions in section 6.

2. Literature review

Relevant literature reviewed spans the international postgraduate classroom, 'intercultural competence', socio-cultural factors, entry-level competencies, acculturation and socio-cultural studies. For convenience, 'home' students refer to UK domiciles; 'non-UK domiciles' to non-UK, European Union (EU) domiciles; and 'international students' to non-EU domiciles. Because EU and UK domiciles pay equivalent course fees and receive no additional institutional support service funding (De Vita 2000) the term 'host culture' is extended beyond the UK to embrace Western Europe (Robinson 2006).

Measurement of a group or individual's ability to achieve assessment objectives including deployment of appropriate and effective behaviour is facilitated through *in-situ* classroom observation of communication, behaviour and group working activities. In addition, questionnaires can generate feedback on student attitudes to teaching and learning practices employed, explanations of their actions, and reveal the perceived importance of various teaching and learning methods in developing intercultural competence skills, facilitating inference of their effectiveness. The specific transferable skills of communication and behaviour being targeted define the variable labels employed during data collection and analysis, although other factors may also influence student development and academic success and affect transferable skills development.

2.1 *Intercultural competence and socio-cultural factors*

The concept of 'intercultural competence' varies with its context, but in international logistics research the deployment of 'appropriate' and 'effective' traits are widely accepted criteria for judging it (Huang *et al.* 2003, p. 279). In some work contexts, models of the impacts of culture on communication have been proposed (Pyne and Koester 2005). Although the level of transferable intercultural skills cannot be measured, the achievement of specific objectives while working in an intercultural setting can be assessed. Challenges on multicultural business teams arise, due not only to communication style being 'direct or indirect', but also to 'trouble with accents and fluency', 'differing attitudes towards hierarchy and authority' and 'conflicting norms for decision making' (Brett *et al.* 2006, p. 86). In an educational context, both student communication activities and behavioural skills should be appropriate to the setting and effective in achieving an objective. Huang *et al.* (2003) identified behavioural competence in conflict resolution as pre-eminent in business relationships in transport and logistics, and Horck (2004) noted the importance of facilitating effective communication in the postgraduate classroom. In this paper, 'intercultural competence' relates to the appropriate and effective deployment of specific elemental transferable skills of communication and behaviour as demonstrated through group working.

In attempting to acquire the broad managerial skills required by the UK logistics sector (Sarana *et al.* 2005), issues facing international postgraduate students include social interaction, language and communication (Dinwoodie 2000). Reasons why students fail academically include age, gender, personality, attitude, motivation, previous studies, teaching and support factors, cultural factors and language proficiency (Feast 2002). In this context, 'socio-cultural' factors may be internal or external to the students' remit of control over their transferable skills development. Internal examples include educational background and motivational aspects, and external factors include language differences and cultural differences in terms of societal challenges. These factors are reflected in the variable labels used in this study, and because in international student groups, culture and language proficiency affect academic success (Bellingham 1993, Feast 2002) they are the specific focus.

2.2 *Student entry level competencies, acculturation and socio-cultural issues*

Evidence of an individual's competence to join an academic programme can be gained from information regarding their previous studies, a face-to-face interview, and for all non-UK domiciles who are non-native English speakers, their level of English language proficiency. In most cases, in assessing evidence of previous study, a quantitative points system is employed. However, previous experience is measured subjectively, typically by interview. Where national education systems vary and interviewing of overseas candidates is impractical, language tests are used to predict the linguistic ability of individuals to cope with prospective jobs or courses. The widely accepted standard measure of English language proficiency for entry onto UK university courses is the International English Language Testing System (IELTS) but these tests are inappropriate for assessing an individual's overall ability to cope on a course. An IELTS score is not a measure of general ability to learn or to adapt to the dominant host culture (Hill *et al.* 1999). Bellingham (1993), an advocate of IELTS tests, found a moderate statistical association between IELTS scores and academic success. Others deny such links. Typically, entry onto UK postgraduate programmes requires a minimum IELTS score of 6.5–7.0 (IELTS 2001), consistent with guidelines that at this level, language proficiency is less likely to be a significant factor in influencing academic success. Other socio-cultural factors, such as accommodation concerns are likely to subsume language concerns. English language

proficiency may affect academic achievement, the significance and strength of the relationship and influence of other variables requires investigation (Hill *et al.* 1999).

Upon arrival in a host culture, all international students are engaged in 'acculturation: the process of changes in the individual's behaviour, values, attitudes, and identity that arises as a result of the interaction between the individual and the persons and the environment of the host country' (Murphy-Shigematsu 2001, p 132). Its impact on a successful level of change was studied among individual immigrants by Chamberlain and Hope (2003). Clinical work in psychological studies, reveal a lowered status of mental health in students undergoing acculturation, termed 'acculturative stress'. The mental health of international students may suffer as they adjust to the host culture's values and ways (Martinez *et al.* 1989). Similar expectations of acculturative stress may hold for postgraduates in this study, or employees contemplating a sojourn abroad. In this study, socio-cultural concern variables include: 'accommodation', 'social', 'finance' and 'language'.

The level of openness towards newcomers by members of the dominant group from the host culture affects the degree of host country identification of economic migrants and in turn, their societal integration. This phenomenon, termed 'cultural imperialism' was identified in a sample of host country students (Cathcart *et al.* 2006), who reportedly assumed that only international students need to learn the skills required for effective intercultural competence. Such an attitude may deny effective team working. In this study, although limited numbers of UK students weaken the potential for dominance by a UK host culture alone, due to historical factors Western European culture is dominant in international business and Robinson (2006) notes how this has shaped curriculum and course design. These influences underpin the pedagogic traditions and styles of teaching and learning, and from a socio-cultural perspective the relatively high concentration of Western European students imply a dominant host culture at UK institutions which is characteristically Western European. The nationality groupings adopted in data collection and analysis activities will enable some exploration of this issue.

When not in the classroom, international students typically spend little time with host nationals and experience little cultural immersion, due to primary bonds with co-nationals (Klineberg and Hull 1979, Pyne *et al.* 2006a). However, a strong group of co-nationality peers also offers a strong social support network. Few studies have investigated the nature of interaction between international students and the host society and the way each individual adopts a mode of acculturation and its impact on academic success is still unclear (Murphy-Shigematsu 2001). One report of Chinese students' study, accommodation and social activities revealed that despite having a mixture of nationalities in their classes and accommodation, they spent more time with co-nationals in their social and study activities (Pyne *et al.* 2006a).

3. Research approach

Research into intercultural competence has been criticised for focusing on quantifying how cultural factors impact on firms and business relations, rather than exploring variables to explain why. Accordingly, this study focussed on student perceptions of how elements of their programme affect their ability to perform in a multicultural setting through forming relationships and learning to resolve conflicts. Figure 1 illustrates the proposed relationship between 'entry level skills' and 'academic success', implying that following study, the latter will be measured. Failure to succeed represents an extreme value in the potential range of increments. Literature reviews highlighted 'socio-cultural factors' (Z) as a control variable, with the potential to influence the relationship between language skills and academic success (Bellingham 1995, Feast 2002, Chamberlain and Hope 2003). The Z variable group is the focus of this paper, which seeks to improve understanding of these factors, and assist in making the

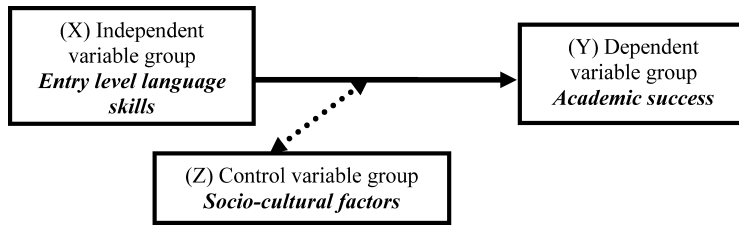


Figure 1. The proposed relationship between variables.

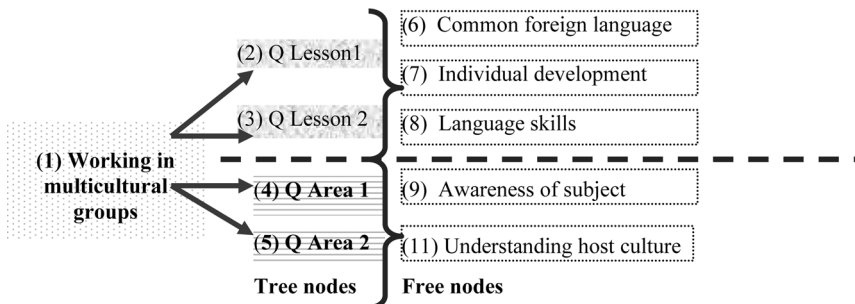


Figure 2. NVivo model of qualitative data findings for socio-cultural factors.

influences of them on forming business relationships in logistics a more manageable entity via classroom interventions.

A self-completion questionnaire distributed to postgraduates on taught logistics programmes sought to explore the relationship proposed between variables (see figure 1). Following four years of surveys at University One, a national sample was collected in year 5. In all instances, a 'before' survey was executed at the outset of postgraduate studies, typically in September. Attitudinal questions elicited the importance to the student of their perceptions of influences on their study experience as 'very important', 'important', 'unimportant' and 'not relevant' with additional opportunities for open responses which would be coded and organised into a hierarchical model of student concerns (figure 2) using QSR NVivo software. This software facilitates the analysis of text files and the organisation of recurrent responses in the form of 'free nodes' and 'tree nodes'. Tree nodes form the higher level general grouping categories and free nodes the lower tier, usually with more detail given in labels for these grouping variables. After three years of data collection and initial analysis of the 'before' surveys, additional open questions relating to the development of transferable skills were added to encourage comments and generate feedback to better inform teaching practice.

4. The dataset

Spanning four cohorts from 2001 to 2004 at University One, the main longitudinal 'before' survey featured 190 MSc students emanating from many countries who were surveyed at enrolment in September. In 2004, a follow-up survey at teaching year-end in March, ahead of spring examinations and the MSc dissertation period, was dubbed the 'after' survey. Responses rates in all surveys typically included all students present in class at a particular time, not advertised in advance, and may include perhaps 80% of registered students. There is no reason to doubt that samples are representative, but because illness for example may affect attendance

Table 1. Frequency of respondents by years and stage of the survey and nationality grouping.

Nationality/Year	2001 Before	2002 Before	2003 Before	2004 Before	2004 After	2005 UK Before	2005 UK After
UK	2	2	0	2	1	3	4
China	1	15	21	31	22	29	29
East Europe	11	8	15	2	1	9	10
West Europe	4	6	6	20	23	38	32
Asia, excluding China	5	5	10	5	8	11	7
Africa	2	2	4	6	7	3	5
Other	2	1	1	1	1	1	0
Total	27	39	57	67	63	94	87
Mean age, years	26.9	26.1	27.8	25.8	26.5	25.1	25.4
Standard deviation	6.94	4.49	5.48	3.77	4.24	5.86	4.02

rates, 'before' and 'after' samples sizes may also vary. From 2004 onwards, exceptions to this time frame were engendered by entrants to programmes via collaborative partnerships with another institution, entailing 'before' survey data collection on enrolment at University One and 'after' surveys at teaching year-end. For one group, enrolment and 'before' surveys in September preceded 'after' surveys in December. For another, enrolment and 'before' surveys in January preceded 'after' surveys in March. In 2005, a national sample including two other universities generated 94 and 87 respondents in 'before' and 'after' surveys respectively. The 'before' survey was administered close to enrolment, with inter-institutional data collection coordinated around standard entry points in September and 'after' surveys at teaching year-end in March. The other universities did not highlight any requirements to vary this regime.

Preliminary analysis noted respondent ages and nationalities over time (table 1). Based on literature highlighting the importance of socio-cultural variables on student groups (Klineberg and Hull 1979, Bellingham 1995, Feast 2002, Chamberlain and Hope 2003), exploratory frequency analysis revealed the varying importance of 'perceived problems for international students'. Variable categories were 'financial concerns,' 'accommodation concerns', 'social concerns' and 'language concerns'. Crosstabulations for 2001–2003 data revealed little variation in age or gender, but more variation in nationality (table 1), generating hypothesis 1 (H1) of: *no significant difference in the mean rank of attitudes towards socio-cultural factors for the different years of the 'before' survey*. They also showed differences in attitudinal responses to socio-cultural questions in relation to respondent nationality. Initial findings inferred that temporal variation in the 'before' survey may be attributable to variations in nationality groups.

5. Results and discussion

Table 2 shows the hypotheses tested. H1 and H2 were tested on 'before' survey data for five cohorts at University One, and the 2005 national 'before' survey sample. Emergent hypothesis H3 was tested on 2004 'after' data at University One, and 2005 national data. As a supplementary hypothesis H4 sought to establish whether based on 2005 data, findings at University One were replicated at other institutions. H5 emanated from analysis of 2004 'after' data and was tested only on 2005 national data. The prime hypotheses H1, H2, H3 and H5 reflect the aims of the research, to explore good practice among providers of Masters level logistics programmes attempting to enhance the intercultural competence of logisticians through classroom and workplace settings.

Table 2. Hypotheses.

Label	Hypothesis
H1	There is no significant difference in the mean rank of attitudes towards 'socio-cultural variables' for the different years of the 'before' survey.
H2	There is no significant difference in the mean rank of attitudes towards transferable skills factor for the different nationality groups.
H3	There is no significant difference between the attitudes of respondents regarding the 'language' variable between the 'before' and 'after' questionnaires.
H4	There is no significant difference in the mean rank of attitudes towards the group work variable in improving communication with foreigners between University One and other institutions surveyed.
H5	There is no significant difference between the attitudes of respondents to the language skills and the communication with foreigners transferable skills variables.

5.1 'Before' surveys at University One

Changing patterns of nationality observed between 2001 and 2004 indicated a need to explore the data controlling for nationality. Given the relationship proposed in figure 1, quantitative analysis of socio-cultural variables and hypothesis testing was carried out controlling for year group at University One for 2001–2004. At the 95% statistical confidence level, table 3 indicates rejection of H1 for the 'accommodation' variable, acceptance on the 'language' variable and only borderline rejection on 'social', and 'finance' variables. In effect, language concerns were perennial. To explore why these differences occurred, the effect of temporal changes in nationality (Feast 2002) was investigated.

The choice of statistical tests was influenced by the nonparametric nature of the data. The nominal variable 'nationality' provided a grouping variable for Kruskal Wallis tests, which output mean rank scores (MRS). These values facilitate understanding of where differences have occurred between grouping variables, in this case between 'nationality' groups in relation to their responses to socio-cultural questions. Mean rank information pinpoints which nationality group is most different in its responses from the most frequent response group. For clarity, table 4 shows only significance values, and this section provides commentary on MRS where appropriate.

Table 3. Kruskal Wallis testing of H1 by year group in the 'before' survey.

Variable	Chi-square	Significance
Finance	9.45	0.05
Accommodation	13.56	0.10
Social	9.29	0.05
Language	1.15	0.89

Table 4. Kruskal Wallis testing of socio-cultural variables by year and nationality.

Variable	Statistical significance and nationality group with the highest mean rank score			
	2001 cohort	2002 cohort	2003 cohort	2004 cohort
Finance	0.93 (Africa)	0.32 (East Europe)	0.05 (Asia)	0.04 (East Europe)
Accommodation	0.11 (Asia)	0.05 (East Europe)	0.14 (Asia)	0.66 (China)
Social	0.02 (Africa)	0.06 (Asia)	0.52 (West Europe)	0.08 (East Europe)
Language	0.06 (China)	0.06 (China)	0.01 (China)	0.00 (China)

In 2001, the only statistically significant difference in MRS of attitudes between nationalities was for the variable ‘social concerns’, most pressing in a small group of Africans (MRS = 22). In 2002, accommodation was marginally significant at the 95% level with social and language issues almost so, with the Chinese group expressing the strongest concerns regarding language problems. In 2003, language issues were significant to Chinese nationals and less intensely, East Europeans. Finance was marginally significant, and MRS revealed social concerns in a proportionately smaller Western European group. In 2004, finance and language variables were significant with the latter particularly so for Chinese students. Testing of H1 for 2005 national data is reported in section 5.4.

5.2 NVivo analysis of open questions

Textual analysis of responses to open questions collected at University One revealed concerns relating to language and culture among students questioned about problems they experienced during group tasks. Figure 2 was constructed using the QSR NVivo programme. First, the tree nodes were established as being ‘Lesson 1’ and ‘Lesson 2’, and ‘Area 1’ and ‘Area 2’. These categories related directly to the ‘before’ survey instrument. In this survey instrument respondents were asked open questions about two ‘lessons’ regarding working in international settings and two ‘areas’ for which they held concerns. In addition, interpretation of the open responses to questions in ‘after’ surveys at University One revealed many comments relating to transferable skills. These emergent comment groups were in relation to: communication with foreigners, individual development, awareness of the subject area and teaching methods, career prospects, and understanding the host culture (figure 2). The emphasis of responses to three of the categories was on the need for greater social interaction opportunities and the specific needs that emerged from textual analysis findings were: greater social interaction opportunities, benefits of work and work experience, problems attributed to a lack of host culture class members, and advantages and disadvantages of group work tasks.

5.3 ‘After’ survey at University One

Data for 2004 from University One was used to test H2, proposing *no significant difference in the mean rank of attitudes towards transferable skills factors for the different nationality groups*. Each student answered questions relating to how important each transferable skills variable was in their personal improvement. Many of these variables revealed statistically significantly different responses when controlling for nationality. Table 5 shows teaching approach variables in rows, transferable skills variables in columns, and in cells,

Table 5. Significance of Kruskal Wallis testing of H2 controlling for nationality in the 2004 dataset.

Teaching approach	Communication with foreigners	Language skills	Understanding of the host culture
Lectures	Important ^{1*}	Important	Unimportant
Group work	Important	Important	Unimportant
Oral presentations	Important*	Important*	Unimportant
Role plays	Important*	Not Relevant*	Unimportant*
Computer practicals	Unimportant*	Unimportant	Unimportant
Personal tutorials	Unimportant*	Important*	Unimportant*
Field visits	Not Relevant*	Not important*	Not Relevant*
Other	Not Relevant*	Not Relevant*	Not Relevant*

^{1*}indicates statistically significant at the 95% level.

the most popular rating of the level of importance and statistically significant interactions for all but eight transferable skills variables. Regarding 'communication with foreigners', responses between nationalities differed, except for 'group work', considered 'important' by all nationalities in improving their ability to communicate with foreigners. 'Group work' and 'lectures' were unanimously considered 'important' in developing 'language skills' and 'computer practicals' as 'unimportant'. 'Lectures', 'group work', 'oral presentations' and 'computer practicals' were unanimously considered 'unimportant' in developing 'understanding of the host culture'.

Textual analysis of open-ended responses to questions (section 5.2) enabled further exploration of attitudes towards significant socio-cultural variables. Differences in attitudes between nationalities and the variable 'communication with foreigners' were observed when compared with all teaching practice-related variables, except 'group work'. This infers acceptance of H2 for this variable and a common opinion among nationality groups and that group work was considered by the majority of nationalities to be 'important' in the development of skills in communicating with foreigners. With the exception of those who marked the category as 'not relevant', the second most frequent category for the fieldwork variable was 'important'. Textual responses indicated that the students felt that a field trip would have been beneficial to their personal development with potential to improve their communication with foreigners.

The 'before' survey had indicated that the Chinese group had consistently held the greatest concerns relating to language. In line with the literature (Murphy-Shigematsu 2001, Chamberlain and Hope 2003) the significance of any differences in attitudes towards the language variable for the Chinese group was explored between 'before' and 'after' surveys. Hypothesis H3 was developed to explore such differences stating: *There is no significant difference between the attitudes of respondents regarding the 'language' variable between the 'before' and the 'after' questionnaires* in 2004. As the two data collection activities are regarded as two independent samples and remain non-parametric the Mann-Whitney test was used. Analysis of the same variables 'before' and 'after', given H3, revealed no significant difference for both Chinese respondents ($U = 332$, significance = 0.853) and all nationalities ($U = 1862$, significance = 0.292). Given earlier results showing the importance of language concerns, there was no improvement in attitude to the language variable between the 'before' and 'after' surveys.

5.4 Establishing commonality of characteristics of the national survey group

Analysis of data for the 2001–2003 surveys indicated that group work as a variable in promoting transferable intercultural skills was held in common regard across nationality groups, with statistical significance (Pyne *et al.* 2006b). This was tested in the 2005 national survey in H4 proposing: *There is no significant difference in the mean rank of attitudes towards the group work variable in improving communication with foreigners between University One and other institutions surveyed.* A Kruskal Wallis test confirmed no significant difference in MRS across nationality groups concerning the group work variable (Chi-square = 2.446, significance = 0.294). This finding infers that all responding institutions may be considered as members of a common population and have been grouped together with University One to form a 2005 UK national dataset.

5.5 Survey findings from national sample

To validate findings based on University One, hypotheses were tested using the responses from the National UK survey. In results for H1 (table 6), only the 'finance' variable showed

Table 6. Kruskal Wallis testing of socio-cultural variables by year and nationality.

Variable	Statistical significance and nationality group with the highest mean rank score in the 2005 national survey
Finance	0.03 (Africa/UK)
Accommodation	0.06 (East Europe)
Social	0.25 (East Europe)
Language	0.53 (China)

significant differences between the nationality groups. However, mean rank information showed similar patterns to those at University One. Language skills remained the primary concern for Chinese students and Western Europeans held the greatest social concerns.

Attitudes expressed in textual responses to the variable ‘language concerns’ show that although language ability is likely to improve by 0.5 of an IELTS gradient in six months (IELTS 2001), the attitudes held by the students themselves towards this variable did not improve over time. The 2004 ‘after’ survey data at University One revealed ongoing anxiety for language concerns, with no improvement during the course. This was confirmed in 2005 national survey data testing H3. Testing of H3 confirmed results for University One, that H3 should be accepted for all nationalities (significance = 0.325) and Chinese only (significance = 0.626).

A specific ‘language skills’ variable remained for parity with the ‘before’ survey. Findings indicated a need to move away from direct association of any language-related variables with the quantifiable element of language competence in line with IELTS testing of language. This was due to stress induced by such tests and their negative impact on students’ attitudes. In surveys both nationally and at University One, results for the remaining language-related transferable skills variable in the ‘after’ survey, ‘language skills’, differences in attitudes between nationalities and this variable were observed when compared with all teaching practice-related variables except ‘lectures’ and ‘group work’. These two variables were regarded as ‘important’ by the majority of respondents with no significant differences by nationality group. The indication from the ‘before’ survey results, that Chinese students consistently held the greatest regard for the ‘language concerns’ variable, was upheld. Textual responses indicated that more mixing with the class in a social context to extend bonds between group members and to communicate in English in such a setting, would have been desirable for improving language skills.

Textual responses in the University One ‘after’ survey indicated that students felt confident when communicating with foreigners, despite expressing language skills concerns in both the ‘before’ and ‘after’ surveys. The emergent hypothesis, H5, was tested using national survey data controlling for nationality to evidence the argument that increasing opportunities for valuable social mixing through means such as group work improves students’ attitudes and confidence in communicating with foreigners, despite their remaining concerns relating to language skills. It was strongly accepted for improving ‘communication with foreigners skills’ and more marginally for improvement of ‘language skills’ (table 7). Although not statistically

Table 7. Kruskal Wallis testing of H4 in the ‘after’ national survey.

Variable	Chi-square	Significance
Communication with foreigners skills through group work	6.64	0.36
Language skills through group work	11.02	0.09

significant, mean rank information indicated that differences between attitudes to improving 'language skills' through the use of group work, when controlling for nationality were held most highly by the Chinese. Qualitative responses indicated that although students maintained concerns regarding their 'language skills' they felt more able to communicate effectively with foreigners following the opportunities provided by group working.

6. Summary and conclusions

One objective of UK postgraduate logistics programmes is to develop participants' strengths in communication and behavioural skills including those that will be appropriate and effective in international business settings. Where programme assessment regimes include group work and student-led seminars, underachievement in developing these skills will result in reduced academic success, and probably subsequent performance in industrial teams reliant on language ability, communication style and teamwork. In educational institutions which simulate such settings, international students may experience problems in adapting to learning and social environments and Western European teaching and learning styles. Year on year, as universities host changing nationality groups with changing needs and learning styles, the learning strategies they deploy to develop intercultural competence skills must adapt.

This study has examined the role of the control variable 'socio-cultural factors' (see figure 1) in influencing the relationship between entry level English language skills and academic success. Although the importance of accommodation, finance and social concerns to different nationality groups wavered year to year, Chinese students consistently expressed language concerns. These surfaced during group tasks. In qualitative responses, several students expressed a desire for additional opportunities for social interaction, perhaps with greater emphasis on group work activities and field trips. Although some language concerns persisted, even at the teaching year-end, all nationality groups considered that group work teaching methods were 'very important' in developing skills to enhance the ability to communicate with foreigners. Group work was perceived to offer 'very important' opportunities to improve both language skills and communication with foreigners.

The results confirm that prominent socio-cultural concerns in an international group featuring a high proportion of Chinese logisticians consistently related to language. Language concerns were statistically significant for Chinese students in all but one survey year, and did not reduce despite increased numbers of co-nationals. Social concerns were not significant for this group, even when it was proportionately smaller. In contrast to earlier findings (Dinwoodie 2000, 2001), by 2004, the general consensus was that no single element of the teaching programme was considered 'important' in 'understanding the host culture'. Findings echo Klineberg and Hull's (1979) assertion that insufficient social interaction may detrimentally affect a student's international study experience and subsequently increase the risk of stress during the process of acculturation. Chinese students tended to spend more time, extra curricula, with conationals in both their accommodation and social groups, often speaking in Chinese. While all groups considered group work and lectures as important in improving their language and communication skills, some negative responses were recorded in relation to poorly managed group tasks. Textual responses showed that for some students, additional opportunities for social mixing would have been perceived as beneficial. Additional residential field visits were suggested as one such opportunity. 'Group work' was considered important by all nationality groups in improving their intercultural communication skills. However, qualitative work revealed statements by some Western European students of fears that if they performed poorly in tasks involving multinational groups this may impact negatively on their

individual grades, almost reminiscent of ‘cultural imperialism’, whereby individuals in a host group may deny their need to build intercultural skills (Cathcart *et al.* 2006). These fears signal that to be effective, group work demands careful planning and supervision with proactive canvassing to overcome potential reluctance to co-operate in group activities. Offering a greater and informed choice of group members and topics may assist.

Findings reported here relate uniquely to self-confessed ‘logisticians’. Due to ethical problems posed by working with low group frequencies observed in national subgroups, a large survey population would be required to explore any relationship between the academic results of one subgroup and their social interaction with the host culture. To achieve large samples simultaneously would require aggregation across a much broader subject grouping such as business studies, or engineering. However, unless there is significant evidence to imply homogeneity between disciplines within such groups, the perceived reluctance of even ‘transport’ or ‘supply chain’ professionals to participate in this study does not bode well for such an approach. In this environment, although limited evidence has been gleaned to guide investment in university support facilities, an integrated approach with information sharing between departments and institutions is strongly advised when carrying out intercultural research. An alternative approach to future research might focus on exploring the experiences of particular national groups, for example Chinese students, perhaps highlighting socio-cultural variables in a cross-section of courses and stages within an entire department or institution. In groups where any variables even loosely associated with ‘language’ may induce negative responses (Klineberg and Hull 1979), any expansion of the survey tool will require clearer delineation between the variables ‘language concerns’ and ‘communication with foreigners’ to counter such concerns.

References

- Bellingham, L., The relationship of language proficiency to academic success for international students. *New Zeal. J. Edu. Stud.*, 1993, **3**(4), 17–85.
- Bellingham, L., The relationship of language proficiency to academic success for international students. *New Zeal. J. Edu. Stud.*, 1995, **30**, 229–232.
- Brett, J., Behfar, K. and Kern, M., Managing multicultural teams. *Harvard Bus. Rev.*, 2006, **84**(11), 84–91.
- Cathcart, A., Dixon-Dawson, J. and Hall, R., Reluctant hosts and disappointed guests? Examining expectations and enhancing experiences of cross cultural group work on postgraduate business programmes. *Int. J. Manage. Edu.*, 2006, **5**(1), 13–22.
- Chamberlain, B. and Hope, B., Integrating international students into computing classes: Issues and strategies. In *Proceedings of the 16th annual conference of the national advisory committee on computing qualifications, Dunedin*, edited by Mann, S. and Williamson, A. pp. 21–30, 2003 (Wickliffe Press: Auckland).
- Dinwoodie, J., *Management Careers and Education in Shipping and Logistics* 2000 (Ashgate: Aldershot).
- Dinwoodie, J., Motivational profiling of logistics Masters students in Great Britain. *Int. J. Phys. Distrib. Logistics Manage.*, 2001, **31**(3), 187–202.
- De Vita, G., Inclusive approaches to effective communication and active participation in the multicultural classroom: an international business management context. *Act. Learn. Higher Edu.*, 2000, **1**, 168–180.
- Feast, V., The impact of IELTS scores on performance at university. *Int. Edu. J.*, 2002, **3**(4), 70–85.
- Hill, K., Storch, N. and Lynch, B., A comparison of IELTS and TOEFL as predictors of academic success. *Engl. Lang. Test. Syst. Res. Rep.*, 1999, **2**(4), 52–63.
- Horck, J., An analysis of decision-making processes in multicultural maritime scenarios. *Marit. Policy Manage.*, 2004, **31**, 15–29.
- Huang, Y., Rayner, C. and Zhuang, L., Does intercultural competence matter in intercultural business relationship development? *Int. J. Logistics: Res. Appl.*, 2003, **6**(4), 277–288.
- IELTS. *International English Language Testing System Handbook*, Queensland: University of Cambridge Local Examinations Syndicate, 2001 (The British Council, IDP Education Australia & IELTS Australia).
- Klineberg, O. and Hull, W.F., *At a Foreign University: An International Study of Adaption and Coping*, 1979 (Praeger: New York).
- Martinez, A., Huang, K., Johnson, S. and Edwards, S., Ethnic and international students. In: *College Psychotherapy*, edited by Grayson, P. and Cauley, K., pp. 298–315, 1989 (Guilford: New York).
- Murphy-Shigematsu, S., Understanding and counselling students with acculturative stress. *J. Int. Student Advisors Edu.*, 2001, **4**, 1–16.

- Pyne, R. and Koester, T., Methods and means for analysis of crew communication in the maritime domain. *Arch. Trans.*, 2005, **17**(3–4), 193–208.
- Pyne, R., Dinwoodie, J. and Roe, M., Enhancing intercultural competence in the classroom. *International Maritime Lecturers Association Conference*, 2006a (Ecole de la Marine Marchande: Marseille).
- Pyne, R., Dinwoodie, J. and Roe, M., Enhancing intercultural competence in postgraduate logisticians. In *Sustainable Logistics in an Intermodal Setting, Proceedings of the 11th Annual Logistics Research Network Conference, Newcastle*, edited by Bourlakis, M., Cullinane, K., Mulley, C. and Nelson, J., pp. 341–346, 2006b (Chartered Institute of Logistics and Transport: London).
- Robinson, S., Reflecting on the ‘International Group Working Experience’: a study of two MBA programmes. *Int. J. Manage. Edu.*, 2006, **5**(2), 3–14.
- Sarana, M., Potter, A. and Naim, M., The requirements of UK industry for logistics education. In *International Logistics and Supply Chain Management: Proceedings of the 10th Annual Logistics Research Network Conference, Plymouth*, edited by Dinwoodie, J., Challacombe, J.A.C., Madejski, E. and Song, D., pp. 409–414, 2005 (Chartered Institute of Logistics and Transport: London).
- Turner, Y., Students from mainland China and critical thinking in postgraduate business and management degrees: teasing out tensions of culture, style and substance. *Int. J. Manage. Edu.*, 2006, **5**(1), 3–11.

**COOPERATION AND COMPETITION IN THE GLOBAL MARKET:
MANNING ISSUES OF CHINESE AND GREEK FLEETS**

Maria PROGOULAKI, PhD Candidate, Scholar of 'PENED 2003' Programme and 'Propondis' Foundation, University of the Aegean, Business School, Department of Shipping, Trade and Transport, 2nd Korai Street, Chios, GR82100, telephone: +30.22710.35287, facsimile: +30.2271.35299, e-mail: m.progoulaki@aegean.gr

Robyn PYNE, PhD Candidate, Scholar of the UK's Economic and Social Research Council (ESRC), International Logistics and Supply Chain Management Research Unit, University of Plymouth Business School, Drake Circus, Plymouth, Devon, PL4 8AA, UK, telephone: +441752232867, facsimile: +44.1752.232249, e-mail: robyn.pyne@plymouth.ac.uk

Junzhong BAO, PhD Candidate, International Conventions Research Centre, Dalian Maritime University, 1 Linghai Road, Dalian, The People's Republic of China, 116026, telephone/ facsimile: +86 41184726138, e-mail: baojunzhong@yahoo.com

Ioannis THEOTOKAS, Assistant Professor, University of the Aegean, Business School, Department of Shipping, Trade and Transport, 2nd Korai Street, Chios, GR82100, telephone: +30.22710.35265, facsimile: +30.2271.35299, e-mail: gtheotokas@aegean.gr

Abstract:

China has the largest maritime manpower pool (BIMCO/ISF 2005) and Greece manages the largest fleet of the world (Lloyds Register GSSC 2007). Data discussed reveal a considerable reduction in the supply of Greek seafarers and a great substitution with foreign seamen is observed. The paper reaches the conclusion that there is great potential for cooperation to take place between the two maritime countries, with the greatest potential for success involving *new generation* Chinese seafarers serving onboard Greek owned vessels. The issue of resource complementarity of the two countries and a number of Greek/Chinese manning mix scenarios are discussed in light of contemporary theories and empirical findings. In light of the changing economy and increased freedom for employment mobility outside of China, conclusions are reached regarding the future sustainability of China as a manpower source based on the limitations exposed through the Sino-Greek case study discussed in this paper.

Keywords: Chinese and Greek seafarers, cooperation, and employment mobility **5**

COOPERATION AND COMPETITION IN THE GLOBAL MARKET: MANNING ISSUES OF CHINESE AND GREEK FLEETS

1. INTRODUCTION

Today, China represents a dynamic entrant in the shipping sector as one of the top labour supplying countries in the world (BIMCO /ISF 2000; BIMCO/ISF 2005). At the same time, its national-managed fleet is expanding consistently and its economic boom is causing rapid societal change that is influencing the choice of individuals to go to sea (Zhao and Amante 2005). Its success in the maritime employment field is reflected by its leading training institution, which is currently experiencing an annual intake in excess of one thousand cadets (C METRG 2007). In terms of trade statistics, China's status as a ship-owning nation was ranked third in the world. On the other hand, Greece is experiencing great fleet enlargement; Greek-owned shipping companies manage the largest fleet of the world GSCC (2007). However, a considerable reduction in the supply of Greek seafarers is observed. A great substitution of Greeks with foreign seamen occurs with seafarers from the Philippines, other Asian and East-European countries being widely employed on board Greek-owned vessels. At this point it is interesting to examine the cooperation and competition patterns in the seagoing labour market of these two countries – Greece being the dominant vessel owning nation and China the dominant manpower supplier.

This paper uses as a stimulus the results from recent surveys on globalisation of the maritime labour market, multiculturalism and manning in Chinese and Greek controlled shipping in conjunction with the authors' empirical research findings. Thoughts and ideas on manning issues and potential solutions are presented, along with an overview of the related manpower statistics since the year 2000. Firstly in Section 1, a vital overview is provided of the background of the shipping industry in relation to China and Greece, in order to present the current cooperation and competition positions of the two countries. The issue of the globalised maritime labour market and the world supply and demand of maritime manpower are discussed in Section 2. Section 3 deals with the employment conditions and manning issues concerning Chinese and Greek seafarers, the motives and hindrances for the mobility of the two examined nations in the world maritime labour market, and the role of manning agents. The future of the two nations in seafaring is discussed in Section 4, in an analysis of possible Sino-Greek manning scenarios. Finally, conclusions and limitations of the research are offered in section 5.

1.1. Greece and China's positions in manning and maritime trade

In the beginning of the 21st century, the progress of several maritime countries seemed to exceed all expectations. In particular, this has been the case for the Greek ship-owning and operating industry as this nation has long been at the top of the world fleet. In the first months of 2007, the Greek-owned fleet broke a record held since the early 1970s in both numbers and tonnage, continuing to be at the top of the table of ownership of the world fleet. The recent data by Lloyd's Register (GSCC 2007) for vessels of over 1,000 grt, show that the Greek-controlled fleet stands at 3,699 vessels, with their tonnage amounting to 218.2 million dead weight (dwt) or 129.7 million gross tonnes (gt). Compared to the data for the year 2006, there was a rise within one year of 302 vessels (8.9%), or 28.1 million dwt (14.8%), or 16.1 million gt (14.2%); in February 2007 Greek-controlled fleet

reached a peak. The Greek-controlled fleet now stands at approximately 8.5% in terms of vessels, 16.5% in terms of world fleet dwt and/or 14.0% of gross tonnage.

If nationally reported statistics alone are to be considered, as of the beginning of 2006 China's national fleet engaged in domestic voyages was operating a total of 205,400 vessels. Of this total figure, 9,400 vessels were operated in short sea trade and near coastal trade, whereas 196,000 vessels were employed in inland waterways. At this time, the top thirteen of China's largest shipping companies owned 846 vessels in the national fleet that were reported to be engaged in international voyages (The Ministry of Communications of the Peoples' Republic of China 2006). However, these national statistics do not report a total figure for merchant vessels over 1000 grt. Lloyds Register Fairplay's World Fleet Statistics report for the end of 2006 that China's national fleet was 3,184 vessels of 1,000 GT and above, and that China's register consisted of 3,695 vessels (Lloyds Register Fairplay 2006). China's registry is closed to outside parties and the 3,695 vessels represent those that are owned by Chinese interests alone.

Besides the rise of tonnage under Greek ownership, one can observe that the Greek flag remains the preference of Greek owners and its registry continues to rise as well. In February 2007 (GSCC 2007), the number of Greek-owned vessels operating under the Greek flag was 969 (with an increase of 6% since 2006 in terms of ships, 20% in terms of dwt and 17% in terms of grt. Greeks also use other flags, as this usage has turned to a structural characteristic of the world fleet, such as Panama, Malta, Liberia and Cyprus. Moreover, besides the dominance of the Greek-owned fleet, Greek orders for new building are also at high level. More specifically, in February 2007 Greek orders amounted to 612 vessels (that is 9.2% of the total world fleet new building); a historic record-year. As Pallis (2007) comments, new shipyards all around the world jockey for ship specification and specialisation in bulk-carriers, containerships and other vessels, with the slots going to well-informed Greek owners who undertake huge projects towards renewal. At the same time, the age of the Greek-owned fleet has decreased and today its median age is 11.1 years (based on the number of vessels) which is lower than the respective average age of the world fleet.

According to UNCTAD (2006) China's nationally flagged fleet stood at 1,763 vessels, its foreign registry 1,130, with a slightly lower total of 2,893 vessels with Chinese ownership, amounting to 69.8 Million dwt. Chinese authorities report that between 1997 and the end of 2005, China's total tonnage experienced a rise of 84.7% nwt and 127.8% TEU (MOC 2006). China takes advantage also of flagging out to some of the more significant flags including Panama, Liberia, Bahamas, Malta and Cyprus.

To service national economic growth and export rates, the Chinese fleet has increased its tonnage to reflect these trends and to fulfil its role in servicing trade with adequate tonnage. As a result of this growth in trade China, itself, has been described as the powerhouse behind the world's port development. In the globalised economy China saw the greatest growth in exports of 25.0% and 22.0% for 2005 and 2006 respectively (UNCTAD 2007). Such statistics warrant a growth in the national fleet of ships as a derived demand to carry commodities. Europe saw just 4.0% and 7.5% growth in exports for these two years. On the other hand, China saw a growth in imports of 11.5% and 16.5% for 2005 and 2006 respectively, while the related percentages for European Union's imports showed 3.5% and 6.5% for these two years (UNCTAD 2007). Greece sits within the 25 countries described in these statistics as the "EU" and despite not experiencing such a significant growth in imports or exports, it still dominates world vessel ownership and is actively ordering new builds, illustrating that it operates vessels

to service the trade of other nations over and above its own national demand for maritime transport. Greek shipping, from the early years of the 20th century to the present day, is characterised as ‘cross trader’ (carrier of other people’s merchandise, Stopford 1997:256).

As opposed to China, the developments in the Greek seafaring labour market are more likely to be sensitive to the developments in the Greek ship-owning and operating industry than by the nation’s economic growth itself. Whereas for China, its manpower levels are driven by a combination of demand for supplying manpower to its own national fleet and the demands for manpower from other nations experiencing high costs or suffering scarcity – including Greece. Several further factors that affect the contemporary employment practices in Greek and Chinese shipping will be discussed further in Section 3 of this paper. Before outlining these factors, it is appropriate to give consideration to the global labour statistics and the position of Greece in manning its fleet.

2. GLOBALISATION OF THE MARITIME LABOUR MARKET

2.1. World maritime manpower statistics 2000- 2005

The results of the BIMCO/ISF Manpower Report (see Table 1) for the years 2005 and 2000 confirm that the centre of gravity of the manpower industry is constantly moving away from the majority of the traditional maritime regions, such as Europe and North America. The worldwide supply of seafarers in 2005 is estimated to be 466,000 officers and 721,000 ratings. The OECD countries¹ remain an important source of officers, although Eastern Europe has become increasingly significant with a large increase in officer numbers. The Far East of Asia and the India sub-continent remain the largest source for ratings and are rapidly becoming a key source of officers. The current estimate of worldwide demand for seafarers is 476,000 officers and 586,000 ratings (see Table 2). Nowadays, countries in the Far East, the Indian sub-continent and Eastern Europe are the main source of this supply. One should note that seafarers from OECD countries constituted some 25,9% of the actual marine global workforce in 2005, compared to 31.5% in 1995. This overall decline in the proportion of OECD-originated seafarers suggests that the changes are evolutionary rather than revolutionary (OECD/Precious Associates Ltd, 2003).

Table 1 - Demand and supply differences by national group (Officers/ Ratings)

(in 000s)	Supply 2005		Demand 2005		Difference 2005 (Supply-Demand)	
Region	Officers	Ratings	Officers	Ratings	Officers	Ratings
OECD Countries	133	174 168 2	18 -35			-44
Eastern Europe	95	115	30	29 65 86		
Africa/Latin America	38	110	144 166 -106			-56
Far East	133	226 117 1	49 16			77
Indian subcontinent	68	96 18 23 5	0 73			
All national groups	466	721 476 5	86 -10			135

Source: BIMCO/ISF Manpower Update 2005.

¹ Greece and the Asian countries of Korea and Japan are members of the OECD, and are included in the statistics.

Table 2 - Trends in demand and supply 2000-2005

(in 000s)	Demand		Supply		Balance	
	2000	2005	2000	2005		
Officers	420	476	404	466	-16	-10
Ratings	599	586	823	721		
Total	1.019	1.062	1.227	1.187	208	125

Source: BIMCO/ISF Manpower Update, 2005.

One should note that some countries demand far more seafarers than they supply (e.g. the open registers). Likewise some countries supply more seafarers than required by their national fleets (e.g. India and the Philippines). This does not, of course, imply that companies in such countries employing their own nationals do not face recruitment difficulties, as they may compete with foreign companies for the same personnel. It is clear that certain countries, especially the Philippines and India, have made significant efforts to increase numbers available to the international market. On the other hand, demand has also increased due to the rising levels of global trading activity and related pressures to maintain both crew numbers and quality (Theotokas *et al.* 2006).

Table 3 shows the top ten supplying countries of seagoing labour. The latest statistics by BIMCO/ISF (2005) reveal that China comes first, with a relatively larger proportion of Ratings' supply, and Greece holds the 8th position, with a relatively larger proportion of Officers' supply, and a significant one for Ratings'. It is interesting to note that neither in 2000 nor 2002 was China the leading manpower supplier, but that within this short period of time it has risen to take the first place (BIMCO/ISF 2000; Lane *et al.* 2002).

Table 3 - Top ten labour supplying countries (2005)

TOP- 10 Countries		Active Supply		Year 2005
		Officers	Ratings	Total (seafarers)
1.	China	42,704	79,504	122,208
2.	the Philippines	46,359	74,040	120,399
3.	Turkey	22,091	60,328	82,419
4.	India	46,497	32,352	78,849
5.	Ukraine	28,908	36,119	65,027
6.	Russia	21,680	34,000	55,680
7.	Indonesia	7,750	34,000	41,750
8.	Greece	17,000	15,000	32,000
9.	Myanmar	6,000	23,000	29,000
10.	Egypt	3,970	17,999	21,969
Percentage of Top-10 in World Supply (%)		52,1%	56,4%	54,7%
WORLD SUPPLY		466,000	721,000	1,187,000

Source: BIMCO/ISF 2005 Manpower Update.

2.2. Ship type and nation

Table 4 shows a cross-tabulation of a selection of ship types, nationality of crew and the percentage of ratings, and junior and senior officers. Data for this table were taken from the Seafarers International Research Centre's (SIRC) report "Whose Manning the

International Merchant Fleet?”. It is the only report of its kind to be published in the last five years. At the time of compilation, the Philippines still dominated crew supply for most categories of vessel listed (see Table 4). Exceptions to this were in the supply of Senior Officers to container vessels, in which sector Germany was the greatest supplier (18.5%) followed by China (15.1%), compared with 9% from the Philippines.

Table 4 - Global fleet manning statistics by vessel type - top three manpower supply countries shown

Vessel Class	Ratings %		Junior Officers %		Senior Officers %	
Dry Bulk	Philippines	40.2	Philippines	38.7	Philippines	24.6
	China	13.0	China	14.7	China	14.3
	India	5.0	Ukraine	6.7	Greece	14.0
Container	Philippines	35.5	Philippines	30.8	Germany	18.5
	China	10.6	China	12.7	China	15.1
	Taiwan	3.9	Taiwan	4.7	Philippines	9.0
Chemical/Gas Tanker	Philippines	42.3	Philippines	37.6	Philippines	19.6
	S. Korea	8.2	S. Korea	9.0	S. Korea	13.0
	China	6.8	Russia	5.2	Netherlands	5.3
General Cargo	Philippines	33.2	Philippines	31.1	Philippines	16.0
	Poland	10.8	Russia	12.7	Russia	11.3
	Russia	9.5	Ukraine	9.0	Ukraine	8.9
Oil Tanker	Philippines	38.1	Philippines	31.7	India	13.2
	India	10.8	India	13.0	Philippines	12.9
	Greece	6.4	Greece	7.0	Greece	12.5

Source: Amalgamated from Lane et al. (2002)

Data regarding the vessels on order compiled by Lloyds Register Fairplay (2007) shows that both Greece and China appear to be expanding their fleets rapidly. Greece comes in first place in terms of total dwt (62,751,296) and second in terms of number of vessels (804). Germany is first in this category of classification, with 1,171 ships with 45,215,760 dwt. China holds the 4th position with 496 vessels and 36,800,616 dwt.

The above data, compared with those presented in table 4 show that China, as the leader in the supply of seagoing manpower, appears to have potential for even more dynamic development of its fleet, as well as for competitive participation in the world labour market for seafarers. China appears to have a surplus in seagoing manpower (largest in terms of Ratings) that may either be consumed by the need to man its increasing domestic vessel orders, or by exporting this manpower to the world labour market. Greece on the other hand shows that especially in dry bulk and oil tankers it has a sufficient number of nationals, but taking into consideration the size of the Greek-controlled fleet, it appears to have a lack of maritime manpower. This creates a field for co-operation and skills transfer between China- the leader in manpower supply- and Greece -the leader in fleet management and supply.

If the market were to operate within the paradigm of perfect competition the availability of seafarers versus the demand may alone determine the observed employment patterns from Table 4. However, the industry is subject to an imbalance in the wage rates and employment mobility of seafarers – with East Asian and Eastern Europeans demanding

lower wages than their western counterparts and strict regulations of a number of flag states not recognising the certificates of the Chinese. There is also, despite the IMO's Standards of Training and Certification of Watchkeeping (STCW) 1995 Convention, some disparity between the experience and competencies of certain nationality seafarer groups, which remains a concern and a major consideration when factor substitution of labour is being considered by ship operators. Whether these limitations in competencies are merely perceived or grounded by research, the industry still speculates as to the skill levels of each nationality of seafarer, highlighting English language ability and a lack of vocational training as two major shortcomings for the Chinese contingent (Sletner 2000; Zhao 2000a; Zhao 2000b; Zhao 2002; Zhao and Amante 2005; Wu 2004). Similar concerns are expressed for other East Asian manpower supplying nations' training systems too, as for example that of Vietnam (Prakash 2007).

2.3. Current manning trends in the Greek- owned fleet

Greek-owned ships, especially those operating in the bulk shipping markets, have been manned with multicultural and multilingual crews during the last decades. In 1990, non-Greek seafarers constituted 27% of the total number of seafarers working on board Greek flagged ships and of those registered in the Seafarers Pension Fund, while in the year 2006 their percentage increased to 44,7% (NSSG 2007)². In general, the bigger flexibility of foreigners against the Greeks is indicative of the relative preference of foreign seamen, as a more flexible and cheap factor of production in the shipping industry (Tsamourgelis 2007). This feature accrues from the comparison with the Greek seamen flexibility, and can be explained by the fact that the employment of foreigners appears to be adapted more easily in the changes of demand. In any case, final consequence of this tendency that made its appearance from the beginning of 1980, constitutes also to the reduction of employment share of Greek seamen in the Greek-flagged and Greek-owned fleet, from 65% in 1996 to 55.3% in 2006 (NSSG 2007).

While Greece holds the eighth position in the list of the world supplying countries (BIMCO/ ISF 2005), it is interesting to compare and take a look at the top ten nationalities employed on Greek-flagged and Greek-owned vessels (see table 5). The National Statistical Service of Greece offers data that show the precise number and nationality of foreign seamen employed on Greek-flagged and Greek-owned merchant ships. The statistics show that the Filipinos cover a great proportion of the crew on the Greek-owned and Greek-flagged fleet, while their percentage has risen during the period 2000-2004. It is worth pointing out that one of the reasons that the Philippines remain one of the highest providers of labour to international fleets is that its population has the ability to communicate effectively in English (Leggate and McConville 2002). Furthermore, the establishment of the Philippines Seafarers' Promotion Council (PSPC) became the means for the Philippines to promote, with the aid of marketing tools, a double objective: seafaring as a career to its nationals on the one hand, and on the other the Filipino seafarer to recruiters. China is greatly criticised due to perceptions of its seafarers' limited ability to converse in English. Maritime English practices observed at Dalian Maritime University, as a case study, reveal a lot about the maritime Education

² One should seriously consider the fact that the National statistics are incomplete as they take into account only the Greek flagged and the registered to the Seafarers Pension Fund ships, which in total amount less than the 50% of the total number of Greek-owned ships. Given that there is no nationality restriction applied in the foreign flagged ships, one should take into account that the total number of foreigners employed to Greek-owned ships is bigger.

and Training system in China. As a participant observing member of teaching staff, the process of change in light of the IMO Model Course structure is being documented as the basis for one of the PhD studies behind this paper. Through interviews with Maritime English teaching staff and those with responsibility for managing programmes, strong expressions of concern relate to the Chinese MET system being too restrictive to the detriment of the graduates. The Chinese education system prepares students for final examinations, rather than demonstration of competency. Competency has to be demonstrated to graduate from a class, but it is not given room to be emphasized through vocational application until after the four years of MET at university level have been completed. Apart from time onboard training vessels, Navigation students do not get the opportunity to sail as cadets until they have graduated from the university system.

Table 5 - Top ten nationalities employed on Greek- flagged and owned ships

TOP 10- Nationalities of seamen (<i>year</i> <i>2004</i>)	Nationalities on GR-flagged ships	Nationalities on GR-owned ships	Sum year 2004*	% in Total
1. Greek	16,672	1,225	17,897	54,6 %
2. Filipino	5,377	1,155	6532	19,9 %
3. Indian	109	671	780	2,4%
4. Ukrainian	496	138	634	1,9%
5. Romanian	479	146	625	1,9%
6. Honduran	186	411	597	1,8%
7. Indonesian	106	388	494	1,5%
8. Bulgarian	153	156	309	0,9%
9. Salvadorian	142	13	155	0,5%
10. Pakistani	112	1	113	0,3%
Total no of seafarers employed	29,302	3,449	32,751	100,0%

Notes: The General secretariat of national shipping statistical service of Greece offers data every two years. Statistics of the year 2004 were published in 2006. Data regarding the nationalities on Greek- owned ships include the ships (>100GT) registered in the Seafarers Pension Fund (NAT).

Source: General secretariat of national shipping statistical service of Greece (2004).

The above presented data reveal that the employment of foreign seamen shows a significant incremental tendency. It seems that foreign seamen are a more flexible means of production, since their employment levels adjust rapidly to the changes in the international demand in the maritime sector (Tsamourgelis 2007). Nevertheless, the level of substitution of Greek seafarers by foreigners depends on structural rigidities of the seafaring labour market in Greece and not only on their wage level difference, but also on the differences in their productivity- effort per cost of their employment (Theotokas *et al.* 2006). China does not feature significantly in Greece's crewing strategies at this point in time. Personal correspondence with manning agents and representatives from China's larger shipping firms during time spent at Dalian Maritime University, indicate that there may be some barriers to this co-operation. Theotokas and Progoulaki's work (2005)

identified the low perception of Greek ship management companies' of the Chinese in terms of "cooperativeness". Nations that have experienced success with Chinese crews, including the Norwegian Shipowners' Association (NSA) and Denmark's AP Moller-Maersk, have created channels through which to input into the training of and selection of Chinese seafarers. The NSA have input finances and staff into Shanghai Maritime University, with specific focus on Maritime English and AP Moller-Maersk have selected two classes of students to train at their centre in Singapore from each intake to Dalian Maritime University since 2004.

3. EMPLOYMENT CONDITIONS AND MANNING ISSUES

3.1 Employment and manning issues in Greek-owned shipping

The analysis in Section 2, referring to the employment of foreigners on Greek-owned vessels, shows a high level of substitution of Greeks from foreign seafarers, and at the same time, reveals the declining number of Greek seafarers. The seafarer's profession has become globally less attractive to new generations (OECD 2003; BIMCO/ISF 2005), and this point creates a challenge for the Greek maritime industry, who traditionally focused at the local labour market for seafarers to be employed not only on the vessels, but also, to run the companies' offices ashore. The most important factors that are negatively affected, not only include the employment of Greek seafarers, but also the promotion of the profession in Greece. Much to blame is the legislative environment of the Greek maritime labour market, and more particularly, the social security system and the minimum scheme law (known as the 'organic composition', *see below*).

As it has been already mentioned in Section 2, globalisation in the maritime labour market led to the creation of a two-level market. Firstly, there are the seafarers that are employed in the national fleet, and secondly, those that are employed on ships under foreign flags. This is the case of the Chinese maritime labour market, and as suggested by Wu and Winchester (2005), the increased mobility appears both between national or foreign flag employment of a seafarer and between the first and second level. However, this is not the case of the Greek seafaring labour market, where there are significant differences. This market in Greece is strongly affected by the social security system, which intervenes and actually distorts the competitive international maritime labour market. Greek seafarers are actually compelled to work either on Greek-flagged vessels, or on Greek-owned vessels that fly foreign flags and are contracted with NAT (National Security and Pension System) constitutions. Otherwise, Greek seamen will be able to purchase their insurance rights from the third social security institution back to their main social security coverage institution NAT (from where Greek seamen receive their pension), by covering both their own financial contributions and the contributions of their employer. In this way, Greek seafarers have no motive to search for employment outside the Greek-controlled fleet. As Tsamourgelis (2007) mentions, "the social security policy applied in the case of the Greek seafarers leads to extensive distortion and creates monopsony conditions in the relevant labour market. It seems that the Greek maritime industry is multinational only in terms of its ships and ownership schemes, but not in terms of its seafarers' labour force which is doomed to remain and operate within national borders as determined by ships under the Greek or non-Greek flag but associated with NAT." In this scheme, the law on 'organic' composition of crews in Greek flagged vessels represents an important parameter that influences the seafarers' employment levels in the national market. According to this law, the number of Greek officers, ratings

and trainees that have to be employed per level of the crew is defined, according to the size and type of the vessel. Theotokas et al. (2006) however mentions that the actual number of employed Greeks is less than the theoretical number defined by the law. Such a restriction also distorts the competitive character of the maritime labour market and the employment potentials of Greek seafarers.

In order to cover the need for manpower, the shipping company searches all the alternative options. The alternatives that the company has, regarding the seagoing personnel includes all nationalities. The crew manager (company or manning agent) can choose between a single national crew, and a multinational one. For instance, in the case of the Greek-owned shipping, the manning alternatives that exist are: (a) only Greeks, (b) mixed crew of Greeks and foreigners of one nationality, (c) mixed crew of Greeks and foreigners of many nationalities, (d) only one foreign nationality, and (e) mixed crew of many foreign nationalities, except Greeks.

A research conducted in a sample of Greek shipping companies and among Greek seamen (Theotokas and Progoulaki 2004; 2007) examined the nationalities that are most commonly employed by Greek-owned tramp shipping companies and Greek seamen. A comparison was developed between the countries from which the companies recruit the majority of seafarers, and the ones they believe cooperate better with Greeks. By the same token, the commonest nationalities of seafarers that Greeks have worked with are compared to the ones Greeks consider as most cooperative towards them, as presented in table 6.

□

Table 6 - Most commonly employed nationalities in Greek-owned fleets and nationalities perceived as most cooperative to Greeks (results from a sample of Greek-owned tramp shipping companies and Greek seamen)

Nationality	Most commonly employed		Most cooperative	
	Companies	Seafarers	Companies	Seafarers
Filipino	26.5%	85%	24.2%	57%
Polish	26.5%	33%	9.1%	5%
Russian	11.8%	25%	9.1%	0%
Ukrainian	26.5%	27%	21.2%	0%
Bulgarian	11.8%	n/a	9.1%	n/a
Indian	4.9%	43%	6.1% 15%	
Chinese	8.8%	n/a	3%	n/a
Pakistani	n/a	46%	n/a	17%

Note: Multiple response rates.

Source: Theotokas and Progoulaki 2004.

As demonstrated in Table 6, the most commonly employed nationals according to the shipping companies (26.5%) and the ones considered to cooperate better with Greeks (24.2%) are one and the same group, the Filipinos. The Ukrainians are placed in the second position; they are the group most commonly employed by shipping companies (26.5%) and perceived as cooperative by 21.2% of them. Poles and Bulgarians follow, who are both thought the most commonly employed by 11.8% of the shipping companies, and perceived as willing to cooperate with the Greeks, by 9.1%. The Chinese are next: they are designated as most commonly employed by 8.8% of the shipping companies and perceived as willing to cooperate by 3%. Finally, Indians are rarely recruited (a mere 4.9% of the shipping companies declares they do so), but are perceived as more willing to

cooperate than the Chinese, by 6.1%. Commenting on Table 6, the seafarers of the sample have a history of cooperation with Filipinos (85%), Pakistanis (46%), Indians (43%), Poles (33%), Ukrainians (27%) and Russians (25%). However their opinions differ from those of the representatives of the shipping companies on another subject as well, namely, as to whom they consider more co-operative. Despite the fact that their answers (supported by a significant rate of 57%) place Filipinos in the first place as did those of the shipping companies, the seafarers then point to the Pakistanis (according to 17%), the Indians (15%) and the Poles (5%) as more willing to cooperate with them.

The above analysis, stemming from the results of previous surveys (Theotokas and Progoulaki 2004; 2007) showed that the Asian culture seems to be the most compatible to the Greek one. One should take into consideration the fact that there is a huge proportion of Asians, and especially Filipinos, in recent history working with Greeks; this justifies the above results. Several reports, such as BIMCO/ISF Manpower Update (2000; 2005) and the OECD Project (2003) corroborate these data, as already mentioned in Section 2 of this paper. According to these, Asia offers plenty of seafarers, who are mostly Ratings. Those thousands of seafarers, who work around the world, may hold seafaring certificates, but the level of their training is perceived as low. That is the reason why Greeks have a complex attitude towards Asians, and especially Filipinos. They mentioned (Theotokas and Progoulaki 2004; 2005) that they can work better with Filipinos, because of their culture, but they encountered problems, because of their lack of or limited training and skills.

Finally, outsourcing of human resource management services has been used for several human resource management functions, such as recruitment and employment of personnel. The managers/ operators have three alternatives available in order to hire seagoing personnel (Papademetriou *et al.* 2005). These three alternatives that may be used in combination, include (a) managing the whole process of recruitment/hire through the in-house operated Crew Department, (b) establishing a Subsidiary Manning Agency, (c) employing an Independent Manning Agency. The In-house Crew Department is a vital part of the ship operating company (either owner or manager), which among its rest duties, seeks for seagoing personnel. The Subsidiary Manning Agency is an agent or affiliated company to the ship manager/ owner, either in the inland or in a foreign country, which often is positioned in East Europe or/ and Far East. Finally, the Independent Manning Agency can also be a single agent or a company who often is positioned in the major seafaring labour supply countries. It could also be an independent ship management company that offers a wide range of services. In Greek-owned shipping, outsourcing (of various forms) in manning is widely used by shipping companies that manage large fleets, since they have the economic ability to operate personnel departments and to employ manning agencies on a worldwide basis, in order to satisfy their large manpower requirements by using a variety of nationalities. Furthermore, they have the ability to create, operate and maintain a network with manning agents, trade unions and marine academies (Papademetriou *et al.* 2005).

3.2 Employment and manning issues in Chinese shipping

Due to the increased supply of manpower from the Asian regions, the 2005 BIMCO/ISF manpower update estimated the shortfall of seafaring officers to be less serious than their original estimates in 2000. The current estimated shortfall in officers stands at 2% according to BIMCO/ISF. China's own researchers approximate 400,000 seafarers with 135,000 of this group being officers (2005). Chinese seafarer education is divided into

various types of training and education. Maritime Universities offer bachelor degrees, some colleges offer diploma programmes and in 2007 a number of these were granted the capacity to issue bachelor degrees also. In addition to these further and higher education institutions, there exist secondary technical schools. In China in 2005, enrolment stood at 11230 for bachelor degree and college diploma level study and 1460 for secondary technical schools (China MSA 2005). For the sake of this paper further statistics relating to these secondary technical schools has been disregarded as their graduates are not entering the employment market as officers, but as ratings. In 2006 5565 students graduated and gained bachelor degrees or diplomas in preparation for entering the market as officers (China Research Group for MET 2007). For the sake of interest in later discussion in this paper, this figure for 2006 can be divided into 1891 graduates from four year university bachelor degree level and the remaining 3674 from two or three year college diploma programmes. For bachelor degree study alone in 2006, enrolment was at an all time high of 2553, an increase of 2.5% from the previous year's intake. However, it should be noted here that until 2006 only seven institutions nationally offered the degree programmes, but in 2007 this was increased to include a further seven institutions formally only offering college diploma level education. The mean annual increase in intake into higher education institutions for the years 2002 to 2005 was 7.7%. 2006 may have seen a levelling out of this figure before this education policy reform affecting 2007's intake. In 2007 these fourteen existing and newly promoted institutions enrolled a total of 4070 students to study Navigation and Marine Engineering, which is a 59.4% increase on the previous year's intake. To put this into perspective, due to an increase in the promotion of maritime degree programmes and the reclassification of some colleges to offer degree programmes, between the years 2002 to 2007 the increase in student intake has been a percentage change of 105.1%.

China's maritime labour pool consists of two distinct groups of seafarers. Those entering the labour market after the late 1990s can be considered quite separately from those already in maritime employment during this period (Wu 2004; Zhao and Amante 2005). Wu describes two main employment groups of Chinese seafarers: those working for "State Owned Enterprises (SOE)" and those employed by companies that are "Non-state Owned (NSO)" (Wu, 2004:69). At the time of writing, Wu characterised these two groups by their approaches to employment. SOE seafarers populated the national fleet of vessels with manpower. NSO seafarers were free to work in either the state-owned or the international sectors, but there was a trend for this group to "target international recruitment" (Wu 2004:69). Differentiating factors between specific groups of Chinese Seafarers were identified also by Zhao *et al.* (2005) with some commonality in findings with Wu (2004) in relation to i) employment conditions and ii) social welfare concerns. Zhao *et al.* reach their conclusions concerning Chinese seafarer characterisation factors based on data from the Seafarers International Research Centre's (SIRC) Global Labour Market Country Studies from 2002 and 2003 and additional in-depth studies carried out in China featuring employed seafarers and enrolled students from a selection of its Maritime Education and Training (MET) institutions. According to Zhao *et al.*'s description of China's maritime labour market, the 1990s saw changes from the norm of seafarers being attached to a shipping company, reliant on them for employment and social welfare concerns, to an era when their attachment is to crewing agencies (Zhao and Amante 2005). In the modern arrangements there is no longer total dependency of Chinese seafarers on their employers for anything outside of affairs relevant to their employment (Kuruvilla *et al.* 2002). This is characteristic of the group Zhao and Amante's study concluded to label as "new seafarers" (Zhao and Amante 2005:81) and for those Wu identified as NSO Chinese seafarers. Herein, these two groups are referred to as *new generation* and *old*

generation Chinese seafarers due to an amalgamation of the concepts described by Wu (2004) and Zhao and Amante (2005).

In his study, Wu (2004) explored a series of attitudinal variables expressed by Chinese seafarers in relation to their employment in the global fleet. Differences in attitudes were observed between age groups as to their preparedness to work for foreign firms. Those under 40 years of age expressed a preference to work onboard foreign vessels. Wu cites English language concerns of the seafarers and their employers as a major influencing factor in their employment mobility. This was a concern of significantly greater expression for the older seafarers in his sample. Wu recognises that education reform in China has led to the new generation seafarers being more likely to have benefited during their education from government policies relating to English language learning in the curricula. Neither of these authors indicate that old generation seafarers are not of interest to foreign firms looking to recruit from China, but instead highlight specific challenges in relation to actual and perceived language ability among this group. Language concerns – either perceived or actual – go hand in hand with willingness to work for foreign firms. Wu reported that many older generation seafarers' negative perception of their own language ability was a barrier to their employment mobility. Pyne and Roe (2004) and Zhao and Amante (2005) express that the industry itself sees English language ability as a weakness of Chinese crews in international manning. The industry itself periodically reports comments relating to concerns for Chinese crews' cultural and English language compatibility in the global fleet (Lloyds Register Fairplay, various 2001-2007).

As part of an ongoing ethnographic study at Dalian Maritime University, a participant observation study in-situ in the classrooms of Chinese Navigation students, led to focus groups being held with third year students outside of lesson time. During discussions their attitudes to working at sea in light of the work of Zhao and Amante (2005) and Wu (2004) and emergent categories from coding of observation material were discussed. At the time of writing this paper this project had reached the stage of having been developed into semi-structured interviews that have been piloted with a sample of eighteen students selected with a minimum of one from each of the fifteen classes of the two hundred and forty six final stage navigation students. Recruitment and retention is an issue on a global scale and affects China too. Economic growth and the rising middle class have led to recruitment moving inland from the coastal provinces. Zhao and Amante (2005) highlight that it is uncommon for recruitment of new students to be from the more prosperous coastal provinces in China and that they tend to come from inland provinces in rural areas. The results of the pilot interviews of the 2008 graduating class from Dalian Maritime University indicated a similar pattern (see table 7). Eighteen respondents were from rural provinces and the exceptions were classed as rural citizens and from the same province as Dalian itself, Liaoning. Students in focus groups in 2006 most commonly expressed that they saw seafaring as a way of making money to invest in the future or to allow them to start their own businesses. The general figure of ten years was given for their anticipated length of sea service in order to reach the rank of captain. When the pilot study took place in 2007 this expression of time had reduced to eight years, with the same reasoning of reaching captaincy, reflecting that the industry is promoting to this rank more quickly due to scarcity. Those expressing fewer years were not concerned with reaching this rank. Expression of preference for vessel seems to be influenced largely by the statements they have heard from "older brothers" *Laoxiang* – former graduates from the same province – with whom they stay in contact and gain insight into their future careers. The pilot study revealed that the majority of responses regarding vessel type expressed a preference for Container vessels. Further exploration of the whole sample population and the reasoning

for these choices is to take place during the semi-structured interviews with the research sample.

Table 7. Pilot survey respondents

Variable	Responses		Variable	Responses	
	Count	%		Count	%
Average age	23	n.a.	Bulk carrier	2	14.3
Rural	14	77	General cargo	2	14.3
Urban	4	22	Container	7	3.5
Father prof.	4	23.5	Passenger	3	17.6
Father manual	7	41.2	Average sea service	8	n.a.
Father unemployed	6	35.3	Captain	10	71.4
			Chief officer	4	28.7

4. THE FUTURE OF THE TWO NATIONS IN SEAFARING

In the case of bulk shipping the demand and supply statistics considered already show the potential for skills transfer in this sector between the Chinese and the Greek national fleets. Greeks and Chinese are already cooperating to a limited degree. An observation and in depth analysis of the on-going trends in the world maritime labour market show that the cooperation between Greece and China can be enhanced. A number of Greek-owned shipping companies have, in the last few years, made significant ship building orders to Chinese shipyards. Considering this business cooperation, Greeks have increasing familiarity with the Chinese way of thinking and their culture. Greek ship-owners are starting to become positive and optimistic in the potential of employing Chinese seafarers. Currently, there are a few shipping companies that have already opened the way for further cooperation, by offering scholars and internships in Chinese Marine Academies. With this practice, Greeks show their intention to enter and take place in the NSO market. The fact that Greeks are cross-traders, and that they participate in the external trade of China, is quite promising, and favours this trend.

Lane et al. (2002) identified a relatively even spread of Chinese across all ranks in bulk shipping (see Table 4). This even spread may have been attributable to a number of factors. Firstly, there is little disparity in the wages of Chinese across ranks. Secondly, it may be attributable to there being sufficient supply in relation to demand to satisfy all ranks. Or, it may be attributable to the choice of shipping companies to employ a single crew mix onboard this type of vessel with a preference for Chinese seafarers. For the figure relating to Greek seafarers their featuring in the top three for the supply of senior officers to this cargo sector indicates that they may be in short supply in the other ranks or that demand for their employment is reduced by their comparatively high wage rates, but that their specialist skills are still desirable despite availability/cost. In relation to the concept of skills transfer, this group of individuals is most likely to have an increased amount of bulk shipping experience to their nation's ownership trend towards bulk carriers. These Greek senior officers may be highly skilled and suitable to supervise less experienced junior officers and ratings, primarily from other nations. Two likely crew

scenarios emerge in bulk shipping from the tables and figures considered already: i) Greek Captain, Chief Officer, Chief Engineer and Second Engineer combined with foreign crew, or, ii) single nationality officers and crew onboard a Greek owned vessels. Crew composition is contingent upon language compatibility, availability of skills and many other factors. The decision to mix seafarers of different origin and the choice and preference of which nationalities to mix, seems to be affected – besides the level of wages – by a general view on the adaptability or ‘ability to mix’ of nations to a culturally diverse environment. Recent research among Greek seafarers and shipping companies shows that Filipinos are most preferred and perceived as the most compatible nation to cooperate with the Greek seamen, and this feature is a product of a long-term cooperation of Greeks and Filipinos (Theotokas and Progoulaki 2004; 2005; 2007).

According to Wu’s study (2004), Chinese seafarer employment is characterised by the complexity of crew complement composition – NSO or SOE – and individual the experience and preferences of the seafarer himself. In the past, sole employment of an SOE group was common and a whole complement would be supplied as a group, including political commissar (Zhao 2000a). Wu described the modern situation today with the NSO seafarers targeting international recruitment. The major limitations he describes are their confusion over international pay scales and their income inequality in the international market. He also lists a lack of exposure to multi-national environment opportunities as constraining Chinese seafarers from English improvement and professional development. The latter concern having greater affect on older groups of seafarers and those who have not received university level education as education policies and practices have caused additional limitation in language skill acquisition. Great emphasis was placed by Wu on the seafarers’ approaches to the global market. In the current market the Chinese seafarer who is graduating from any training institution has a greater level of choice as the scarcity of labour affects the market. Should the seafarer wish to vie for selection by a foreign firm at the outset of his training, his only barrier is his performance in diagnostic testing, personality type and English language ability. There are no other further constraints, except the requirement to be employed through an agency, upon him should he wish to attempt to be selected for such a training scheme.

Bureaucratic constraints exist for all seafarers and their employment must be through an approved manning agency (Zhao and Amante 2005). These agencies work to recruit graduates and other suitably qualified seamen for international employment. These agencies will provide a job, training and manage other relevant employment affairs for the seafarers. They exist in place of the work unit system where seafarers were employed by a specific company and were at their disposal for deployment (Zhao and Amante 2005). China’s largest shipping firm, COSCO, operates both as a ship owning, management and manpower supplying organisation. In the days of SOE seafarers this company and others were in the practice of supplying groups – “work units” – to the national fleet and at times to overseas companies. This system was often reliant on the versatility of a few individuals to communicate in English when in a mixed nationality setting and to relay information and instructions to other work unit members. In the work unit system these old generation seafarers were regarded as the responsibility of the company. Their ship assignment, wages, leave rotation, party membership, housing allowances and social welfare concerns are dealt with by the company (Zhao and Amante 2005).

Today, these SOE groups still exist, but the practice of work group supply to overseas companies has been decreased. Instead, the NSO model is being favoured. This has ended the reliability of the seafarer on the shipping company and given greater flexibility and

openness to international employment. Seafarers are then exposed to the labour market and need to be reliant on the agency as the middle man in place of the shipping company. This is a consideration for any Greek firms wishing to recruit from China, that in order to make their employment of Chinese crews a sustainable practice, then their investigation of the crewing agencies policies and practices are essential to avoid damaging exploitation and the non-retention of crews.

During the ethnographic study at Dalian Maritime University it was observed that there was a considerable lack of information relating to job opportunities for the potential officers being trained there. Occupational literature was available, but came largely from crewing agencies and not the shipping companies directly and when asked, final stage students could list the names of numerous Chinese crewing companies. However, many were unaware of some of the world's largest shipping companies and vessel operators e.g. Exxon Mobile, Hyundai Heavy Industries, American President Lines (APL), P&O Nedlloyd, with the exception of Maersk – which has its own characters in Chinese, pronounced similarly to the roman script in brackets “ 马士基 (Maerskegie) ”. This knowledge is present in the students at Dalian due to AP-Moller Maersk's policy of recruitment as described earlier in the paper. Training of these cadets takes place in Singapore using the western continuous assessment vocational route and these students are readily exposed to a multicultural setting in daily life, in the training centre and onboard during vocational training.

A significant factor for new generation Chinese seafarers is the funding of their training, especially as many of them come from inland provinces and are drawn to seafaring as a prospective way of getting a better life and being able to provide for their dependents, who include parents in Chinese society. Zhao and Amante (2005) raise the issue of the lack of scholarships for Navigation students. From interviewing the Navigation College Dean about this factor and from the results of the pilot study the impression was given that this situation has changed since their 2005 investigation. In addition to some scholarship funds from both the university and shipping companies, some investment was made by interested parties for uniforms and textbooks. The students asked, received scholarships to a maximum of 30% of their training and living expenses from the available university scholarship schemes. In some instances the student received none or as little as between 2-5%. Few stated receiving direct shipping company financing and in cases that they did, this was limited to 15% and as little as 4%. The majority of their costs were financed by family income and savings and individual bank loans. There was no contract to work for any shipping company upon graduation or other stipulation involved in this relationship.

From examining the course outline and through discussions with students, in the current curriculum there is no specific allowance for enhancing intercultural competence. In other settings this is possible through classroom activities involving mixed nationality group work (Pyne and Roe 2004; Horck 2004). In the Chinese maritime training institution there is not this possibility outside of the realms of the English classroom where western and Chinese English teachers can use group work and role play. The attitudes of serving Chinese seafarers to work in a multicultural setting was explored by Wu (2004) and found to be negatively affected by their lack of opportunity to experience such settings. The preparedness of Greeks to employ or work with a number of nationalities, including Chinese, was initially explored as outlined in table 6. Both studies revealed some barriers that require further exploration and that might be overcome by suitable training. This type of training should take the place of the ungrounded knowledge passed from seafarer to

seafarer based on their individual experiences and the cultural stereotyping that is, unfortunately, characteristic of some “cultural awareness” training.

While the dominance of single nationality Chinese only crews is already a feature among the SOE operators, the potential of single nationality Chinese only crews on vessels operated by NSO firms should be examined also. Following the comment above, regarding the long-term cooperation of Greeks and Filipinos on boards, which led to their ‘cultural compatibility’ and the perception of Filipinos as the most compatible nation to cooperate with the Greek seamen (Theotokas and Progoulaki 2004; 2005; 2007), the same is possible to happen with the Chinese. Greek-owned shipping companies can exploit the surplus of Chinese seamen, while China has the opportunity at what is still the beginning of its opening to the global market, the basis for a long-lasting relationship with Greece. China can extend the potentials of co-operation through outsourcing, but only on a long-term basis. In this way, China can have a strong ally not only in the shipbuilding or trade sector, but also in maritime labour. Greece on the other hand, can develop long-lasting relationships, and Greek shipping companies can expand their networks to include China and Chinese seafarers, exploiting in this way the cost advantages that stem from the minimisation of transaction cost. The key to this cooperation is trust between the two nations. So, while the trend to man Greek-owned vessels with single national crews is already apparent, more time and cooperation is needed, in order to develop a trustworthy relationship. This means that the potential of single national crews, employed in the Greek-owned fleet can include the employment of Chinese crews. However, at present, it is advised to proceed with caution and insight in moving towards either of the Sino-Greek manning scenarios described in this paper. The potential for a single nationality (scenario ii), Chinese only crews, onboard Greek vessels is very possible given certain constraints. It should be phased in if deemed appropriate, following attempts at and the periodic review of practice under scenario i) Greek Senior officers and Chinese crew. Taking in mind the present situation with regards to the manning strategies of Greek shipping companies, the multicultural crew of Greeks and Chinese, represents a step-by-step approach that needs to be developed in order to have the necessary climate of trust created. This is because trust is vital in order to achieve a stable relation that can open the path to scenario ii).

5. CONCLUSIONS

China has a larger proportion of Ratings than Officers as its contribution to the global labour maritime market (BIMCO/ISF 2005). For the bulk sector, China held a consistent spread across all ranks and was placed second for its supply of Ratings (13.0%), Junior Officers (14.7%) and Senior Officers (14.3%). On the other hand, Greece did not feature in the statistics for bulk carrier Ratings and Junior Officers, but was ranked third for its supply of Senior Officers (14.0%). The likelihood that these Greek Senior Officers are serving onboard Greek vessels is increased by the nation’s dominance in vessel ownership in the bulk sector. For scenario i) the cooperation of Greeks and Chinese on Greek-owned vessels, the opportunity exists for greater involvement of Greek shipping companies in investment in training. This would require their input, resources and funds into Chinese training and education institutions. The opportunity exists here for Greek ship operators to recruit from Chinese institutions and to become more involved in the training programme for students. An example of an investment in training would be the opportunity for lecturer exchange or for Chinese navigation students to take part in intercultural training, in-situ with their potential Greek colleagues.

The present paper shows that currently China and Greece are two maritime countries, whose resources are complementary. On the one hand, China has got a large amount of freight of its own to transport globally, and widely uses cross-traders in addition to its own fleet. Moreover, China has a surplus of maritime manpower outside of the demands of its national fleet who are free to be employed in the world seafaring labour market. On the other hand, Greece is a cross-trader and manages the largest fleet in the world. Furthermore, Greece faces a lack of maritime manpower, and turns to the world market, in order to man its fleet. Besides the limitation of absence of a common base for statistical analysis regarding the manpower of Greece and China, it is clear that there is an open field for cooperation between the two maritime countries; the key element for this cooperation is the resource complementarity. According to the last, and based on the Resource-Based View (Barney 1997; Barney and Wright 1998; Prahalad and Hamel 1990; Wernerfelt 1984) Greek shipping companies can have the ability to access the stable resource of seafarers, that China can offer. Concurrently, China can exploit the fleets that Greece offers.

ACKNOWLEDGEMENTS

This paper is part of the PENED-03ED1573 research project, implemented within the framework of the “Reinforcement Programme of Human Research Manpower” (PENED) and co-financed by National and Community Funds (25% from the Greek Ministry of Development-General Secretariat for Research and Technology and 75% from E.U.-European Social Fund). Moreover, thanks are expressed to the Economic and Social Research Council (ESRC) for fieldtrip funding for the Dalian based research.

REFERENCES

- Barney, J. (1997) *Gaining and Sustaining Competitive Advantage*, Addison-Wesley Publishing Company Inc.
- Barney, J.B. and Wright, P.M. (1998), On becoming a strategic partner: the role of human resources in gaining competitive advantage, *Human Resource Management*, 37(1): 31-46.
- BIMCO/ISF (2000) *Manpower Update - The world demand for and supply of seafarers*, Institute for Employment Research, University of Warwick.
- BIMCO/ISF (2005) *Manpower Update*, Institute for Employment Research, University of Warwick.
- China Maritime Education and Training Research Group (CMETRG), (2007), *Research report on the development and reform of the Chinese Maritime education system*, (yet to be published), Dalian Maritime University Press.
- China Maritime Safety Administration (2005) *Seafarer Training, Examination and Certification in China*, Dalian, Dalian Maritime University.
- General secretariat of national shipping statistical service of Greece, 2000- 2004.
- Greek Shipping Co-Operation Committee (GSCC), 2007, Greek Controlled Shipping, Information paper based on data provided to the GSCC by Lloyd's Register of Shipping-Fairplay (February). Viewed 15 March 2007, <<http://www.nec.gr/html/greekowned.htm>>

- Horck, J. (2004), An analysis of decision-making processes in multicultural maritime scenarios, *Maritime Policy and Management*, 31, 15-29.
- Kuruvilla, S., Das, S., Kwon, H. and Kwon, S. (2002), Trade union growth and decline in Asia, *British Journal of Industrial Relations*, 40, 431-461.
- Lane, A., Obando, B., Sorenson, M., Wu, B. & Tasiran, A. (2002), *Crewing the International Merchant Fleet*, Seafarers International Research Centre/Lloyds Register Fairplay.
- Leggate, H. and Mcconville, J. (2002) The economics of the seafaring labour market In Grammenos, C. (Ed.) (2002) *The Handbook of Maritime Economics and Business*. London/Hong Kong, LLP.
- Lloyds Register Fairplay (2006a) German owners want manning flexibility *Lloyds Register Fairplay*.
- Lloyds Register Fairplay (2006b) *World Fleet Statistics*, Lloyds Register Fairplay.
- Lloyds Register Fairplay (2007) *Fairplay Newbuildings*, viewed 6th December 2007, <<http://www.fairplay.co.uk/NewBuildings/>>
- (MOC) The Ministry of communications of the People's Republic of China, (2005), *The 2005 Report on China's Shipping Development*, The Press of People's Communication: Beijing [in Mandarin].
- OECD/Precious Associates Ltd (2003), *The availability and training of seafarers-the future impact*, Precious Associates Ltd., in association with Knightsmart Limited, London.
- Pallis A. (2007) The Greek Paradigm of Maritime Transport: A view from within, in Pallis A. (eds) (2007) *Maritime Transport: The Greek Paradigm*, Research in Transportation Economics, Volume 21, Elsevier.
- Papademetriou G., Progoulaki M., and I. Theotokas (2005), Manning Strategies in Greek-Owned Shipping and the Role of Outsourcing, *12th International Conference on Contemporary Developments in Shipping: Efficiency, Productivity, Competitiveness*, IAME, Limassol, Cyprus, June 23-25.
- Prahalad, C.K. and Hamel, G. (1990), The core competence of the corporation. *Harvard Business Review*, May-June, 79-91.
- Prakash, J. (2007), No quick fix on officers. *Lloyds Register Fairplay*.
- Pyne, R. and Roe, M. (2004), Cultural Interaction among mixed nationality crews and its influence on English language ability, *Proceedings of the LSM - 2nd Manning and Training in China Conference*, Shanghai.
- Sletner, T. (2000), Quality system for the implementation of STCW -95 in higher maritime education in Norway, *Maritime Policy and Management*, 27, 89-100.
- Stopford, M. (1997) *Maritime Economics*, 1st edition, Routledge, London and New York.
- The Ministry of Communications of the People's Republic of China (2006), *The 2005 Report on China's Shipping Development*, The Press of People's Communication, Beijing [in Mandarin].
- Theotokas I., Lekakou M., Pallis A., Syriopoulos T., and Tsamourgelis I. (2006), *Greek shipping industry, Employment and Competitiveness*, A study for the Panhellenic Seamen Federation (PNO), Chios: University of the Aegean, Business School, Department of Shipping Trade and Transport [in Greek].

- Theotokas, I. and Progoulaki, M. (2005), Greek seafarers' attitude on the issue of multicultural working environment. *1st International Symposium on Ship Operations, Management and Economics*. Athens, The Greek Section of the Society of Naval Architects and Marine Engineers (SNAME).
- Theotokas, I. and Progoulaki, M. (2004), Managing Multicultural Teams: The case of Greek-owned shipping. *Conference of the International Association of Maritime Economists (IAME)*. Izmir.
- Theotokas, I. and Progoulaki, M. (2007), Cultural diversity, manning strategies and management practices in Greek-shipping. *Maritime Policy and Management*, 34, 383-403.
- Theotokas, I., Progoulaki, M., Tsamourgelis, J., and E. Tsagari (2006), South-Asian seafarers on board Greek-owned ships: organisational, managerial and cultural issues, *2nd International Conference on EU- East and South-Asia Trade, Investment, Logistics and E-Business*, Chios, Greece, October 9-11.
- Tsamourgelis I. (2007) Employment practices and Greek Shipping Competitiveness, in Pallis A. (eds) (2007) *Maritime Transport: The Greek Paradigm*, Research in Transportation Economics, Volume 21, Elsevier.
- UNCTAD Secretariat (2002) *United Nations Conference on Trade and Development (UNCTAD) Review of Maritime Transport 2002*, United Nations, New York and Geneva.
- UNCTAD Secretariat (2006) *United Nations Conference on Trade and Development (UNCTAD) Review of Maritime Transport 2006*, United Nations, New York and Geneva.
- UNCTAD Secretariat (2006), *The United Nations Convention on Trade and Development*, the United Nations, New York and Geneva.
- UNCTAD Secretariat (2007) *United Nations Conference on Trade and Development (UNCTAD) Review of Maritime Transport 2007*, United Nations, New York and Geneva.
- Wernerfelt, B. (1984), A resource-based view of the firm, *Strategic Management Journal*, 5, September- October, 171-180.
- Wu, B. (2004), Participation in the global labour market: experience and responses of Chinese seafarers. *Maritime Policy and Management*, 31, 69-82.
- Wu, B., and Winchester, N. (2005), Crew study of seafarers: A methodological approach to the global labour markets for seafarers. *Marine Policy*, 29(3), 323-330.
- Zhao, M. (2000a), Chinese Seafarers at the End of the 20th Century. *Seaways*, 7-10.
- Zhao, M. (2000b), *Chinese Seafarers: Value for Money of Cheap Labour?* Cardiff: Seafarers International Research Centre.
- Zhao, M. (2002), Chinese Seafarers at the Beginning of the 21st Century. *LSM Manning and Training in China Conference*. Shanghai, Lloyds Ship Manager.
- Zhao M., and Amante. S.V.M. (2005), Chinese and Filipino Seafarers: A Race to the Top or the Bottom? *Modern Asian Studies*, July, 39: 535-557, Cambridge University Press.