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Critical thinking across the disciplines: understanding and application

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CRITICAL THINKING ACROSS THE DISCIPLINES: UNDERSTANDING AND APPLICATION

by

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Abstract

Joseph Allison

Critical thinking across the disciplines: an insight into understanding and application

This thesis explores the concept of critical thinking from the perspective of academic staff based in four different University discipline areas. Looking specifically at the relationship between their personal understanding of this concept, and how they then try and convey it to their students. The empirical data informing this study is drawn from interviews with the academic staff, as well as observations of their teaching practice. Underpinned by a critical realist perspective, the study focused upon on the structures of higher education that influence this relationship, between understanding and facilitation, as well as the agency experienced by both the staff and students.

Critical thinking is a concept that is steeped in the traditional liberal values of higher education, which informs how many academic staff have come to understand it. However, increasing pressures placed upon higher education curricula and practices, many of which stem from neoliberal priorities, such as market principles, and the commercialisation and commodification of degrees, impact on how critical thinking is, or can be, addressed. A combined theoretical framework, consisting of Bernstein's pedagogic device theory, to trace the macro and micro influences on university structures and teaching-learning interactions, as well as Bourdieu's theories of field, habitus and capital, to inform issues of agency in these areas, has been utilised. Providing a unique lens through which to consider the disciplinary knowledge practices of each discipline area, and how these impact on the development of critical thinking. Whilst a number of studies have explored disciplinary understandings of critical thinking, none of them as yet have considered this insight alongside observations of practice.

Whilst the findings from this study highlight a number points, there are a couple that will be particularly useful more widely in the organising and structuring of

curricula. Predominantly, that there is disconnect between the understanding academic staff have of critical thinking and how they find themselves having to teach it, sometimes to their great frustration. Furthermore, that valuable insight can be achieved through the consideration of disciplinary knowledge practices and teaching-learning interactions in relation to control and agency, which appear to have quite a considerable impact on student engagement.

Greater understanding and interesting glimpses of possible areas of future study have been revealed through this approach into what is a widely, highly valued but hard to define subject, one that is pertinent to so much of higher education.

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1.0 Introduction

This study stems from more than twenty-years of higher education (HE) experience that has evolved through a number of different roles. My earliest encounter was as a wide-eyed Marine Science undergraduate, enrolled just after Dearing's influential 1997 report. This was followed by postgraduate study, and range of teaching activities. I am now responsible for a small team tasked with supporting more than 20,000 students. Many of the changes witnessed and experienced throughout this time, in different roles and at different institutions, have made significant contributions, both consciously and subconsciously, to my understanding of HE, and the position I now take in relation to supporting students.

Yet, it is only now, following seven-years of doctoral study, spent developing a strong theoretical understanding, in conjunction with the empirical data gained through this study, and on top of more than ten-years working within a university, that I feel well-enough informed, and also remotely confident enough, to write about these things.

Considering my own experiences as a student and comparing these to many of the students I now work with, I feel immensely privileged and fortunate to have studied when and where I did. First and foremost, although I did not realise it at the time, I arrived at university with a fairly good understanding of what it was about, having followed all of my family into HE. Thus, I possessed a degree of

the ’social capital’ that Bourdieu describes as being so valuable (1986). Furthermore, changes in the HE sector, over the past twenty-years, have made it a very different experience for the students of today, and it seems compromises have had to be made, particularly in relation to its teaching and learning activities. My own experiences were of smaller lecture and seminar groups, regular contact with a personal tutor who seemed willing and able to answer all the questions I had and provided lengthy and detailed feedback. All in all, that pedagogy was at the heart of studying for a degree. All of these things do of course still happen today, but unfortunately, it seems they are all too often the exception rather than the rule. Yet, the expectations placed upon students, regardless of the compromises that have been made, have remained much the same. This is something that D’Andrea and Gosling highlighted some years ago, when talking about changes taking place in the sector, particularly in relation to how students were being supported. They believed that more focus needed to be placed upon students’ academic needs rather than on any perceived deficit of their capabilities (D’Andrea and Gosling, 2005), essentially proposing a shift in the expectations being placed upon students.

Throughout this period, discourses have increasingly positioned students as customers of their universities, commodifying their education. As Lynch outlines, ‘universities have been transformed increasingly into powerful consumer-oriented corporate networks’, with students now being considered in terms of ‘homo economicus’, only recognising their economic value (2006: 1). Kalfa and Taksa, claim that this approach had subsequently, ‘eroded the collegial ethos’, that had historically been in place (2016: 688), an ethos that I personally recall feeling a strong sense of whilst studying. The neoliberal

rationale behind this repositioning supposes that it provides students with greater degrees of control and choice through marketisation and institutional competition. However, the reality might be quite different. Access to an affordable HE experience that is of a high standard is potentially more of a priority to many participants (Lynch, 2006) than having a wide array of choice. The structures of HE have therefore undergone, and still are undergoing, significant change. Yet its agents, academic staff, and the students as its 'customers' enjoy little agency in how this process unfolds.

From a philosophical perspective, this represents an uneasy relationship between that of structure and agency, the structures of HE and the universities, and the agency of its agents, the students and staff. These issues, structure and agency, are at the heart of a critical realist understanding of social reality and have been spoken about by Scott (2005). It is from this position, one of critical realism that this study is being considered, where knowledge and understanding are not fixed, but part of 'open systems', exposed to challenge through the generation of new knowledge, understanding and 'truths', which are themselves socially constructed (Williams, 2016). Focusing on social practices such as structure and agency as the object of study, from a critical realist position, complements what Roy Bhaskar recognised as the emancipatory potential of social science (1978), something that has also long-been associated with a university education.

To help describe critical realism Margaret Archer introduced the idea of 'morphogenesis'. In this theory, Archer determines structure as relating to social positions and roles, and agency, as the domain of human action and interaction

(1998). Each of these is distinct from the other, and therefore unable to be subsumed by each other (Archer, 1998). Where changes take place in relation to structure and agency, Archer termed this ‘morphogenesis’, and where things remain static, ‘morphostasis’ (1998). In applying this to the current context, it is clear that over the past couple of decades, there has been significant change in both the structuring of HE, and the agential forces of its staff and students. In a study drawing on Archer’s critical realist theory, Case, suggests that it is a useful one with which to frame student learning in HE, and specifically, whether the aspects of structure and agency are in complementary or contradictory relations to each other (2015b). It is this that lies at the heart of this study, exploring the complementary or contradictory relationship between the structures of HE, and the impact these have on the agency experienced by its staff and students.

When utilising a critical realist approach in research analysis, Case also highlights the importance of determining any conceptual foundations, particularly in relation to teaching and learning (2015a). At this point I should explain the use of some terminology, specifically ‘teaching-learning interactions’, which will be used throughout. This is used in preference to, ‘teaching and learning’, or vice-versa, and is informed by the work of Ashwin (2012). In considering teaching and learning as a social practice, Ashwin explains that whilst they are relational, teaching is undertaken for learning, and learning is generally a factor of that teaching, academics and students are nonetheless participating in different activities (Ashwin, 2012). Furthermore, that participation in teaching-learning, is at the level of the individual, and whilst there are elements of these activities that can be objectively observed, the

actual individual experience is subjective. For Case, it is the interaction between these activities that makes it 'real' from a critical realist perspective (2015a). Case and Ashwin take slightly different views on whether 'teaching-learning' can or should be separated from each other: Ashwin believes that they should be considered as different aspects of the same 'teaching-learning' process (2012); whilst Case feels it is useful to keep them as distinct processes (2015a). What they are both in agreement on however, is the necessity of 'interaction' alongside teaching-learning. For Ashwin, the 'interaction' is fundamental, as it is this that is intended to support student's engagement, in various forms (2012). Case however, sees the two activities of teaching and learning 'located on different stratum', something that is also akin to critical realism, but the 'interaction' is emergent from the combination of the two (2015a: 630). Thus, the 'teaching-learning interaction' is neither reducible to either activity, or the sum of the two, but rather a 'new entity' that is an emergent property, which provides a way of describing the relationship (Case, 2015a). As such, the interaction is central to any theory that aims to explore the relationship between teaching and learning, as is the case in this study.

Clarification also needs to be provided at this point in relation to my understanding and use of the terms neoliberal and neoliberalism, as these will also feature extensively throughout this thesis. Whilst the number of texts making reference to these concepts in relation to education seems to be increasing exponentially, my initial reading of it came through authors such as Stephen Ball, Henry Giroux, and Ron Barnett. In general terms, I understand neoliberalism to be the steadfast belief in individuality, at the expense of anything remotely representative of community, social grouping, or public good

that may pose a threat to its free-market values. Ball suggests that at the core of neoliberalism is the desire to transform social relations into calculability's and exchanges, and thereby into a market form, which has subsequently resulted in the commodification of educational practice (2012). For Giroux, this has represented an attack on HE, where new approaches to governance, finance and evaluation have increasingly aligned HE with corporate values and interests (2014). Economic forces are therefore having an increasing impact on universities (Barnett, 2005), and the dominant rhetoric for policy reform is 'technical instrumentalism' (Young, 2008: 21).

Of more specific relevance to this study is the fact that teaching-learning has tended to be stripped down into skills, competencies and attributes, that are often deemed to be generic and transferable. This has been in an effort to invoke comparability between institutions, better meet the needs of employers, and to a certain extent, enable universities to demonstrate their effectiveness under an increased focus of accountability (Barrie, 2006).

What I have also become acutely aware of however, particularly with the increasing abundance of literature on this topic, is the use of neoliberalism as a general term to denigrate capitalism. Williams rightly points out how neoliberalism is often used almost indiscriminately to describe the 'worst excesses of capitalism … anything perceived as distasteful … [or] to evoke anything that is bad' (2016; 70). Interestingly, Williams also points out, how many people within the HE sector have watched on, largely in silence, as this transition has unfolded. Thus, acknowledging that there has been a neoliberal influence on HE and its practices, but one that needs to be taken into

consideration alongside other factors. What is relevant once again here, is the relationship between the (re)structuring of HE practices, and the agency experienced by its staff.

I will now outline the topic that will provide the focus of this exploration. In Dearing's 1997 report, he identified four key aims that were to underpin the purpose of HE, the first of these was 'intellectual growth', so that individuals were well-equipped for work, and could contribute effectively to society. Since Dearing's report there has been an increasing emphasis on skills in the HE curriculum; skills that are reported as being essential for students in order to make a successful transition from university into employment. However, whilst intellectual growth seems to be an admirable ambition of all educational processes, particularly in HE, it is a term that is not easily defined or determined, which is something that became necessary as the discourse of skills, attributes and outcomes gained ground. There was also a similar drive for these skills and attributes to be definable, with clear criteria for when and how they can be accomplished. Through this process, a term that came to represent that intellectual growth in HE was 'critical thinking'. Some have since argued that critical thinking is a defining concept of education (Barnett, 1997), and the, 'fundamental way of characterising contemporary HE' (Moore, 2011b: 3). So much so, that it is now seen as one of the most prominent issues (Mason, 2007; Winch, 2010), even representing something of an educational, 'promised land,' according to Papastephanou and Angeli (2007: 604).

In the next chapter there is a more detailed account of my own critical thinking narrative, how it came to my attention, and the rationale as to why I have

decided to focus on it. What I would like to highlight here, is one encounter that acted as a catalyst for that decision, where my curiosity on the topic was heightened, and my own thinking shifted. I was in my current role as a Learning Developer (also discussed in the next chapter), when a request came in from a colleague, inviting me to ‘do’ a lecture on critical thinking for their second-year students. Great, I thought. Reading on however, I was then told that I had one hour on a given day in which to do this. This for me, brought to the fore, many of the changes that had occurred in HE since my undergraduate days, and how teaching-learning interactions were having to respond to these changes. It clearly represented how structure and agency where in a contradictory relationship, and that this would impact on the experience of those students. With the belief that critical thinking, whatever that might have meant in that programme, could be addressed and ‘done’, in that brief moment of time. It is this then that provides two parts of the focus of this study, the concept of critical thinking, and, how this plays out in teaching-learning interactions.

1.1 Critical thinking, a complex concept

For almost as long as the term critical thinking has been in use in HE, there have been debates regarding its conceptualisation, to the point where it has resulted in the establishment of its own discourse (Papastephanou and Angeli, 2007). Unfortunately, whilst Moore suggests that the contested nature of this discourse seemingly reached an impasse (2011b), little is still known and understood regarding how it is fostered. Questions still hang over the evidence of our ability to teach it, or, if we are even able to teach it at all (Davies, 2011). A point also made by Hammer and Green, who highlight the gaps, ‘between

aspiration and teaching practice', further adding that, 'design[ing] appropriate learning experiences that develop students' critical thinking skills [is] still a matter for experimentation, debate and reflection' (2011; 303, 313). Johnston et al., add that the processes which are employed to develop students critical thinking, remain an area in need of greater understanding (2011). These claims, for further research and understanding into critical thinking, as well as where and how it is being developed in universities, have been made by other authors, such as, Cosgrove, 2011; and, Mulnix, 2012.

A brief overview of the term's history however, does highlight that it is a complex and contested topic. The longest and most keenly contested aspect of this debate has been whether it is an attribute that requires an understanding of discipline specific knowledge, or, if it is a skill that can be taught, and is transferable to other contexts. Good defences for both of these positions have been provided by Johnson and Siegel, in *Teaching Thinking Skills,* edited by Winch (2010). Strengths and weaknesses can be seen in both of these positions. However, it would not be helpful for me to express a preference for either at this point, if indeed I were able to, as it would run the risk of influencing the research process unnecessarily. Suffice to say, numerous distinguished writers have made significant contributions to this debate (McPeck, 1981; Paul, 1982; Ennis, 1989; Siegel, 1990), yet it remains unresolved and consensus is still yet to be found. What is clear from both sides, is the central role language and understanding play in conceptualising critical thinking.

Discussion since these early debates has tended to not to look at critical thinking from such a binary perspective, but from numerous levels, further

reflecting its complexity. Barnett, spoke of multiple interpretations including the domains, of knowledge, self, and world; and at different levels, from instrumental through to transformative (1997). Phillips and Bond built upon the initial conceptualisations of a generic and/or embedded skill, and added to it, a lifelong skill, and, critical being (2004), with Siegel also highlighting an ethical dimension (2007). Moore offered yet further interpretations: as a fault-finding exercise; methodological reasoning; or, as an ethical, critical conscious quality (2011a). Evidently, it still remains a highly contested and complex concept with the only point of agreement seemingly that it is a good thing for students to develop (Moore, 2011b). As Jones rightly highlights, critical thinking is often spoken about in generic terms, yet it is evidently understood in many specific and different ways (2009). It is perhaps because of this that empirical research on the subject has only recently begun to be tackled in earnest, and that trying to develop an appreciation of its multiple understandings may provide better insight into its teaching.

Although recognised as a defining concept of HE, Pithers and Soden's extensive review of critical thinking in 2000, highlighted that there was a lack of research regarding its development at degree level. Now, some years on, there has been an increase in research activity, and a significant volume of work has been conducted on critical thinking in HE. However, this has largely tended to focus on definitions and conceptualisations, whilst there still remains little in the way of empirical evidence regarding the following: its teaching (Davies, 2011); pedagogical or cognitive development at degree level (Pithers and Soden, 2000; Mulinx, 2012; Kuhn, 1999); and, how students experience it (Phillips and Bond, 2004).

Perhaps most significantly it is the lack of studies looking at the understanding of the academic staff responsible for its development in students that is most surprising. Johnston et al., provide a useful overview of just some of the different conceptualisations of critical thinking academic staff may have, and include phrases such as, ‘liberal education’, ‘pursuit of truth’, ‘benefit of society’, ‘critical beings’, and ‘emancipatory education’, all of which potentially ‘occupy somewhat different ontological and epistemological spaces’ (2011: 65), and all of which are fundamentally influenced by the forces of neoliberalism. Yet it is uncertain whether these same staff are able to stay true to these conceptualisations in their teaching-learning interactions, do the structures of HE, and beyond, afford them the agency to do that? This therefore, provides the third element of this study, exploring the understanding academic staff have of critical thinking, which will also consider how this varies across disciplines, and its correlation to their teaching-learning activities.

Exploring this combination of understanding and practice in different discipline areas, will provide a greater insight into what impact the shifting structures and cultures have on student agency, and their ability to recognise and realise the academic expectations being placed upon them. An understanding, which if brought about through careful analysis, should be able to inform future curriculum planning and practices.

The lack of attention into the understanding academic staff have of critical thinking maybe due to there being disciplinary differences in how the concept is experienced and understood, which in-turn leads to uncertainty regarding its pedagogy, and why it remains a troublesome concept (Moore, 2011b; Ahern et

al., 2012; Hammer and Green, 2011). The consideration of disciplinary difference in critical thinking first came to the fore some years ago. Condon and Kelly-Riley argued that ‘no one definition of critical thinking is applicable to every discipline at every level’ (2004: 64). This point was reinforced in some more recent work in this field, such as Hammer and Green (2011), and Ahern et al., (2012), who outline how critical thinking will be interpreted in different ways across disciplines, with variations also in its application. Brookfield, argues that critical thinking will be influenced by different traditions and assumptions, resulting in disciplines having alternative views on what it actually is or means, due to their epistemological positions (2012). Mason, also highlights how it can vary significantly across cultures (2008), whilst Siegel, adds a multitude of other layers to be considered, such as attitude, emotions, dispositions, habits, character traits and reasoning skills. (2007). All of which contribute to the multiple ways of understanding critical thinking and its development.

In order to explore these differences, and their possible implications, this study will speak to academic staff in four different discipline areas about their understanding of critical thinking. Looking at it from their personal, and discipline perspective I will be exploring how they thought that understanding had been developed, and how they think it is best developed in students. In relation to how this is influenced by wider structures, Kalfa and Taksa have expressed, ‘the impact that managerialism has had on teaching practice is underexplored’ (2016: 688). The data generated by interviewing academic staff will also be enhanced through observations of participant’s teaching-learning activities, to gain an insight into the correlation between their understanding and

teaching practice. Finally, micro and macro influences will also be analysed, to determine what are the key drivers impacting this relationship.

1.2 Positioning the field of critical thinking

A number of studies have explored critical thinking across different disciplines in HE, such as Moore (2011; 2011a; 2011b), who looked at critical thinking in History, Philosophy and Literary/Cultural Studies, all of which were located in the same Arts faculty of an Australian university. Or, Johnston et al., (2011), who explored both student and staff understandings of critical thinking in Social Work and Modern Languages, in a UK university. Another study conducted by Jones (2007; 2009), focused on critical thinking, among other generic attributes, with staff in History, Physics, Economics, Medicine and Law, also in Australia. All of these studies have helped develop valuable insight into both disciplinary differences, and, in some cases, personal and professional differences in relation to critical thinking. None of them however, included observational data of teaching practice in the data collection process, to analyse alongside the comments made by participants. The inclusion of this, along with the range of disciplines chosen to participate in the study, will provide a new perspective on our understanding of critical thinking. One that, through a better appreciation of the relationship between understanding and practice, and structure and agency, informed by departmental and institutional identities, will be able to feed into curriculum design and teaching-learning interactions across the sector.

A further point of interest that has come from the studies just mentioned, is how critical thinking is also understood not only in relation to personal and

disciplinary identities and epistemologies, but also through institutional identity and priorities. Institutional identity is something that has become increasingly fluid since the prominence of market competition between institutions, particularly in the five or so years since the studies by Moore, Jones and Johnston et al. It is these sector-wide agendas, many of which stem from neoliberal discourses, which have had the greatest influence on the changes taking place in the lecture theatres and teaching-learning interactions in HE. Giroux, provides a succinct reminder of some of the changes that have occurred in relation to HE:

> '... [the] reinforcing [of] an audit culture that mimics the organisational structures of a market economy. In addition, class sizes are ballooning, curriculum is stripped of liberal values, research is largely assessed for its ability to produce profits, administrative staffs are being cut back, governance has been handed over to paragons of corporate culture, and valuable services are either being outsourced or curtailed' (Giroux, 2014: 30).

Jones acknowledges the impact these changes in the sector are having, and feels that as a result, epistemology shifts are occurring in the academic staff, brought about by increased scrutiny, observation and evaluation of their practice, and greater emphasis on student expectation (2007). All of which have resulted in a change, or at least greater insecurity, regarding their academic identity. She points out that in some cases the insecurity experienced has induced more strategic approaches to teaching, due to the reluctance of staff to critique processes put in place to audit their practice. This then creates a tension between an individual's educational position and a wider understanding of their role and that of universities. Perhaps it is no wonder then that the understanding of academic staff regarding critical thinking is reported as

unclear, with confusion as to how it is best conveyed to students (Moore, 2011a). This reinforces the need for further insight into the impact these macro forces are having on teaching-learning interactions. It is only through a more detailed understanding of this, at the micro and macro level, and how these play-out in the teaching-learning interactions, that we might be able to provide empirically informed resistance to the seemingly unrelenting neoliberal forces driving these changes.

This is a point that has been made by Lynch, who expresses the need for academic staff to develop neoliberalism counter discourses, in order to preserve the wider societal responsibilities of HE (2006). The combination of interviews and observations used here will highlight any disparity or inconsistency between how participants align their identity with their discipline and institution. Particularly in relation to their teaching-learning interactions, as well as the micro and macro determining factors on these, and any frustrations they feel in this relationship. Analysing and interpreting the data in this way, provides another unique backdrop to this study.

One further suggestion from Moore's research, is the idea of developing 'institutional meta-language[s]' of critical thinking, that embrace and celebrate disciplinary difference (2011; 2011a). Whilst Jones stresses the need to reconceptualise generic attributes, particularly critical thinking, as fluid, and with three features 'multiplicity, connected and transformation' (2009: 95). The findings from this study will therefore enable the 'opening up' of these concepts, so that students and staff can increase their awareness of different

understandings, and potentially become more flexible and versatile in their own thinking.

To summarise, the following research questions will form the central focus of this study: How do academic staff understand and talk about critical thinking across different disciplines?

This will be informed by the following questions:

- To what degree does their understanding and use of critical thinking vary across disciplines?
- And, how do they try and convey this to their students?

Utilising an approach successfully employed by Moore and Jones, this study will focus on listening to academic staff regarding their personal understanding of critical thinking, rather than seeking to generalise and define it, as has been the focus of so many studies. It will look into how the discourse of critical thinking is incorporated, fostered and played out in their practice, through their own voices. As such, it aims to appreciate the integral but varied nature of critical thinking within and across disciplines, how it is constructed, used and taught - what Jones refers to as, ‘discipline knowledge in action’ (2009).

In his research, Mason rightly questions how the discourse of critical thinking is produced, what values are associated with it, and what societal, cultural and educational issues arise from it (2007)? All of which will vary according to the institutional, disciplinary and individual identities and epistemologies. Answers to these questions are going to be essential if HE is going to understand and

improve the development of critical thinking in its students. A deeper insight however, will also be needed into what it means for staff and students, how they experience and develop it, and what that looks like more specifically in their relevant discipline areas.

This understanding alone however, will not provide the ‘silver bullet’ required to better develop student’s critical thinking. What will also be required is an insight into the relationship between how academic staff understand it, the teaching-learning interactions they use to facilitate it, and the expectations they place on students to realise it. In order to develop this insight, we will have to gain an appreciation and understanding of how structure and agency relate, and what emergent properties this brings in relation to teaching-learning interactions. Until this is understood, claims of ‘narrow’ and ‘flat’ teaching for critical thinking (Alston, 2001) that have resulted in the ‘trivialisation of critique’ (Masschelein, 2004) and shallow instrumentalised reasoning (Brookfield, 2012) will become more commonplace. Furthermore, unchecked this will restrict the potential of our students to become what Barnett termed, 'critical beings' (1997), or, the critical thinkers that are required to be effective members of a democratic society (Harrell, 2011; Lim, 2011).

1.1 Research Overview

This study began by using purposive sampling to identify four discipline areas willing to participate in the study from within the University. It was hoped that the four chosen areas should contrast in some way, such as being professional or applied degree programmes, or come from different faculties, such as Science

and Technology, or Arts and Humanities, in order to try and illuminate significant rather than subtle and minor differences. The four discipline areas that participated included Education, Medicine, Environmental Science, and Law and Criminology.

Individual interviews were conducted with four participants from each area, although five participants took part from Law and Criminology, providing a total of 17 interviews. Whilst it was hoped that these participants would also be purposively sampled, with a view to exploring a wider range of experiences, such as the teaching activity undertaken, the level taught, or years of experience in HE, the challenge of recruiting participants proved harder than anticipated, and all positive responses were invited to take part in the study. In order to encourage discussion, the interviews were semi-structured with some initial questions identified that would facilitate further discussion. Beyond this the discussion adapted according to the responses of the participants. The interviews were audio recorded, transcribed in full, and coded according to themes and patterns that emerged from across the data, as well as in relation to the theoretical framework employed, then validated by cross-checking.

The final stage of the research data gathering included practice observations, in order to try and witness the methods and language of understanding that were used by the academic staff to encourage critical thinking among their students. Whilst some of the studies reviewed thus far purposefully avoided observations due to them being deemed ‘impractical’ (Moore, 2011b), I felt that observations would provide better insight into the teaching-learning interactions surrounding critical thinking, as well as potentially into the academic staff’s own

understanding of the concept, by providing a means of gathering information regarding participants lifestyles, cultures and beliefs, as they occur in their natural settings (Denscombe, 2014).

The observations were arranged in discussion with participants in the interviews, specifically identifying relevant modules or teaching sessions, such as lectures, seminar groups, or other activities, where they felt critical thinking was more likely to be conveyed or addressed. For this reason, and due to the time of the academic year when this part of the research took place, which was late spring, it meant that there was not an evenly distributed or consistent pattern to the number and type of observations available for each discipline area. A rationale and analysis of the methods employed will be addressed in the Methodology chapter.

The analytical framework used to interpret and analyse the data generated by the research methods also provides an original element to this study. Basil Bernstein's Pedagogic Device (1990; 2000), will provide the framework for analysing participants' comments and observations in relation to how these connect with the organising and structuring of the pedagogic discourses, which in-turn, inform the teaching-learning interactions and processes. Whilst I will also draw on the work of Pierre Bourdieu, and his theories of capital, habitus and field (1986; 1988; 1990a; 1990b; 1992), to explore the data more specifically with respect to the agency experienced and exercised, by both staff and students in these pedagogic processes. The combination of these theories has only been utilised in relation to specific areas of HE, for example see Crozier and Reay (2011), and whilst it has been recommended as a viable

approach in exploring wider HE teaching-learning interactions by Ashwin (2012), it still remains underused.

The following chapters will now provide a more detailed picture of the research space that this study occupies, through the unpacking of a personal narrative in relation to the topic, in the Research Context. The Methodology chapter will then be followed by a chapter introducing the Theoretical Framework. Three chapters then make up the combined Analysis and Discussion, before concluding on the study's outcomes and implications.

2.0 Research context

Having introduced the study in general terms, outlining the wider rationale, it is worthwhile bringing to the fore important contextual information in relation to the study's key features: the institution in which it is situated; my own role and position with regard to the topic of focus, critical thinking; and, its relationship to wider societal influences. This chapter will provide an overview of these features, starting with the wider influences on critical thinking, before then narrowing in on my own critical thinking narrative, from how I first became aware of the concept, to how I now understand it.

Looking at the wider context of HE and the external influences of neoliberalism, it is apparent that these have, and continue to have, a significant impact on the structuring of critical thinking. To draw on Bourdieu here, neoliberalism has not only informed the structure of critical thinking, it continues to act as a structuring force too (1990b).

Perhaps one of the most blunt appraisals of this impact on HE, and education in general, is made by Giroux, particularly in his recent paper that discusses the role of HE in authoritarian times (2018). Giroux argues that through the transformation of adopting a business culture as the culture of education, the core mission of education has been corrupted (2018). This has led to a form of 'bare pedagogy', as he has previously referred it to (2010), that acts an 'attack on education as a public good and literacy as a basis for producing informed citizens' (2018: 5). This in turn breeds an illiteracy that not only fails to develop critical and active citizens, but one that also acts to eliminate the public spheres,

universities themselves, that make thinking possible (2018). He goes on to suggest that the conservative policies that inform the neoliberal approaches, intentionally seek to prevent critical thinking in both students and teachers, as this is seen as a liability and threat to the current political regimes (Giroux, 2018). In some of his other works Giroux claims that HEs ability to foster critical inquiry is diminishing, with critical knowledge being confined to the dustbin, as universities themselves become merely sites for consumption (2010).

Whilst Giroux highlights the impact of neoliberalism on critical thinking in very explicit ways, other authors have highlighted ways that are more implicit yet just as critical, such as Stephen Ball. Ball, similarly identifies the effects of performativity in education as a negative force of neoliberalism, however he relates it more in terms of the identities of the teachers and tutors, suggesting that through the commodification of academic practice, neoliberalism 'gets into our minds and our souls, into the ways in which we think about what we do … how we relate to students … and our knowledge production' (2012: 18). This process, Ball argues, imbues an ontological insecurity and tension in staff, where they are no longer 'the things that [they] say, do or desire' (2012: 26), which challenges the very notion of what the university does best, 'enable people to think', and 'the possibility of free and critical thought in the neoliberal university' (2012: 19, 26).

Diane Reay is yet another author who discusses the tensions brought about by neoliberal influences on education. Whilst, Reay looks at a range of educational settings, her over-arching question is if socially just education is indeed possible under neoliberal capitalism (2016)? In determining what is meant by socially

just, she draws on Freire (1998) and his notion of ‘disruptive pedagogies’, where students are encouraged to question and develop their social and political understanding. Reay’s belief is that it represents a contradiction in terms, to suggest that there can be a socially just neoliberal education system (2012).

One thing that unites all of these authors, and others besides, is their call for resistance and an alternative approach, whether that be based upon, ‘critical’ (Giroux, 2010), ‘radical’ (Giroux, 2003) or ‘disruptive’ (Freire, 1998) forms of pedagogy. A further worry also expressed however, is that the ‘inside’, meaning the education system, will only change if and when the ‘outside’, or wider society, changes (Reay, 2012), or in Ball’s view, the ‘inside’ represents within ourselves and our own relationship with neoliberalism, before we can begin to address the ‘out there’ (2012). Clearly, these views offer insight into just some of the ways that neoliberalism is believed to have influenced the discourse and narrative of critical thinking within HE.

Switching now to my own critical thinking narrative, which has developed and been informed by three pivotal areas: my own studies in HE prior to this doctorate programme; my role as a Learning Developer; and, my experiences during this doctoral process. These have all influenced my position on the topic, in choosing it as the topic of focus in the first place, but also in how I have engaged with it, and therefore, how I understand it. This is something that has also been strongly influenced by the institutions I have studied and worked, and their identities.

Researcher positionality is something that Cousin believes is important for all researchers to reflect upon openly in order to generate trustworthiness in their research (2009), not only in relation to framing the research and capturing data through the selected methods, but also in its analysis and interpretation. It is almost impossible for the researcher to remain neutral throughout this process, and not 'veil' the research to some degree with their own values and beliefs (Cousin, 2009). This is something that is particularly evident when the intention is to gain the perspective of research participants through interviews, which cannot help but be influenced by the interviewer. These situations themselves therefore become social and dynamic constructs, resulting in shared understandings of the topic of focus. Hence the importance of providing the context in which the research took place and airing my own views on critical thinking prior to discussions with any of the participants.

2.1 Personal academic capital

My introduction to HE came later than most, starting a Marine Science undergraduate degree at Southampton University, in 1997 at the age of 28. Having not performed very well in my A level studies at sixth-form college, my entry into university had to be gained through an Access course. In hindsight, I should have been more aware of, and possibly prouder of this achievement, being offered a place at one of the top Oceanography centres in Europe, through this 'new' route. Upon deeper reflection, there are two key points that stand out. The first is that this was at a time when the doors of HE were being opened wide, access to HE was being more widely encouraged, and its 'massification' was well under way, so perhaps my achievement was not as

notable as I now think. The second point, is that I don't recall being at all worried or concerned by this process; in-fact I believe I was actually quite confident. This, I realise, must have been largely to do with the 'social capital' that I had accumulated, as mentioned in the previous chapter, all of my family had successfully attended university, with my father also being a university lecturer. The advantages this gave me however, were not immediately apparent to me, although subconsciously I must have drawn on them extensively, not only in the application process and transition, but also in my studies once there.

Looking back on this transition, from Access course to top 20 university, I feel that the main benefit of the Access course, and this perhaps was its main function, was to get me back into studying 'mode', to reintroduce me to the primary teaching-leaning processes. In relation to being prepared for university, I remember it actually being quite a shock, and struggled with the pace and content of the first few months. I can vividly recall my first Chemical Oceanography lecture, where the whole Chemistry content of the previous Access year was covered as a re-cap in a 45-minute lecture. From my recollection, I was actually sweating at the end of that lecture, due to the pace and intensity of it. Over time however, the social, or more specifically academic, capital I had accumulated, and my already acquired academic 'habitus' was very influential in helping me make progress. My sisters were a valuable source of information and passed on essential studying techniques and bits of know-how, and my mother was happy to read my work and give feedback on it. Yet, unknown to me, there was also a deeper level to the privileges I had experienced, particularly in relation to my topic of study here that was very much to do with my upbringing.

At the time, when I was growing up, it often seemed like a chore, a challenge, sometimes almost excessive, but whilst at university, and even now, I look back and am so grateful to my father for one of his particular attributes. He was never content with, or accepted, straightforward descriptive answers, to anything. Instead, he would always probe further, asking ‘why’ all the time: Why don’t you like that book? Why did you like that dish? Why don’t you agree with that article? Why are you going to do that? Whatever we as children stated, or however we replied to a question, we would always have to take our responses that extra step further and provide some detail to our answer. As an Architect, this was never more so than when gazing up at whatever feature of a particular building he was pointing to, for which there is much photographic evidence, saying, ‘look, do you see, now why do you think they did that?’. This, I now see, is a gift that he gave us, for which I am eternally grateful.

The social capital I had acquired had been developing through other ways as well. I can recall the many long, and sometimes arduous, discussions and arguments during family meal times, which were often political or values laden. Fortunately, as my two sisters were older than me, and both with strong views and characters, they would take up the challenge of defending inequality or the unjust in the world, whilst I listened and looked on. This has been a huge help to me throughout my education, particularly in relation to analysing information, and explaining my own thoughts and ideas, something that obviously became increasingly important throughout my studies. I am now aware that these are attributes many of today’s students have not always had the opportunity to develop themselves, so feel immensely privileged and lucky to have had that upbringing.

The final point to make regarding this first encounter of HE study, is in relation to the teaching-learning interactions that I recall. As mentioned in the introduction, these seem to compare very favourably to the experiences of many students today, and this is very relevant in respect to critical thinking. Lectures were sometimes crowded then as well, but it was the dynamic and engagement that felt quite different. When questions were asked, they were expected to be answered, and if you tried to sit through the lecture without putting your hand up, you could expect to be asked the next question. There was a greater expectation placed on engagement, but subsequently, there was also more opportunity to put forward your own thinking, test and challenge ideas, which did seem welcomed and encouraged. Compared to many of the lectures I witness today, it was much more of a two-way interaction. Obviously, there were exceptions, but this did seem to be how it was for the most part. Similarly, seminar groups were of a size that encouraged participation from all present, and for me these represented an incredibly positive learning environment. Perhaps I was lucky, but I also had a very proactive personal tutor, who I met regularly, often getting set additional work that was non-credit bearing to help develop academic skills, and who guided me expertly through three years of study. In some ways these ideals now seem like a distant dream, or perhaps I am comparing chalk and cheese, but I am not convinced that if I went back to that university now these things would be as evident.

The next port of call on my HE journey was Southern University, which is where I now work, a post-1992 university, where I came to study an MSc. in Coastal and Ocean Policy. Studying a postgraduate programme, the teaching-learning interactions were very different to those of my undergraduate study; smaller

classes (<20), and therefore much more class discussion, and as a new programme, a good level of support throughout the process. Similar to my undergraduate experience, it was during the thesis (dissertation) stage of my masters where things felt like they came together, and really started to make sense. Through the combination of working with literature and primary data, on a topic that I had self-selected seemed to bring about a heightened sense of engagement and purpose. However, throughout both programmes, undergraduate and postgraduate, the concept of critical thinking remained elusive to me. I must have been aware of the need to analyse and evaluate in my work, and have been fairly adept at it, only just missing out on a first-class degree and a distinction respectively, but I do not recall coming across the term critical thinking during these studies. My masters was followed a few years later in 2004/5 by completing a two-year part-time Post Graduate Certificate in Education, where once again a pass was achieved without knowingly crossing-paths with the concept of critical thinking.

2.2 Learning Development

My first introduction to critical thinking came in 2007, when I started to work at Southern University as a Learning Development Advisor. As a post-1992, UK University, Land would describe Southern University as part of the ‘universal system’, where discourses centre on accessibility, widening participation and employability (2004). According to Wilde and Wright, it would be deemed a university with a focus on ‘recruiting’ rather than ‘selecting’ its students (2007), apart from one or two programmes where it maintains a strong reputation.

Within the institution, my role has been in a field that has become known as learning development (Hilsdon, 2010), a field that developed in response to increased support needed for students in their academic studies. Hilsdon provides a good overview of how the role of learning development came about in the UK HE sector. In short, the term includes numerous roles, such as educational developers, study skills tutors, librarians, English language tutors, and researchers, among others, all with the intention of enhancing student learning at university (2010). Support that was put in place in response to sector initiatives that included increased participation, and widening access, which resulted in students coming from a more diverse 'range of educational, cultural and linguistic backgrounds' (Lea and Stierer, 2000: 2). Due to these initiatives, it could no longer be assumed that students had been equipped through their previous educational experiences to deal with the academic practices being asked of them (Hirst et al., 2004). Indeed, Wingate suggested that this was no longer the case for students coming through the traditional route of secondary school and college, let alone alternative routes such as Access courses and top-up degrees (2006). The UK's response was therefore to reframe some academic practices as generic 'skills', and task study skills services, or learning development teams, with the responsibility of developing and teaching these skills across universities. As Hilsdon states:

> 'Learning development is a complex set of multi-disciplinary and cross-disciplinary academic roles and functions, involving teaching, tutoring, research, and the design and production of learning materials, as well as involvement in staff development, policy-making, and other consultative activities … with the emphasis on examining how students experience and make sense of learning activities and academic practices' (2011: 14).

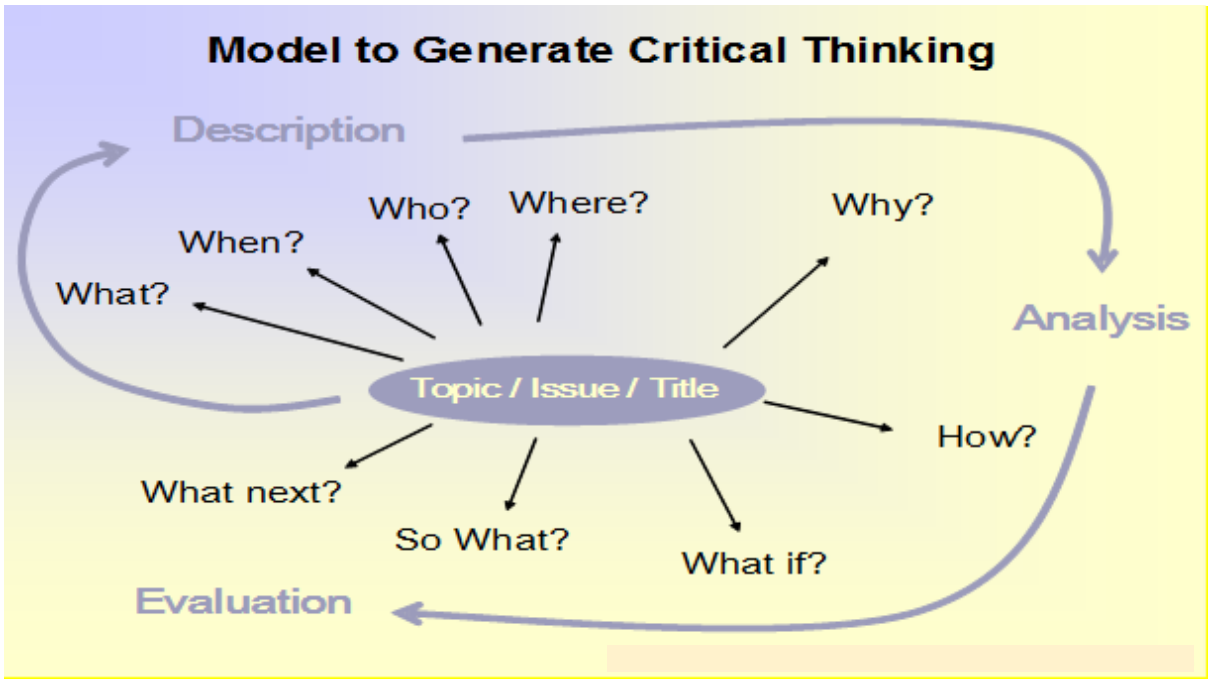
It must be noted that although this field has experienced growth over the past ten to fifteen years, it does still remain a contested term and area, and is not in widespread use across the whole sector. This might also be a factor of how differently these services can be set up and function from institution to institution, with some set up as generic study skills teams situated in libraries, or careers centres, whilst others may be operating with a different remit, and be positioned within specific disciplines or faculties. Hilsdon's definition above therefore represents a very broad, cumulative view that may not be representative of each department or team.

At Southern University, the Learning Development team I joined consisted of 5 full-time posts, all of whom came from a variety of backgrounds, some were language specialists, others had strong research experience, and all had further degrees. The team was centrally located within the University, so not aligned to any specific faculty, school or programme, but provided support to all. This meant that academic staff could approach the team to come and help address the development of academic skills in their programmes, which was normally done through the provision of workshops for large and small groups of students. There was also one-to-one support for students, which tended to focus more on developing their academic writing and critical thinking, as well as some general study skills. In this role, I gained much wider insight into student's experiences of studying and writing, and helping them to unpack the expectations, interpret feedback, and develop their academic skills.

The idea of critical thinking had become particularly prominent in the team that I joined, as critical thinking and reflection were a specific area of focus for an

initiative called ‘LearnHigher’, a Higher Education Funding Council for England (HEFCE), Centre of Excellence for Teaching and Learning (CETL). This involved a collaboration of 16 universities developing a range of resources to support student learning (LearnHigher, 2016). Resources that staff and students from across the country could draw upon. Through this process, materials and resources for students and staff were developed by our team over a number of years for this national resource, the most prominent of which was a ‘Critical Thinking’ study guide, which included a model that aimed to help students develop their critical thinking, see Image One below. If I had not been aware of the concept of critical thinking before, it very rapidly became part of my practice.

Image One: ‘Model to generate critical thinking’ – Learning Development resource



The resources that we developed played a central role in much of the teaching we undertook with students. They were adapted as necessary, and integrated, or linked, into their curricula and/or assignments as much as possible and were influential in informing our own understanding. Over the following years I developed many workshops that addressed academic writing and critical thinking, from foundation level up to doctorate level, and across the University for a Number of programmes. This was a role that I found both very rewarding and enjoyable. The core messages remained similar, revolving around structure and coherency in writing, and developing critical thinking; however, working with different programmes helped retain my interest in the subject. One workshop could be with first-year Midwifery students, and the next final-year Architects. I can also remember thinking how wonderful and helpful these resources were, particularly the critical thinking tools, for making something challenging accessible and 'easier' for students to engage with, or evidence, in their work. I can even recall feeling a bit aggrieved that I had not had access to them in my own studies, perhaps I would have then got that first or even distinction!

This approach to supporting students in HE, particularly with regard to the development of generic or transferable skills, is not without fault. Wingate, describes it as 'bolt-on', in that it separates the skill being addressed from the subject being taught, suggesting that 'built-in' or embedded approaches were preferable (2006). This is a point I agree with to an extent, hence the workshops I facilitated were developed as much as possible in collaboration with the programme or module tutors, in order to ensure that the topic was not completely divorced from the subject content or curriculum. I found that the optimum approach came when our resources were integrated and co-facilitated

with the tutor's disciplinary awareness, understanding and contextualising. However, this was not always either possible or mutually expected, and often there were calls for us to 'just deliver' the session in the tutor's absence, as highlighted in the last chapter.

Throughout this period, I felt confident that this way of working with students was effective, yes it could have been better, in that it could have always been more embedded into the programmes, or by making the sessions with the students longer, and followed up at intervals. However, for the most part, according to both students and staff feedback, they had a positive impact both on their learning, and the quality of their work. That was until significant micro and macro changes started to take effect in the institution, the department, and team I was in, and consequently in my own thinking.

2.3 Professional doctorate in education

These changes largely occurred between 2010 and 2012, and they raised a number of difficult questions for me. The first change came about through enrolling on the professional Doctorate in Education (EdD.) programme. The readings and class discussions in this programme made me consider things, particularly education, in quite different ways, having never studied social science before. Being exposed to authors such as Paulo Freire, Pierre Bourdieu, Basil Bernstein and Stephen Ball encouraged a more philosophical approach to my understanding of education, and what it is for, concepts that I had never previously considered deeply, and which resulted in my own practice coming under increasing scrutiny. This level of critical reflection made me

question some of the approaches and resources that I had been using and had felt comfortable with over a number of years, such as the model for critical thinking. I started to feel partly complicit in 'technical-instrumentalism' and the 'trivialising of critique', and feared I was to a degree, guilty of facilitating critical thinking in a 'narrow' way, by using a structured model or framework that encouraged asking specific questions in a sequence. Whilst I knew the model we used was intended as a starting point, and that the questions raised in its use should act as 'springboards' for further questions; if students took it literally, 'if I ask this, this, and this, then I am doing critical thinking', (and why shouldn't they have?) then it would be seen as a very reductionist approach. At times I felt I was being pushed in this direction, even more so when only given an hour to address a subject as broad as critical thinking.

At the same time, another change came in the form of a 'strategic review' that was being implemented into the student support services at Southern University, which, as with many other institutions across the sector, was clearly led by the need to make financial savings. From the position of our team and department, it seemed that arbitrary decisions were being made that were not based on sound reasoning. Our team was one of those cut, resulting in a 25% reduction in staffing, leaving only 3.5 learning developers, to support in the region of 26,000 students, at an institution that was widely recognised as having a significant widening participation remit. This resulted in a good deal of critical reflection on my behalf, but from a different perspective. We were working with a wide range of students and disciplines, trying to develop and encourage their critical thinking and writing. Yet, from my viewpoint, the University was seemingly displaying none of this in its own decision making. It therefore felt

false and led to a personal feeling of uncertainty. What seemed to intensify this inward tension was also knowing that the new driving force or agenda in HE, was all about improving the student experience. Yet the expectation was that we should be striving for greater efficiency without impacting on either the quality or quantity of our work.

The uncertainty I felt, seemed akin to that described by Jones, when she cited the changes in the HE landscape as having an impact on academic identity, resulting in what she has described as 'ontological insecurity' (2007). This is something that she found specifically in reference to critical thinking, and how it had become commodified in HE, stating:

> '... critical thinking is in the process of being packaged, shrink-wrapped and is in danger of losing its power. It is used to promote the value of a university education yet at the same time the real power and value of critical thinking to interrogate is declining' (Jones, 2007: 210).

This, Jones goes on to explain, had occurred in response to a number of significant changes throughout the sector, including the evolution of a culture focused on audits and accountability, and reduction in per capita funding whilst accountability had increased. All under the watchful gaze of hierarchical observation from governments down through institutions, faculties, departments, and finally staff, which necessitated even more evaluation and justification of practice, with the associated administrative burden that this brings (Jones, 2007). I felt as if I was caught in the cross-fire; on the one-hand being complicit in the 'shrink-wrapping' of critical thinking, but also, that this was in response to wider agendas that I had no influence over.

Other authors such as Krause, have made reference to these changes in the HE sector, and their subsequent impact on the identity or roles of academics and their teaching (2009). Whilst acknowledging that change is not something new to HE, she points out that in the decade preceding her publication in 2009, universities had transformed in response to social, economic, political and policy drivers. More specifically, shifts in employment for academic staff, among other factors, that shape their identity, describing these as 'fault lines' (Krause, 2009). Krause goes on to outline how these fault lines had appeared around the issues of what universities are for, the roles and relationship of teaching and research, and the 'fragmentation' of knowledge, fragmentations which were being reinforced by HE funding-policies, reward and promotional structures, and the 'performativity agenda' (Krause, 2009). Finally, she suggests that this was all with a view to improving efficiency and accountability of universities, but for academic staff it resulted in significant instability and a 'metamorphosis of the academic profession' (Krause, 2009: 414). Whilst experiencing this first-hand, I was also reading increasingly about the impact neoliberalism was having on education as a whole, and HE more specifically, through authors such as Ball and Giroux.

It seemed that much of what Giroux was saying was playing out in-front of me, that the impact of neoliberalism, or as he put it, 'the right-wing assault', was not just affecting the identity of academics and academia, but more seriously pedagogy itself (2006: 31). Giroux highlighted why this was so crucial because pedagogy naturally incorporates moral, political and critical elements, which in turn, in his view, if suppressed will cause long term damage to the democratic nature of HE (2006). The 'intellectual growth' ideals of Dearing, to be well

equipped for employment and to make effective contributions to society, were seemingly disappearing rapidly in the rear-view mirror.

These messages were being reinforced by other authors, such as Mary Evans, with her book *Killing Thinking: the death of the universities.* In this she makes a similarly convincing argument regarding the 'distortion' of university values, where independent and critical thought were no longer valued, proposing that the 'master' that universities will serve in the future is 'the rational bureaucratic state of the twenty-first century' (Evans, 2004: 3). I was beginning to experience my own 'ontological uncertainty', 'fault lines', and 'distortion', that had been, in-part, brought about by audit and performativity agendas, measured against a set of values determined by an unknown 'bureaucratic master'. I can still recall the expectations of one senior manager who wanted to evidence that what we were doing was transformative, but also measurable, to this day I am still unsure as to how that can be done!

Looking through my writing, the associated reading material and the topics that I chose to focus on in the early stages of the EdD, clearly highlights that I was thinking about these issues and the impact they were having. My first assignment for the programme was titled, 'The development of recent Higher Education policy in relation to the discourse of skills: a case of contested rhetoric', which employed Ball and Bowe's policy analysis (1992), and highlighted clashes between humanist and technicist approaches in policy initiatives regarding the increasing prevalence of skills in HE curriculum. In the next module, this was followed by, 'Do communities of practice still hold the key to academic literacy practices', where I questioned the over-reliance on a

communities of practice approach (Lave and Wenger, 1991), for conceptualising student's progress in HE. What I can remember at the time is how useful I thought the academic literacies approach was in trying to understand student's development in HE, by placing more emphasis on the processes rather than the outcomes, and how that might help students understand the implicit elements of the curriculum (Lea and Street, 2000).

In my third assignment, 'A Bernsteinian analysis of PBL: curriculum, pedagogy and evaluation', I drew heavily on Bernstein's pedagogic device, particularly classification and framing (Bernstein, 1990; 2000), to analyse the impact of problem-based learning (PBL), which was proving a popular approach in HE. What I had become aware of however, was that when programmes switched to a PBL approach, as early as the second term of the first-year in some cases, students often found it difficult to make that transition. This was because PBL required very different approaches to learning compared to those that they had become accustomed to, either in their previous HE experience or prior to this, and whilst there are a number of positives to be had in this approach, these seemed to outweigh any concerns of how this might impact students. As with the previous assignment, the topic here again seems to be about student agency. However, what really connected with me was using Bernstein's pedagogic device as theoretical framework, and how it helped address questions around power and agency.

The fourth and final assignment in this programme, which acts as a precursor to the thesis stage, was, 'Motivation and expectations of students entering higher education: a participatory approach to student voice', which seemed to be of a

slightly different orientation compared to the three previous assignments. However, deeper reflection reveals that it, like the others before it, was very much about issues of structure and agency, only this time I wanted to explore this through a participatory, student voice approach. This project did not go on to be the focus of my doctoral thesis, for a number of reasons, some of which will be highlighted below. What this piece of work did do however, was to give me a better sense of my critical realist ontological positioning.

Whilst going through my EdD journey outlined above, there was also change occurring in my practice too, when in 2013 I was promoted to team leader of the Learning Development team. This gave me an even greater sense of responsibility to the students, as well as my team, and myself. One of the key things for me was that I did not want my team to be coerced into practicing in a way that was a product of the dominant agendas explicitly playing-out at the time. I wanted the principles of our team and our practice to remain true to an idea of a university education where students were suitably supported in their learning. Developing their critical thinking so that they could be successful from an employment perspective, but also from a social responsibility perspective as well; what Giroux (2006) and others have described as ‘critical pedagogy’. I was also increasingly aware of my new role potentially aligning me closer to managerialist approaches, which was being actively encouraged: in appraisal meetings I was told that I should be spending more time in meetings and thinking about our strategy, rather than in the classroom - something that did not sit well with me.

I did however, recognise that I needed to try and bring about change in some of the ways the team and I practiced, and to do this, I felt that I needed to dedicate more time and effort into my new role. This, in addition to the tension I was personally experiencing by undertaking a doctorate that was seemingly condoning the system that it belonged to (which from a practice perspective I was in many ways at odds with) eventually resulted in me interrupting the EdD programme. I'm still not sure which of the factors was the most significant in my interruption; my need to focus more attention on my new role or feeling compromised by participating in a system that I was increasingly questioning. Perhaps it was a good measure of both. Fortunately, this decision proved to be a positive one, both for the team and myself.

With an increased focus on the Learning Development team, it started to function in a way that we collectively shared and believed in. Through creative interpretation of institutional policies, some great new initiatives were brought about. Initiatives that engaged us as individuals, started to reframe the ways in which we were trying to support students, and gave us choices. Other parts of our practice were dropped, or reduced to minimal levels, as our focus shifted more towards the quality of what we were trying to do rather than the quantity of it. We felt that even when we were doing a great job, we still got cut, so decided not to be driven by quantitative measures alone. Ironically, I felt that the reduction in our team brought about by the cuts, had provided us with an opportunity. For it would have been impossible for us to maintain the previous service levels, and by not being preoccupied by a 'service delivery' approach, it liberated us from the often-excessive service evaluation requirements.

As well as our team ethos changing, my practice also changed, I believe also for the better. I started to focus on broader principles of our practice, in academic writing and critical thinking, which had been informed by my work on the EdD programme. I was working with students in less prescriptive ways, encouraging them to engage with their discipline and studies from a wider range of perspectives, which was more akin to my understanding of critical thinking and academic writing. I felt more confident in what I was trying to teach and convey to students. Although, this confidence was tested at times, as staff who had become accustomed to the prescriptive ways in which we, or at least I, had been working previously often needed convincing of our new approach. Being largely, although not always, successful in this, gave me greater belief, both in my own practice, as well as what we were doing as a team, and once again in the wider potential of HE. So much so, that after just over a year's interruption I resumed my doctoral studies.

Upon this resumption I felt a desire to explore a new topic, one that represented a change in direction from the previous focus, but which seemed to be more reflective of the EdD journey that I had experienced up until my interruption. Resuming my studies, and upon deeper reflection on this journey, I developed my interest in critical thinking, which as mentioned in the introduction, was partly triggered by a specific interaction with a colleague. But there were other influences as well. I wanted to gain a better insight and understanding of the role of critical thinking, for me as a learning developer, and for the students and staff that we worked with. I was enjoying teaching what for me was a new and different version of critical thinking, one that had been informed by authors such as Brookfield (2012), that encouraged the questioning of issues such as power

and agency and took into account the consideration of wider perspectives. Brookfield (2012) outlines some of the approaches, or teaching-learning activities, that his research suggests helps students develop a more critical approach, which include:

- That it is best developed through social processes
- That it needs to be modelled by tutors and teachers
- Examples should be drawn from, and grounded in, concrete experiences
- It is helpful to get people out of their comfort zones, what he calls disorienting dilemmas
- And, that it needs to be facilitated through an incremental and developmental process

Drawing on these principles in my practice made for more enjoyable teaching, both from mine and hopefully the students perspective, particularly encouraging dialogue and debates where the students were able to share ideas and contest knowledge in their disciplines. It no longer felt like the prescriptive, or deficit approaches that I felt I had been ‘delivering’ previously. Although the outcomes now might not always have been immediately apparent to students, as the focus was less likely to be on addressing a specific question or assignment but was instead focused on wider principles. Hopefully they would come to recognise this in more meaningful and longer lasting ways over the course of their programme. What I was not always sure about was whether this was in-line with the expectations of the staff and programmes I was working with, and it was this that I wanted to explore in more detail.

This interest in critical thinking was also heightened through other areas of our practice, particularly working one-to-one with students in tutorials. These would quite often centre on unpacking assignment feedback from markers and looking at how to work on these areas in future assignments for students. Critical thinking, or analysis, and the lack of it was something that was regularly mentioned in markers' feedback. With comments such as, 'Your discussion does not go deep enough', 'You need to be more analytical', and, 'Your thinking needs to be more sophisticated', I became increasingly aware of confusion amongst students regarding the expectations being placed upon them, and how they were supposed to evidence these in their work. It seemed as if there was a significant gap between their understanding and their tutor's expectations, and in a number of programmes, I was not aware of there being anything in place to try and bridge this gap. This initial interest resulted in my research-gaze focusing on students, and how they understood this term. However, my focus soon shifted towards the information they were provided with and how useful this was, such as handbooks and assignment briefs, which was quite often all that the students got. Finally, after further consideration, I realised that at the granular level, where it really mattered, was with the tutors and teachers, how they understood, practiced, and tried to facilitate critical thinking. Their perspectives, I thought, would have a far greater impact on how their students subsequently understood critical thinking, and it was this therefore that became my topic of focus.

This chapter has provided an outline of my own experience in relation to critical thinking, which is important in clarifying why and how I understand it as I do, particularly given its contested nature and the multitude of interpretations there

are. This is something that felt necessary, for as mentioned at the beginning, my own experiences of critical thinking cannot help but ‘veil’ and influence the way I interpret the data generated, as well as inform how I discuss it with participants, and over the following chapters. What is more, I am aware that this understanding is also fluid and will evolve, responding to changes in the way knowledge is created and applied, as well as in relation to how my own identity shifts, which will be a reflection of the interactions I have with both students and staff. Thus, reiterating the critical realist stance that has been taken, in recognising that any attempt to describe the world and its social interactions, through the relationship between structure and agency, are bound to be fallible. As Scott reaffirms, the understandings themselves cannot be explained in any absolute sense as they will be continually open to change themselves (2005).

What I am also hopeful of however, is that the journey of this work does not end up solely a theoretical one. Whilst I have been incredibly influenced by many authors in my EdD reading, I have also been conscious of how many of them are ‘just’ critiques, with no real solutions or alternatives offered to remedy the faults that were being highlighted. As Giroux points out, ‘Critical thinking divorced from action is often as sterile as action divorced from critical theory’ (2014: 25). I want there to be some tangible outcome from this work. This is why, as well as looking at the understanding of academic staff, and their approaches to the facilitation of critical thinking, I also chose to analyse the factors that influenced this, so that this could potentially be developed into a framework, theory or model, that could go on to inform teaching-learning interactions and curriculum design.

In summary, I do firmly believe that critical thinking is a significant part of what a university education is about, but that it is in danger of being compromised given the current direction of travel for many universities. It does require time to help students develop and practice their understanding of critical thinking, and it does not progress, or accelerate, at given times of year, such as when transitioning from year to year, and under, or through, specific conditions or contexts, but needs demonstrating and reinforcing regularly. It also needs space to be developed, and by this, I mean space within the curriculum, where students are provided with the opportunities to express their views, discuss and debate alternative views, without this always being linked to 'high-stakes' assessments. In these conditions, students might be better able to demonstrate critical thinking as academic staff understand it, within their disciplinary and institutional structures and cultures, and through more complementary relationships. This in-turn will create a positive loop, providing students with a greater degree of agency in this process. Without a better understanding of this relationship, the claims of 'shallow' and 'instrumentalised' thinking will no doubt continue, and it will only be through greater insight, that we will be able to adapt our teaching-learning interactions and curriculum design, so that students do have a realistic chance of developing this valuable skill.

The next chapter will now provide a more detailed discussion on the methodological positioning and approach of this study.

3.0 Methodology

This chapter will provide greater detail concerning the methodological approach adopted in this study, and the research methods that were employed in its undertaking. It will incorporate a critical review of the study's rationale and the subsequent research questions that developed from the rationale. It will also provide a detailed account of the methodological position taken, and an analysis of the implications this had on the research methods employed. Also discussing the limitations of the study and the ethical considerations.

3.1 Research questions

The aim of this study was to explore the concept of critical thinking across a range of discipline areas, in order to gain insight into how it is understood in relation to the individual identity of academic staff, as well as the identity of their disciplinary areas. This insight was to then be augmented by observations on a variety of teaching-learning interactions that the academic staff undertook when trying to develop critical thinking with their students. By exploring these two research areas and their relationship, the study aimed to identify if there was inconsistency, or indeed conflict, between the understandings academic staff have of critical thinking in their different discipline areas, and the approaches

they adopted in developing it with their students. Furthermore, to identify what causal factors are responsible for any discrepancies between understanding and practice.

Greater insight into this relationship, between understanding and facilitation, would lead to more flexible, versatile, and informed approaches being employed regarding how critical thinking is incorporated into teaching-learning interactions. A further benefit would also be the option to inform the organisation and structuring of the curriculum more widely, when considering the development of certain academic skills. The overarching question, or theme of this study was therefore, how do academic staff talk about and understand critical thinking across different disciplines at this University?

This will be informed by two sub-questions:
To what degree does their understanding and use of critical thinking vary across these disciplines?
And,
How do academic staff try and convey this to their students?

These research questions build on the findings of three closely aligned studies, undertaken by Moore (2011; 2011a; 2011b), Johnston et al., (2011) and Jones (2007; 2009). Perhaps the most comprehensive of these studies was by Johnston et al., (2011), who undertook a two-year study, focusing on critical thinking in two contrasting discipline areas, Social Work and Modern Languages, across all year groups. A range of research methods, including student case studies, staff interviews, observations, and document analysis,

were all used in the study; there will be analysis in relation to the methods of this study further on. One of the main findings in the study by Johnston et al., was that:

> ‘There is little empirical research on the key questions of what is actually happening in terms of criticality development across higher education curriculum in ordinary undergraduate classrooms. Research is needed that displays awareness of the wider social, political and educational contexts in which these classrooms are operating, and which is framed by a theoretical understanding of what criticality might be or how it might develop’ (2011: 67).

Points that this study intended to make a contribution towards, developing a wider understanding of how critical thinking is understood across discipline areas, what social political and educational factors are influencing this, and how that then might be theorised in order to inform further curriculum development.

In contrast to Johnston et al., Moore’s study was not as comprehensive, with the data collection mainly being based upon interviews with academic staff from three discipline areas; History, Philosophy and Literary/Cultural Studies. In addition to this Moore also incorporated document analysis into his study. Whilst the sample of seventeen academic staff in Moore’s study is relatively small, and as such not representative (something it must be noted Moore was not attempting to do) the fact that he encountered seven different definitions highlights the multiple understandings the concept of critical thinking enjoys (2011a). What Moore also highlighted was that the academic staff they spoke to seemed to have quite well-developed understandings of the concept of critical thinking that they were able to articulate. Furthermore, that the academic staff were also seemingly able to convey these interpretations to their students

(2011a). Unfortunately, without undertaking any observations of teaching-learning interactions, it is unknown whether the understanding academic staff had translated well into to practice. Therefore, questions regarding how academic staff understand critical thinking and how it is used in their teaching (Barnett, 1997) remain unanswered.

The initial study undertaken by Jones (2007), was slightly different to the other two just introduced, in that it focused instead on 'generic attributes', with critical thinking considered one of these. Critical thinking then became the main focus in her follow up work in 2009. Once again, interviews represented the main method of data collection, with a larger sample population of thirty-seven academic staff, from five discipline areas, but this time from across two institutions. Jones' study was also supplemented with document analysis. As with Moore's study, Jones' intention was not to try and determine disciplinary definitions of generic attributes and critical thinking, the sample again not being large enough to do this, but rather, to try and illicit whether there was a relationship between disciplinary cultures and the way attributes are constructed (Jones, 2007). The main finding of Jones's study was that:

> 'More significantly, however, are the qualitative differences in the ways in which generic attributes are conceptualised. The findings suggest that, while skills such as critical thinking and problem solving are of central importance in the five disciplines studied, the meanings attached to them are fluid. Further, the way knowledge itself is conceptualised, sought and validated in the disciplines shapes the ways in which critical thinking is understood' (Jones, 2009: 88).

These findings by Jones certainly point towards there being disciplinary interpretations of concepts like critical thinking; to what degree that is seen in this study might well depend upon the disciplines that are involved.

Collectively, these three studies highlight the need for further work in this area for three key reasons. Firstly, they point towards the need for further empirical research that will explore the conceptualisations academic staff have of critical thinking across a wider range of discipline areas. Secondly, that whilst many academic staff may have well developed views and understandings of critical thinking, and that they are able to articulate these to their students, there still remains a question regarding how that translates to teaching-learning interactions. Thirdly, that there may be a number of factors of micro and macro origin; that influence this relationship between understanding and practice as it relates to the structure of HE, and the agency experienced by its students and staff; which themselves, are in response to wider social, political and educational factors, and need to be taken into account.

3.2 Philosophical positioning

All of the three studies mentioned above, make reference to the importance of ontological and epistemological understanding in relation to disciplinary conceptualisations of critical thinking. As for these studies themselves, they were all grounded in slightly different philosophical or methodological approaches. Johnston et al., employed an 'ethnographic-type technique', which incorporated the microanalysis of interviews, texts and documentation from a range of sources (Brumfit et al., 2004), which could also be deemed as a form of discourse analysis. Whilst Jones does not express the philosophical foundations of her study, it was largely based upon interviews, with the data being 'emergent' from these, which could suggest an ethnographic

underpinning. Moore provides a detailed account of these considerations in his book, *Critical Thinking and Language* (2011b). Drawing broadly on a phenomenographic approach, he also incorporated a form of textual analysis, or what he called 'textography', to supplement the interviews. Moore claims that the phenomenographic approach he employed is distinctive from ethnography, without actually highlighting how, but also suggests that they both suffer from a similar criticism, and that is regarding the authenticity of data generated through interviews. As Moore questions, in interview situations, can an individual authentically experience and reflect upon the phenomenon being considered (2011b)? Moore then goes on to discount the use of observations to supplement the other data sources, as he thought them 'impracticable', and that they 'would not allow for sufficient focus on the key term' (2011b: 57). It must also be noted however, that in one of his other texts, Moore describes his research methodology as 'broadly ethnographic' (2011). These studies have therefore drawn from a range of methodological approaches, including phenomenographic, ethnographic and discourse analysis. They have also largely followed interpretivist theoretical perspectives, being underpinned by constructionist understandings.

Haggis usefully highlights that too often research that explores HE pedagogical theory has a tendency to reflect fairly limited conceptual frameworks, and 'one-dimensional, institutional perspectives' (2008: 163), that perhaps do not accommodate the many layers and complexities involved. This 'one-dimensional' approach is something that has been evident throughout this EdD programme, where it felt that there was an overriding preference, or even an

expectation of adopting a social constructionist methodological stance. More specifically, and in relation to this study, Haggis added that:

> 'The theoretical shift in the social sciences towards an interest in understanding 'things in context' implies the need to investigate difference and particularity. This is arguably of particular relevance to educational research, as it attempts to create knowledge that can be used in relation to practices in specific contexts. But practices, and people, in specific contexts are particularly difficult to investigate from the dominant epistemological, and ontological, position[s]' (Haggis, 2008: 161).

Although Cousin does also warn against the endorsement of 'mindless eclecticism' with regard to methodological approaches. Instead suggesting this should be balanced with not too strong alignment to any particular paradigm, that potentially encourages a limited view of empirical research, and treats the 'hunting and gathering' of data as the main purpose of research activity (2009). With this in mind, there is a degree to which we should accept, or even celebrate, the 'messy', but real, nature of social research (Crotty, 1998). As mentioned in the introduction, this study has been grounded in a critical realist stance in relation to its methodological approaches.

The first point to highlight regarding critical realism is in relation to its methodological positioning. Whilst outlining the three main claims made by critical realists, Scott points out that the first of these is the understanding that there are 'significant differences between the transitive world of knowing and the intransitive world of being' (2010: 4). Furthermore, based on the writing of Bhaskar (1989), that the two of these, essentially ontology and epistemology, should not be combined or 'conflated', as this would result in either, ontic or epistemic fallacies. Critical realism is therefore based on the assumption that ontological theory presupposes epistemological theory (Scott, 2005). Bhaskar

distinguishes these as ontological realism and epistemological relativism (1978), and so ontology becomes the main focus of critical realism (Sayer, 2000). This gives us the understanding that there is a reality that exists 'out there', but this is independent of our individual understanding of it, and for this reason, it is not possible to understand the reality in any absolute or concrete terms (Scott, 2005). McLachlan and Garcia put this in a simpler form, 'what exists in the social world cannot be reduced to what we know about it' (2015: 197).

This leads us to the next claim made by critical realists according to Scott, that there is also a commitment to ontological depth when researching or observing the social world (2005). This ontological depth is stratified, in that the reality of society is made up of successive layers, at the intra-personal, interpersonal and social structure levels, and the relationships between these layers are emergent (Scott, 2005; Priestly, 2011). It must be noted that the emerging properties from the layers, are not straight forward combinations of their individual parts, but rather the emergence of a new entity that is not predictable or certain (Case, 2015a). Take for example the stratification evident in this study, the many layers, from academic staff as individuals, through to their programme, department or discipline, then school, faculty, or institution, and finally, the wider sector; and that the various ways individuals have of understanding the social world in relation to these strata will be emergent from how the layers combine. The emergent properties that stem from the structures are brought about by the unique effects possessed by each of the structures themselves (Scott, 2014). For example, an individual member of academic staff will not possess the same attributes or powers as the department that they belong to does as a whole.

Bhaskar also adds here that the powers or attributes held act with potentiality, in that they are always there, with potential, but not always necessarily realised (1978; 1989).

There is a further point here regarding ontological depth, in addition to its stratification, which is highlighted by Scott and Priestly, and that is how critical realism distinguishes between three domains of reality: the empirical, which is the experienced; the actual, which occurs in a historical context but may not be experienced; and, the real, which comprises the structures of objects, and their causal mechanisms (2014; 2011). Scott also points out that the first two of these domains, the empirical and the actual, are both 'real' and can be considered part of the real domain, it is just that the real domain is also inclusive of the structures of social objects and their emergent properties (2014). When talking of social objects in this sense, Priestly suggests these can come in the form of customs, traditions and other social structures (2011). Once again it is the layers of understanding, in relation to critical thinking, that this study aims to explore, particularly in relation to possible customs or traditions that may exist in each discipline.

The final claim made by critical realists, Scott outlines, is that the social world takes place in open systems. This is in contrast to closed systems, which operate in a consistent fashion and do not change in their nature (2005). As has been demonstrated in the points made above regarding social realist philosophy, the ontologically stratified depth of objects and their structures, as well as the power and attributes experienced by individuals and their social groups, and the emergence of the interactions between all of these, means that

these systems are always open to change and can never be considered fixed or predictable.

This is particularly so in relation to educational research, which as Scott argues, is made all the more difficult as the objects under scrutiny (individual behaviour, relationships between individuals and social groups, and the structural properties of systems) will naturally change over time and across settings, with external powers, political, social, economic, are all also in constant flux (2005). The open nature of social actions and interactions, reinforces the first claim made of social realism, and that through the various layers, their attributes, powers, and relationships, and the mechanisms and properties that emerge from them, all exist independently of our knowledge of them (Priestly, 2011). Whilst for some this may seem a flaw of critical realism, that we are only able to know, understand, or interpret social reality through our own subjective conceptual schemas (Priestly, 2011), for others it represents the ‘critical’ part of critical realism.

There are a number of factors that contribute to the ‘critical’ nature of critical realism. The first of these, which has been alluded to above, is in relation to what has been termed the ‘looping’ effect of social reality (Scott, 2010). In essence, the observations and descriptions that researchers make are always ‘one step behind’ that which actually takes place, because their description may either, influence a new emergence of that object, or, become redundant as the object of study is part of an open, constantly changing system (Scott, 2010; 2005). This, Scott reinforces, is not due to errors on the researcher’s behalf, or fallibility of the approach taken, but instead recognises that:

> ‘There is no outsider perspective that allows the individual access to complete knowledge, including knowledge of how the world works. … because what is considered to be at that moment in time the most appropriate way of describing the world constitutes the reality that is external to individuals to which they have made reference … [which] implies that new ways of describing the social world are always operating and replacing old ways, even if those new ways are in a critical relationship to the old’ (Scott, 2005: 636).

It is through an understanding and acceptance of fallibility, which should be recognised in all research methods, that the second ‘critical’ factor in critical realism arises from, and that is a commitment to internal critique. For Cruikshank, internal critique is part of any rationale for a critical realist approach, and its continued development as a philosophical method (2002). Scott, further emphasises that it is through internal critique that critical realists develop their notions of objectivity and truth (2005). This internal critique has also been expressed in terms of reflexivity. In Kahn’s review of critical realist methodological perspectives, he believes that reflexivity is central to a critical realist understanding, and specifically in relation to emancipation (2015), which is the final, and perhaps most relevant factor in making critical realism critical. Kahn draws on Bhaskar here, in reiterating how accounts of social reality are value-impregnated as well as being value-impregnating, which subsequently encourage emancipatory principles in social science (2015). Naturally, the adoption of a critical approach, Scott highlights, also suggests that whatever is under consideration is not perfect and is therefore in need of development and improvement (2010), essentially being critical of the object of study.

Whilst all of the above claims regarding critical realism make it an excellent ontological position to guide this study, there is one other point that makes it all

the more relevant and appropriate. It is what Scott describes as ‘the key framing device at the ontological level’ for critical realists, and that is the relation between structure and agency, or individual self-determination and social context (2014; 2005). Whilst reference has already been made to the idea of structures, and their mechanisms and properties, it is how these interact with the agency of individuals that is of interest to critical realists. This is what Scott points out as:

> ‘the focal point of any investigation: the degree of structural influence and the degree of agential freedom for each human actor. This is the crux of the matter because it allows the researcher to understand the complex relationship between agency and structure at each time point’ (2014: 38).

As mentioned in the introduction, the work of Margaret Archer has been influential in how the concepts of agency and structure are framed here. Whilst she identified four different versions of this relationship, it is her morphogenetic/morphogenesis version that has been drawn upon here, where agency and structure have distinct properties and powers, and should not therefore, be subsumed by each other (1998). This is highlighted once again by Scott, where he outlines how social structures precede an individual’s ability to exercise agency, but also how individuals instinctively monitor the social world, and in return, exert an influence, which impacts on the nature of the structures (2005). Or, as Archer herself states, ‘how structure shaped interaction, and interaction, in turn, re-shaped structure (2000: 464). For Case, it is this, the morphogenesis of student agency that is at the heart of a critical realist analysis of student learning in HE (2015b). It was also highlighted in the introduction, that for Archer, what is important here is whether any changes in structure and agency are in a complementary or contradictory relationship (1998). This again

adds to the rationale for the critical realist positioning, as it helped illuminate whether the micro and macro structures of HE are in a complementary or contradictory relationship with the teaching-learning interactions that take place regarding critical thinking.

The understanding of critical realism that has been outlined, provided by Bhaskar, Archer and Scott, is just one of many interpretations, that can, and has been, applied to many areas where there is social change (Case, 2015). In relation to pedagogic research however, it has not been widely utilised, barring the work of Scott (Priestly, 2011), and more recently Case. Perhaps this is partly due to Haggis' claim of dominance and over-reliance on long-established ontologies and epistemologies in educational research (2008). However, the low number of researchers and studies adopting a critical realist approach is quite surprising, given the number of recent authors that have suggested what opportunities it has to offer in this field.

In Kahn's study on methodological approaches in pedagogic research, he felt that critical realism provided a paradigm of 'rigorous grounding' for exploring how methodological approaches affect teaching and the emancipatory potential of HE (2015). Kahn also noted how it 'offers a non-reductive explanatory critique that draws attention to the underlying basis for the actual events we experience' (Kahn, 2011: 443). Priestly describes critical realism as providing 'a powerful conceptual tool, both epistemological and methodological' when educational questions are being addressed, particularly in relation to issues of curriculum change (2011: 227). Case, also highlights how a critical realist

approach, informed by the work of Archer, can be usefully applied to frame research on student learning in HE (2015b).

The final comment to support the use of a critical realist methodological approach, and why it is appropriate for a doctoral study such as this, comes from Priestly, who believes that because it has not been drawn upon a great deal, it therefore ‘offers the potential for a fresh perspective on the thorny issue of curriculum change, both in terms of how policy makers construct policy for change, and in the management of change’ (2011: 231).

3.3 Research methods

Having outlined the methodological position and approach that underpinned this study, I will now discuss the methods that were employed to generate the data. Similar to the studies conducted by Moore (2011), Jones (2009) and Johnston et al., (2011), the intention here was to focus on listening to academic staff regarding their understanding of critical thinking, rather than seeking to generalise and define these understandings, as has been the focus of so many studies. The aim was to look into how the discourse of critical thinking is incorporated, fostered and played-out in their practice, discipline and epistemology, through their own voices. As such, it aimed to appreciate the integral but varied nature of critical thinking within and across their disciplines, how it is constructed, used and taught, as Jones refers to it, ‘discipline knowledge in action’ (2009). To serve this effort best, a combination of interviews, focus groups, and practice observations were planned. However,

before discussing the rationale for this selection, I will first discuss the process of recruitment for the disciplines and participants involved.

The first part of the research process was therefore to select the sample populations, both the specific discipline areas, and the individual participants to be involved. In order to address the intention of this study, to ‘open-up’ the topic of critical thinking, a good range of discipline areas needed to be selected. A range that would reflect variations in disciplinary principles, from ‘pure’ subject areas, to the more professional or vocational ones; as well as comparing more science-based subjects with those that have a more of a social, or arts and humanities emphasis. This represents an exploratory sampling approach, where the selection criteria emphasis, is on ‘illuminating’ the subject area with interesting examples; in comparison to a representative sample, that endeavours to involve a more comprehensive cross-section of the population (Denscombe, 2014). Cousin refers to this more specifically as, ‘purposive sampling,’ in that it enables the strategic identification and recruitment of groups and individuals that will offer certain characteristics to aid the enquiry (2009). Or further still, to demonstrate variety in the data generated. Bryman (2016) outlines that sampling of this nature has been referred to as ‘maximum variation’ sampling, where it is hoped a wide variation in dimensions of interest are captured.

However, Bryman also adds that through this non-probability but purposive approach, the researcher is subsequently unable to generalise their findings (2016). This is part of a ‘trade-off’, according to Usher and Scott, between the ability to generalise any findings, and the detail to which they can go (2011).

The intention of this study is on the later, a rich and detailed understanding of the participants lived reality, rather than trying to determine any concrete laws. Something that would not be in-line with the critical realist approach, it therefore did not require there to be a large number of disciplines represented, just a good range of them. In addition to this point, the sampling approach also had to be mindful of the limited resources available to the study, and what was realistically achievable within the timescale, thus prohibiting a representative sampling approach as there are more than 20 schools in the institution. Furthermore, by wanting to get a range of responses from within each school, to be able to see if there is any disciplinary consistency, this would place a restriction on the total number of interviews to be conducted, which is addressed further on. With this in mind, four schools were considered the right number from within the University.

The selection of schools invited to participate in this study was also ‘purposeful’, as their consideration was not only based upon what they might represent, or contrast with, in the way of data captured. They were also selected on the basis that I had established professional working relationships with a number of academic staff within certain schools, and I felt that having worked with some of them, either in a teaching or research capacity, this might help with recruitment for the research. This would be deemed as opportunistic sampling (Bryman, 2016), as well as purposeful. Through this process of selection, the Schools of Medicine, Law and Criminology, Environmental Science, and the Institute of Education, were all approached to participate.

I recognise that this sampling approach raised two issues. The first was the risk of increasing the effect of both my and the participants 'situated knowledge', which relates to the familiarity either researchers or participants might have about the research setting (Kahn, 2015). This is often a prevalent feature of pedagogic research according to Kahn (2015), but this decision was made here in recognition of the time pressures on this study's research process. Secondly, the approach also ran the risk of introducing an element of bias into the data collection, for having worked with certain members of staff within these schools, particularly in the form of teaching, they may be aware of, or indeed influenced by, the approach that I, and the wider Learning Development team, take in relation to critical thinking.

My role within the University as a Learning Development, and the possible implications this has for this study has already been considered in detail, however it will be prudent for 'trustworthiness', to outline what this actually means for the schools selected. I have facilitated workshops for a range of programmes in all four of the schools selected, at both undergraduate and postgraduate level, some of which have specifically been on critical thinking. On that basis, there is the possibility that I could have previously worked and collaborated with any of the participants involved, and sub-consciously informed their understanding on this topic.

Further to this, there are programmes within some of the schools that I or my team members have worked more consistently with over a number of years, therefore, Learning Development, our skills and experience, may be already integrated within these disciplines, forming part of their discourse. In contrast to

this, other participants whose teaching roles have not brought them into contact with my practice or Learning Development, will know little about our work and role within the University. These differences may influence their understanding of critical thinking, particularly if they are aware of the approaches we use, or, if they had drawn from any of the generic resources we develop, such as the study guide on critical thinking, again giving insight into Learning Development's way of discussing this topic.

Added to this is the understanding I have developed of their programmes over time, through the collaborations mentioned above but also through providing one-to-one tutorials with students from their schools. This again varies depending upon how much their students are aware of, or feel they need support from, Learning Development. In the schools where there is a high level of support for the students, I will have a better understanding of that programme and their curriculum from discussions with the students. This, in-turn, will influence the way I am able to explore this with the academic staff, potentially enabling me to open up more insightful discussion with participants on areas such as, assessment, marking and curriculum design. It is therefore important to be mindful of what Cousin reminds us, that 'no method can excavate the pure voice of the interviewee', if there is such a thing (2009: 195). She goes on to point out that as with any research approach, the quality will only come through careful consideration of the collection of data and its analysis, and any possible alternatives.

Before approaching any staff in each of the schools chosen, formal approval was sought from the Head of School in each case, to ensure they were happy

for me to undertake the research with their staff. Approval was sought by email, with an information sheet attached (see appendix) that outlined the research aims and objectives, methodology, and expected outcomes. Once approval had been gained, a distribution list of their teaching staff was acquired, in two schools this list was given to me to use, in the other two schools an administrator sent out information and made contact with academic staff on my behalf. Denscombe (2014) highlights how bias can still be introduced into sampling in this way, as any contact list may be incomplete, or they may use different criteria for ‘teaching staff’ or ‘academic staff’, possibly not including associate lecturers, part-time staff, or others not on permanent contracts. Thereby potentially biasing the sample towards particular groups. There was little that could be done about this, trust had to be put into to those assisting in this part of the recruitment process, acknowledging the valuable support they were providing.

An information sheet outlining the research proposal, along with an introductory email was then sent to the academic staff on each distribution list, asking them to contact me if they were interested in participating in the study, or, if they would like any questions answered to find out a bit more about the study before committing. The initial response to this request was mixed, from six staff indicating they would be interested in one school, to some being interested but busy in another, and no interest at all in another school. In the cases where the response was low, after a few weeks a second email was sent out to try and bring the study to their attention again. If this still did not recruit the required number of participants from each school, then known members of staff within

each of the schools were contacted directly to personally ask if they would like to be involved.

The participants from each school were ‘purposefully sampled’, to enable a good variation in responses, regarding their experience in HE, position and role, but also, so as not to generate too much data that it would be unmanageable within the resources and timescale the study was operating. Bryman (2016) discusses sample size, indicating a variation in the numbers deemed acceptable for publishable research, being anything from 12 up to 60. However, this number must reflect both the intentions of the study, which in this case is exploratory and not intending on reaching ‘theoretical saturation’, and the methods of data collection being utilised. Borg and Gall (1979, cited in Cohen, Manion and Morrison, 2011) suggest that causal-comparative and experimental studies require a sample of no less than 15. Whilst Crouch and McKenzie (2006) highlight the value of smaller samples, fewer than 20, as this makes it easier for the researcher to get closer to their participants and generate more detailed data. With this in mind, four interviews and one focus group were planned with each of the four schools, resulting in a total of 16 interviews and four focus groups, as well as undertaking the practice observations. One extra person was interviewed in Law and Criminology, making the total number of interviews 17. Table One overleaf lists the participants by their pseudonym, as well as their role, discipline, and years of teaching experience in HE.

Interviews were considered the most appropriate form of primary data collection in this study for a number of reasons. Firstly, as Scott highlights, critical realists prioritise the experiences, projects and desires as they are described by its

social actors, even if these may not always be complete and accurate accounts (2005). Furthermore, this would be in-line with the other studies undertaken on this topic by Moore (2011), Jones (2009) and Johnston et al., (2011). Interviews are also deemed particularly rewarding when wanting to explore 'complex and subtle phenomena' (Denscombe, 2014). More specifically, interviews, are effective because of their ability to explore and develop an in-depth understanding of individual's experiences and perceptions (Cousin, 2009; Denscombe, 2014; Moore, 2011b). In this way, Cohen, Manion and Morrison, discuss interviews as a method that:

> '... enable participants - be they interviewers or interviewees - to discuss their interpretations of the world in which they live, and to express how they regard situations from this own point of view' (2011: 409).

Table One: A list of participants, their role, discipline, and teaching experience.

Name	Role	Discipline	Years in HE
Jan	Lecturer	Education (E)	8
Paul	Lecturer	Education (E)	2
Sharon	Lecturer	Education (E)	15
David	Lecturer	Education (E)	9
Anna	Associate Professor (Reader)	Criminology & Criminal Justice (L&C)	35
Paula	Associate Professor (Senior Lecturer)	Criminology & Criminal Justice (L&C)	17
Debbie	Associate Professor (Senior Lecturer)	Criminal Justice Studies (L&C)	23
Mary	Lecturer	Law (L&C)	6
Barbara	Associate Professor (Senior Lecturer)	Law (L&C)	20

Chris	Associate Professor	Medicine (M)	20
Rita	Associate Professor	Medicine (M)	15
Mike	Associate Professor	Medicine (M)	25
Helen	Professor	Medicine (M)	15
Peter	Associate Professor (Senior Lecturer)	Environmental Science (ES)	20
Christie	Lecturer	Environmental Science & Geology (ES)	25
Sally	Associate Professor	Environmental Science (ES)	16
Gary	Lecturer	Environmental Science (ES)	14

It is the 'interpretations' academic staff have of critical thinking that this study aimed to draw out, and to then compare these with participants approaches to their teaching-learning practices.

Whilst generating verbal 'knowledge' in this way is befitting of the methodological underpinning of this study, in the context of an interview, this knowledge can extend beyond the verbal, sometimes taking into account the pauses, and other non-verbal, multi-sensory cues, that can also be revealing (Cohen, Manion and Morrison, 2011). The degree to which these can be drawn-out partially depends on the nature of the interviews and how structured they are: being either, structured, semi-structured or unstructured (Cousin, 2009). As the topic of enquiry offered the possibility of a range of subtle variations in responses, the approach required some flexibility and adaptability in the questioning. Further to this, as Cohen, Manion and Morrison explain, the more open-ended the interview the more effective it is at generating 'unique, non-standardised, personalised information' (2011: 412).

When conducting semi-structured interviews, Cousin places the emphasis on the researcher not having too much prepared in the way of questions, but to be able to tease out the interviewee's understanding and conceptualisation, and let the discussion lead on from this (2009). In this way, topics or themes are identified that form the basis of the interview, which can then be adapted and modified by the interviewer in order to suit the circumstance. For this reason, a handful or questions, or points, were prepared, firstly to start discussion off, but then to also facilitate further discussion if participants only provided short, quick responses. A copy of the planned questions is available in the appendix. This also represents a challenging element of the research, exploring the participants understanding or positionality of critical thinking, in an interactive environment, where Cousin reminds us, it is impossible for the interviewer to remain neutral in the 'meaning making' (2009). This, once again relates to my 'situated knowledge' of the topic and the disciplines involved in the study, which is as relevant in the interview itself, as it is in the subsequent data analysis, where there is also a significant degree of interpretation.

In addition to individual interviews, the intention of this study was also to conduct focus groups as an additional source of data collection. The theory behind this was that the interviews would gain an insight into individuals understanding of critical thinking. Unfortunately, the planned focus group element of the study could not be undertaken due to a number of reasons, and although the idea of focus groups had seemed appropriate and achievable in the planning stage, the reality was very different, and once the data analysis was well underway, I felt that more than enough data had been generated to answer the research questions.

The final part of this study wanted to gain an appreciation of how the academic staff tried to convey critical thinking to their students, whether this was in-line with their own understanding of the topic, and what factors potentially influenced this relationship. Whilst some of the studies reviewed gauged this through textual analysis of relevant teaching documents, I wanted to explore this through observations of their teaching practice; the teaching-learning interactions they planned and undertook with their students in a range of contexts. As some of the findings in the studies reviewed highlighted, respondents sometimes found it difficult to articulate what critical thinking meant to them, but 'knew it when they saw it', observations provided the means to understand this in more natural settings.

According to research literature, participant observations offer the opportunity to 'deal with the detail, the subtleties, the complexity and the interconnectedness of the cultures, lifestyles and beliefs being observed' (Denscombe, 2014: 215). From a critical realist perspective, the observations also provided insight into how some of the stratified layers interact. For example, in the interviews the academic staff could have positioned themselves in a number of ways, as previous learners, researchers, or curriculum planners, when talking about critical thinking, however, once the teaching-learning interaction is taking place they are in a different role, with different structures and properties. Furthermore, the observations gave an opportunity to explore how some of the different structures interacted with the agency of staff and students.

Once again, time constraints, and the time of year the research was undertaken, restricted the amount of observations that were possible. It was not feasible to observe all participants, indeed some of them only undertook small amounts of lecturing and other forms of teaching-learning interactions, and furthermore, this again would have generated a great deal more data. Also, as it was already a significant way through the academic year, the teaching activities were beginning to wane, with greater emphasis being placed on project completions and exams. The intention therefore, was to try and observe a range of teaching-learning interactions in as many of the discipline areas being studied. Table Two overleaf, outlines the observations that were undertaken. Throughout the observations notes were generally made on the teaching-learning interactions that were taking place and the student responses to these. Noting things like the questions they asked, when they asked them and what sort of questions they were, whether open or closed. What level of response they got from these. The style or approach adopted by the academic staff, how students appeared to engage with this, and any other points that I felt might be relevant to the topic of study. Notes made during two of the observations are available in the appendix.

Table Two: A list of observations of practice

Participant	**Activity**	**Duration**	**Number of students**
Debbie	Lecture	2 hours	26
Barbara	Lecture	2 hours	45
Anna	Seminar	2 hours	13
Anna	Lecture	2 hours	36

Rita	PBL group	2 hours	8
Rita	PBL group	2 hours	6
Paul	Lecture	1 hour	60
Jan	Lecture	2 hours	17
David	Seminar	2 hours	16
Peter	Lecture	1 hour	56
Sally	Lecture	1 hour	38

The final part of the research process involved the data analysis. For this, all interviews were audio recorded, transcribed in full and printed out. These were then read and listened to, repeatedly, and carefully, with topics and themes gradually emerging from them, that were then collated in to what seemed natural categories. This is similar to the data analysis approach taken by Jones, where her coding 'involved re-reading and validation through cross-checking across all transcriptions' (2007: 212). The categories, their sub-categories, patterns and themes, then went through a process of refinement, modification, and in some cases rejection. Cousin, warns against being too 'fetishized' about transcriptions, as if they are stable and accurate accounts (2009). Instead, she suggests reading through them, and listening to them a number of times over, being 'wild' in the initial stages of making notes, coding speculatively and densely, and from this categories and sub-categories will begin to emerge. The transcripts were also compared against the notes that were made during the interviews, and through re-listening to them, which tended to focus more on documenting the actions and behaviours of the participants, whether they

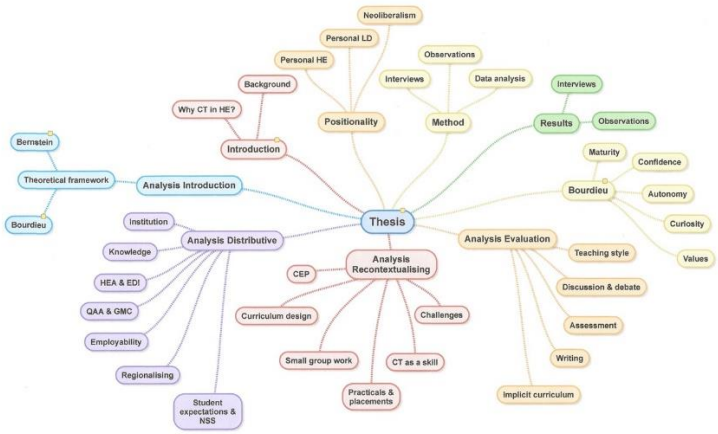
paused in their responses, or were quick to respond. Or other actions, such as rolling their eyes, or laughing, whilst responding.

Through this initial process, the following categories were identified in relation to critical thinking: Teaching-Learning; Knowledge; Profession and Practice; and, Personal. There were a range of sub-categories and codes below these. A table showing the initial stages of the data analysis categorising can be seen in the appendix.

In the study by Johnston et al., their coding was further developed through reflecting on the data in relation to their theoretical framework (2011). This represented the next stage of my own analysis and resulted in a change in the main categories. As outlined in the introduction, this study has been analysed through a combined theoretical framework, drawing on the work of Basil Bernstein, and his pedagogic device, and Pierre Bourdieu's theories of habitus and capital. A fuller introduction to this theoretical framework and its rational will be outlined in the next chapter. In summary, it provided a rich theory that encouraged close consideration of the structures of HE, through the pedagogic device. As well as focusing on the teaching-learning interactions, and issues of agency, through Bernstein's evaluative rules, and Bourdieu's habitus and capital. This resulted in re-analysing the data and initial categories, with them now being considered in relation to: the distributive rules, anything that related to the generation of knowledge, and who is able to teach it; the recontextualising rules, relating to the organisation and structuring of the curriculum; and, the evaluative rules, which included the actual teaching-learning interactions. Data coded in relation to habitus and capital, was noted

separately, but included in the relevant pedagogic device categories. Image Two overleaf outlines the overall thesis structure and new analytical coding categories.

Image Two: Thesis structure and data analysis coding structure.



3.4 Limitations

As with all research methods, and in-line with the adoption of a critical realist position, there are some recognised limitations regarding the research methods adopted, what would be deemed fallibilities from a critical realist perspective (Scott, 2005). The first of these has been alluded to already, and that is the idea that the researcher remains neutral throughout the research process. Whilst the intention here was to gain an understanding of the perspectives academic staff had of critical thinking, this was generated through dialogue in the interviews, which inevitably involve the interviewer, their positionality and situated knowledge, these situations thereby became dynamic social interactions, and to a degree, result in the development of shared understandings. This is something that became apparent in one interview, where, once asked how they

understood critical thinking, the participant replied with, ‘well I was hoping to actually learn something about it from this process’. There are two factors that guarded against developing a shared view with participants. Firstly, through the interviewing process, which was led by the participants as much as possible, exploring the topics that they raised, rather than rigidly following the set of questions I had prepared to guide the interview. Secondly, a critical realist approach accepts an element of fallibility in relation to the methods employed, but also acknowledges that the methods chosen were the most appropriate at the time (Scott, 2005).

Another form of fallibility, or possible source of error that critical realism recognises is that the responses from participants may not always be truthful. This was quite evident in one of the interviews undertaken, when I sat down opposite the interviewee in their office I saw on the computer screen behind them the results of an internet search, where the search term ‘what is critical thinking’ had been used. As such, their responses were potentially not what they truly understood critical thinking to be, but rather a ‘text book’ answer. Some of these limitations are of similar relevance in the observations, where the observers’ presence potentially influences the situation, creating an unnatural, or false environment. Although Denscombe does suggest that observations are one of the most likely to maintain the naturalness of the setting, when compared to other methods (2014).

The researcher is potentially even more influential in the data interpretation and analysis, as they record, transcribe, re-read and code responses, with the intention of identifying a handful of ‘categories of description’ or themes

(Cousin, 2009). This approach is where the methodology lacks scientific rigour according to Denscombe (2014), however as Cousin reminds us ‘no method can excavate the pure voice of the interviewee’, if there is such a thing (2009; 195). She goes on to point out that as with any research approach the quality will only come through careful consideration of the collection of data and its analysis, and any possible alternatives.

A further limitation of this study was its small-scale nature. Although the overall purpose was not to be able to generalise the findings, (indeed it wanted to try and move away from generalisations and provide a picture of the multiple ways critical thinking is understood at an institutional level) with only four schools, or discipline areas being researched, it could only provide a small part of that picture, as there are at least 20 schools and multiple programmes within the University. The hope therefore was that it will highlight the value of developing an understanding of the concept and how critical thinking is used within and across the disciplines, to better inform its teaching for students

3.5 Ethical considerations

All social researchers should approach and conduct their work in an ethical manner (Denscombe, 2014). Whilst the focus of the research was not particularly sensitive, nor its participants deemed vulnerable, it is prudent to try and anticipate any potential risk of harm and mitigate against this, however seemingly innocuous the research is. Denscombe highlights the key principles of research ethics as: protecting the interests of the participants; ensuring participation is voluntary and based on informed consent; avoiding any

deception and operate with scientific integrity; and, that it complies with the laws of the land (2014: 309).

Cousin suggests a number of points to be aware of with ethics (2009). The first of these is trustworthiness, first and foremost creating an environment where participants will feel able to discuss the topic freely. Further to this, to develop a rapport with the participants that will similarly facilitate open discussion. Trust was as important in the later stages of the research too, in the analysis of the data, which should be done honestly, openly and free of any bias or positionality. It is also an important consideration regarding the storage of any data, which should be done following recognised protocols.

The second of Cousin's ethical points relates to the well-being of the participants and the relevant institutions (2009). Whilst it was not a difficult topic of discussion for the participants, it required a certain amount of reflection on their behalf. Brookfield stresses how this can sometimes be difficult in many professions, particularly teaching, as it has the potential to 'other' individuals form the norms of the group, or even challenge these (1995). If this had arisen, support would have been offered to the individual in collaboration with the school, and participants had the right to withdraw from the process at any point. All participants and their schools were provided with a detailed outline of the aims and objectives, and research process, and in each case informed consent was gained, the third of Cousin's points.

The final point, similar to Denscombe's, is to do no harm. There was little to no possibility of this occurring in any physical sense, so in this case it was more

about individual's emotions and their relationships with other participants. This feeds back into the first point of creating the right environment and atmosphere for the participants, which was not only in the best interests of the individuals, but also the potential success of the research.

With regards to the observations, Denscombe identifies the key ethical considerations to be that no harm must come to the individuals involved, and the identities of the participants should not be disclosed (2014). As mentioned already, there was no possibility of physical harm to the participants, so again this could only have been on an emotional level. Therefore, particular attention was paid to setting up and conducting the observations, as many teachers can experience anxiety when their practice is observed (Brookfield, 1995). In these instances, it was made clear that it was not their practice that was being observed, rather the 'tools', language and understanding they employed. Also, due to the limited number of participants from only four schools it was difficult to guarantee anonymity, therefore any sensitive data generated was handled very carefully. A copy of the ethical approval letter, and consent forms can be found in the appendices.

The next chapter will now introduce the theoretical framework that was employed.

4.0 Theoretical framework

The analysis of this study is centred on participants' comments and observations in relation to critical thinking, and how these connect with the organising and structuring of pedagogic discourses, which in turn, affect teaching-learning interactions. Analysis of the data generated through the interviews and observations, has been divided into three categories, reflecting the work of Basil Bernstein and his Pedagogic Device (1990; 2000). The first section will explore the data in relation to the 'distributive rules', to analyse the wider influences on the curriculum and disciplinary knowledge practices. The second section will then discuss the disciplinary knowledge practices, and structuring of the curriculum, in relation to Bernstein's 'recontextualising rules'. Finally, the 'evaluative rules', will focus on the teaching-learning interactions (Bernstein, 1990; 2000).

Throughout this analysis, I have also drawn on the work of Pierre Bourdieu, and his theories of field, capital and habitus (Bourdieu, 1986; 1988; 1990a; 1990b; 1992). This is to explore the data more specifically with respect to the agency experienced by both staff and students in these pedagogic processes, in trying to interpret the functioning of this small example of HE practices in relation to the understanding of critical thinking.

It must be acknowledged that the works of both Bernstein and Bourdieu are quite capable of providing a thorough analysis of the data generated here and interpreting that data in relation to the research question on their own; both offer a range of useful theories that can be applied from micro through to macro issues. It must also be acknowledged that there are some 'grey' areas between the sections of analysis, as the boundaries between and within each of their own theories are not easily defined, rather acting as 'cumulative theories' (Maton, 2004). Bernstein himself acknowledged that there is a strong connection between his earlier work on codes, and how they create the conditions for Bourdieu's concept of field and habitus (Bernstein, 1990), a point also made by Apple (2002). However, addressing the analysis in the way chosen, played to both of their theoretical strengths; using Bernstein's pedagogic device to analyse the processes behind the conversion of disciplinary knowledge practices in relation to critical thinking, into teaching-learning interactions; and, Bourdieu's field, capital and habitus to explore the issue of individual power and agency involved in the structures and processes surrounding the teaching-learning of critical thinking in HE.

4.1 Bernstein's Pedagogic Device

Considering the first analytical tool applied, Bernstein's pedagogic device (2000; 1990), as just mentioned it consists of three sets of hierarchically interdependent rules: distributive, recontextualising and evaluative. As Bernstein states, the recontextualising rules are derived from the distribution rules, and the evaluation rules being derived from the recontextualising rules, this will be reflected in the approach taken here.

4.1.1 Distributive rules

The first set of rules in the pedagogic device are the distributive rules, which Maton and Muller describe as 'the ordered regulation and distribution of a society's worthwhile store of knowledge' (2006: 19). It is these rules that determine what knowledge is thought to be valuable. In Bernstein's latest version of the pedagogic device, he suggested that all societies had at least two 'classes of knowledge', the everyday, or mundane, and, the specialist, or esoteric (2000). The distributive rules control who can access these different forms of knowledge, and more importantly, who is able to generate new forms of knowledge (Maton and Muller, 2006). Historically, Bernstein points out that the 'gatekeeper' to specialist knowledge had always been the church, however, in more recent times it has largely been the premise of the education system (2000). As his own 'brutal simplification' states, 'In modern society, the control

of the unthinkable lies essentially, but not wholly, in the upper reaches of the education system' (Bernstein, 2000: 29).

Singh provides a very useful account of how the lines between the esoteric and mundane have become increasingly blurred, or at least fluid (2002), a point also made by Bernstein, in that what was once deemed specialist knowledge may over time become everyday knowledge (2000). Singh's main argument lies in relation to the way in which specialist knowledge is generated, both in volume and complexity (2002). He points out some important implications of this, which are particularly relevant to the HE context. This is that the specialist nature of knowledge often needs 'translating' before it can be pedagogised, adding that this is something those that generate the knowledge are not always able to do. Furthermore, that universal or public education does not necessarily provide automatic access to the relevant specialist knowledge, access can either be open to all, or, increasingly costly depending on who it has been generated by, and how.

Other considerations are noted by Singh as well: that our ability to grasp more 'new' knowledge is finite, yet the amount available to us, through various means, keeps on rising. It is also worth highlighting that when Singh wrote this in 2002, the public's trust in 'expert' knowledge was waning (2002); a slide, it could be argued, that has not been reversed in the years since. All of which has led to greater levels of complexity around knowledge creation (Singh, 2002), or what has also been termed, 'quantum leaps in the nature of and access to knowledge' (Krause, 2009: 416). Krause (2009: 413) more recently has likened this to the 'fragmentation of knowledge', citing HE funding, institutional reward

and promotional structures, the performativity agenda, and other institutional policies, as some of the sources for this fragmentation. These subsequently impact on the availability, access and reproduction of that knowledge. Meaning that the generation of knowledge, something long considered the premise of universities, is now considerably more complex, compared to when Bernstein first introduced the pedagogic device and distributive rules.

As with the creation of knowledge, there has also been a corresponding shift in who is able to distribute, or reproduce, this specialist knowledge, particularly in the HE context. Whilst in 2000, Bernstein suggested that state involvement in HE had lessened, it had still maintained an indirect influence through the Higher Education Funding Council Executive (HEFCE). The highly influential block-funding that HEFCE once provided has since ceased, yet state involvement in the distribution of knowledge, who is able to teach what and under what conditions, has increased in other ways and mechanisms. For example: the Higher Education Academy (HEA) accreditation scheme; the teaching excellence framework (TEF); the research excellence framework (REF); along with other metrics such as the National Student Survey (NSS), and Destination of Leavers from Higher Education (DLHE), all of which are actors operating on behalf of the state. These, either collectively or individually, contribute to various institutional rankings that play a key role in the choices students make regarding their place of study, and therefore also in the financial stability of the institutions, which in-turn influences the programmes of study available, taught by whom, and under what conditions.

These distributive influences might also be in conflict with other drivers, such as teaching qualifications or prerequisites set out by the professional bodies accrediting degrees, as well as other political, economic or employment related organisations that can directly or indirectly influence who is able to teach what in HE. Krause, suggests that this creates, ‘a lack of stability in the configuration of HE institutions’, due to constant shifts in, ‘national policies, market forces, globalisation, third-mission imperatives and technological advances’, all of which place further challenges on the institutions and their academic staff (2006: 414). The above points make clear the hierarchical, or dominant relationship distributive rules have over disciplinary knowledge practices, by defining what is thought of as valuable knowledge, and how this then results in different identities of the HE institutions, their staff and students (Ashwin, 2012).

It is important to recognise here that some of the factors mentioned above that influence the distributive rules, can also be considered relevant as recontextualising rules. What is apparent is that the ways in which the external forces are interpreted and prioritised by different institutions, under whatever set of rules, will be a major influence on the identity of those institutions. Ashwin actually points out how Bernstein’s recontextualising and distribution rules create a site of struggle in the relations between the HE curriculum and disciplinary knowledge practices (2012). With academic staff, their disciplines and institutions, professional bodies, employment, and government agencies, all being significant stakeholders, therefore exert power and influence. In this analysis the distributive rules have been taken as the factors that appear to originate externally to the university, whilst recontextualising rules are those deemed internal to the university, with the proviso that some of these can be

interchangeable. What is also apparent here is that the number of factors influencing HE since Bernstein last updated his pedagogic device in 2000, has increased considerably, from it being largely between the state and the institutions, to now involving a wider range of bodies, organisations, as has been pointed out.

With respect to this study, the distributive rules will be helpful in identifying the external forces that are influencing issues around critical thinking. Tracing these forces down through the recontextualising and evaluative rules, into the teaching-learning interactions.

4.1.2 Recontextualising rules

The second rule of the pedagogic device are the recontextualising rules, which are responsible for how the knowledge, generated through the distributive process, is transformed into pedagogic discourse (Bernstein, 1990, 2000), and as such, forms the disciplinary knowledge practices of each disciplinary area. According to Apple, the recontextualising rules make up the curriculum by:

> ‘selectively dislocating discourses from the primary contexts - the site where knowledge is originally produced - and then re-locating and re-focussing them in the secondary context to form the pedagogic text’ (2002: 613).

Thus, recontextualisation ‘has a crucial function in creating the fundamental anatomy of education’ (Bernstein, 2000: 33). This, Shay highlights, is where the curriculum and any reform it may undergo is predominantly situated (2015).

To be able to understand the structuring and organisation of disciplinary knowledge practices Bernstein introduced two elements to the recontextualising rules, classification and framing. The first of these, classification, relates to power relations, in that power creates boundaries, and it is the relationship between these boundaries and their nature, that classification addresses (Bernstein, 2000). What constitutes strong or weak classification is the degree to which objects or their agents are 'insulated' across these boundaries. Something that is strongly classified will have, 'a unique identity, its unique voice, its own specialised rules of internal relations' (Bernstein, 2000: 7). In contrast, if there is weak classification, then the insulation is not strong, resulting in 'less specialised discourses, less specialised identities, less specialised voices' (Bernstein, 2000: 7). Bernstein added that whatever the classification, strong or weak, there are always corresponding relations of power.

The power relations in-turn relate to another principle of classification, and that is 'recognition' and 'realisation'. Recognition rules are at the level of the 'acquirer', and determine whether an individual is able to, 'recognise the specialty of the context they are in' (Bernstein, 2000: 17). This means that any change in the classification, will have a subsequent impact on an individual's recognition. The relationship between recognition and realisation rules can be highlighted by an example: a student may be able to recognise the environment they are in when they are in a seminar but may not be aware of what their role is within that seminar, how they are supposed to contribute, or behave in that context, and thereby realise the expectations. Bernstein clearly expresses the

effect classification and recognition have on power relations and subsequently on communication:

> ‘The classificatory principle regulates recognition rules, recognition rules refer to power relations. Certain distributions of power give rise to different social distributions of recognition rules and, without the recognition rule, contextually legitimate communication is not possible … Power is never more fundamental as far as communication is concerned than when it acts on the distribution of recognition rules’ (2000: 17).

As such, these principles of recognition and realisation will prove very useful in analysing the data generated in this study in relation to how the organising and structuring of the curriculum influence the way critical thinking is accommodated and addressed. It is also worth highlighting how the classificatory principle can be used at a range of levels; from the macro, considering the power and insulation held across a ‘field’ such as HE, or by an institution; to the micro, the degree to which individual schools or disciplines, or programmes within an institution, are insulated and have individual voice.

Looking more closely at the disciplinary level, or what Bernstein referred to as discourses. He used the terms singulars, where the discourse produced by the discipline is about the discipline itself, for its own understanding, and not for wider ‘consumption’, giving physics as an example. Regions, on the other hand, are where multiple singulars have been recontextualised as a collective, for example in engineering, to be of wider social benefit (Bernstein, 2000). What is relevant here is that Bernstein felt over the last 50 years, in HE there had been a general and noticeable shift away from singulars, to what he termed a

‘regionalisation of knowledge’ (2000; 60), something that will also be relevant in the analysis when looking at the specific disciplines involved in this study.

The second element of recontextualising, framing, relates to the forms of communication realised in pedagogic practice. Essentially framing is about who controls what in pedagogic communications, or more specifically between, ‘transmitters and acquirers’ (Bernstein, 2000: 12). Control in this way may be about the type of communication, it’s pacing or rate of progress, the criteria it is set against, and, Bernstein adds, the social base in which it is undertaken (2000). Tapp identifies framing as controlling the selection, teaching and evaluation of what is to be learned (2015). Where there is strong framing, the transmitter has control over these issues, where there is weak framing, the acquirer has more ‘apparent’ control. The framing can however vary within and across disciplines. For example, some lectures may have very clearly defined content to be addressed in a specified period and approach, whilst in another context, the same topic could be addressed through open debate and questioning by students, thereby losing some of the control on coverage and pacing, in other words, with weaker framing. Framing will provide a significant tool in the analysis of the disciplinary knowledge practices, and the observations of the teaching-learning interactions (evaluation), in each discipline

What is also relevant, is the impact strong or weak framing has on the pedagogic practices. Bernstein highlights that where framing is strong, there will be what he called, ‘visible’ pedagogic practices, which encourage more of a performative curriculum model, where the ‘rules’ of the discourse are explicit

and easily recognisable. However, where there is weak framing, it is likely that this will result in, ‘invisible’ pedagogic practices, and a ‘competence’ model of curricula, with the rules of that practice being either implicit, or simply unrecognisable to the acquirer (2000). With several participants in this study speaking of the implicit nature of some elements of the curriculum, and specifically in relation to critical thinking, this will also provide a key part of the analysis when looking at the different disciplines and their recontextualisation.

4.1.3 Evaluative rules

The final part of the pedagogic device are the evaluative rules. These relate to where pedagogic discourse is transformed into pedagogic practice through its transmission, acquisition and evaluation (Bernstein, 2000), what is being referred to here as teaching-learning interactions. Bernstein highlights that ‘the key to any pedagogic practice is continuous evaluation’ (2000: 36), whether students are developing legitimate forms of evidence regarding their acquisition of the curriculum. This also relates to the ‘realisation rules’, which ‘determines how we put meanings together and how we make them public’ (Bernstein, 2000: 17). The realisation or ‘evidence’ required is what Bernstein termed a ‘text’, with a ‘legitimate text [being] a realisation on the part of the acquirer which attracts evaluation’ (Bernstein, 2000: xvi). It must be noted that this is not always a physical text, such as a piece of coursework, but can also be about conduct in a seminar for instance. The evaluation rules are therefore responsible for the production of ‘texts’, thereby regulating pedagogic practice and teaching-learning interactions by determining the standards that students

are expected to achieve. As Ashwin states, it is these that focus on the interpretation of the curriculum as set out by the recontextualising rules (2012).

This already highlights where different interpretations of the rules may be encountered, analysing teaching-learning interactions both in relation to evaluation rules and recontextualising rules. For example, consider a 'text' in the form of an assessment, which clearly relates to evaluation in that it is part of the teaching-learning interaction as a students' realisation of the curriculum. However, it can also be considered part of the organisation and structuring of the curriculum. For the purposes of this analysis, comments by participants or observations of practice that relate to curriculum structure and design have been analysed from a recontextualising perspective, whereas if they appeared more relevant to the actual teaching-learning interaction, or a realisation between the 'transmitter and acquirer', then they have been grouped with the evaluation rules.

Having outlined the structure of the pedagogic device, I will now outline its relevance to this study. Bernstein suggests that the focus of his pedagogic device is being able to determine whether there are rooted principles informing how knowledge is transformed into pedagogic communication (2000). Highlighting that its emphasis is not on what is being relayed, (the content, as he claimed was the focus of much of the research available at the time) but on the 'relay' itself - what he termed the 'intrinsic grammar of pedagogic discourse' (Bernstein, 2000: 28). This makes it particularly apt for this study, in that it is not the actual content of the curricula that are of interest, but rather the way it is structured and organised, and the teaching-learning interactions undertaken,

that will be more influential in shaping the understanding of critical thinking in the staff and students.

Singh describes Bernstein's pedagogic device theory as, 'a model for analysing the processes by which discipline-specific or domain-specific expert knowledge is converted or pedagogised to constitute school knowledge' (2002: 572). Whilst it is true Bernstein's work was originally intended to focus specifically on school-based knowledge and curricula, it has been successfully appropriated more widely, particularly in relation to HE, in general, and in relation to more specific HE contexts (Shay, 2008 and 2015; Tapp, 2015). The HE context also offers a potentially unique circumstance for drawing on Bernstein's theories, in that, unlike the schooling context, the staff in HE are often involved in a number of the hierarchical levels of Bernstein's pedagogic device, the distribution, recontextualisation, and evaluation of the disciplinary knowledge practices (Ashwin, 2012), and even within each of these, possibly as agents for different organisations.

The final point to be made regarding the appropriateness of Bernstein's for this theoretical framework is provided by Ashwin. Who points out that Bernstein's aim was for his theory to be 'interrogated' by empirical research and have it evolved in response to this (2012), rather than for it to be 'misappropriated' or simply applied. Small-scale empirical studies, such as this, offer a good opportunity to explore the subtle variations in relations between disciplinary knowledge practices and teaching-learning interactions in different discipline areas, whose approaches will vary and take on different characteristics (Ashwin, 2012).

4.2 Bourdieu: field, capital and habitus

Just as Bernstein wished for his theories not to be merely applied but interrogated through research, so too was Pierre Bourdieu insistent that his theories of field, habitus and capital, were not fixed and needed to be empirically tested (Bourdieu and Wacquant, 1992). There also lies similarity at the core of what both these theories aimed to expose or highlight in relation to social reproduction and inequality: in Bernstein's case, whether there were deep-rooted principles informing the transformation of knowledge into pedagogic communication (2000), reinforcing social reproduction. Whilst Bourdieu's general focus, particularly in relation to HE, was on the role it played in, 'the maintenance and reproduction of social inequality' (Naidoo, 2004: 457). Bourdieu was also keen, however, to challenge the apparent divide between empirical approaches that focussed on social structures and those that favoured individual agency (Ashwin, 2012). Given the focus of this study, critical thinking, and according to some interpretations, its association with social justice, and how this is being analysed in terms of structure and agency, it is clear the value that this combination of theories can bring to a small-scale empirical study such as this.

Bourdieu's theories of field, habitus and capital provide another lens through which to explore how the cultures within universities, or, their institutional habitus (Reay 1998), are influenced by their position within the field of higher education. Furthermore, how the disciplinary knowledge practices and teaching-learning interactions within these 'fields', can be 'conceptualised from the perspective of institutional cultures' (Ashwin, 2012: 110). That Bourdieu

undertook a detailed analysis of the French HE sector (Bourdieu, 1988), provides yet more weight to the application of his theories. Something that is further justified by other studies that have looked at teaching-learning interactions in HE and further education, informed by his work (for example Shay, 2005; Crozier et al., 2008). Bourdieu's theories, and their relevance to this study, will now be introduced and outlined.

The first thing to point out with Bourdieu's theories of field, habitus and capital, is that he meant for them to function in relation to each other; 'to think in terms of field is to think relationally' (Bourdieu and Wacquant, 1992: 96), that is, habitus only acts in relation to a social field (Jenkins, 1992), and, depending on the state of the field, the same habitus can result in different practices (Reay, 2004). Furthermore, that capital only exists and functions in relation to a field (Bourdieu and Wacquant, 1992). This, as pointed out by Jenkins (1992), has resulted in Bourdieu's theories being criticised for being deterministic, something Bourdieu strongly defends against in *Homo Academicus* (1988) by highlighting that their relational nature means that changes in circumstances, including those that are external to the field, can result in changes to the field, habitus and capital. Similar to the intentions here. Naidoo, also suggests there are limits to the depth that Bourdieu's theories can reach because of this 'strict' relational functioning (2004). However, what makes these theories useful in this circumstance, is as Bourdieu states, that the functioning of habitus, practice and agency are linked with issues of structure through field and capital (Bourdieu, 1990a), or, more specifically, that his theories can help illuminate the relationship between universities and external, macro forces, and, how these

then play out in a variety of ways in different institutions, or fields (Naidoo, 2004).

4.2.1 Field

As a concept, field has been utilised in exploring a range of contexts, by Bourdieu's own empirical work, which included the French HE system, and others subsequently. For Bourdieu, field can be defined as, 'a network, or a configuration, of objective relations between positions' (Bourdieu and Wacquant, 1992; 97), positions which may be occupied by agents or institutions (Ashwin, 2012). These positions within the field are objectively defined, in relation to their existence and their determinations, or the power they impose upon other occupants (Bourdieu and Wacquant, 1992). The power they are able to exercise is based upon the capital that they poses, with the form of the capital being a factor of, or determined by, the field. As such, Bourdieu likens the possession of capital to an understanding of the 'rules of the game' in that field (Bourdieu and Wacquant, 1992). The game within a field is therefore about where and how agents develop and maintain the forms of capital that are valued by the field. As Jenkins puts it, 'fields are defined by the stakes which are at stake', whether that be land, power, social class, achievements or other advantages (1992: 84). However, the game within a field can also be about how agents try to change the rules of that field, so that it might recognise the forms of capital that they poses (Ashwin, 2012). To this end, fields are always subject to power dynamics and contestation (Crozier et al., 2008).

With the rules of the game being contested in this manner, it means that the field is sometimes an area of struggle for its agents, something Ferrare and Apple highlight as happening frequently in HE (2015). Yet the field can also be an area of force, or as mentioned, of power; the rules create normative values, control activity, and promote ontological observance, even if the rules are sometimes not explicit (Ferrare and Apple, 2015). This in-turn encourages domination or subordination by agents or institutions. Furthermore, each field is semi-autonomous from what Bourdieu termed 'fields of power' (Bourdieu and Wacquant, 1992). For example, institutions within the field of HE will respond to sector-wide policies and initiatives, such as driving up research profiles, improving teaching-learning, or student employability, in different ways, based upon the capital that they possess in those areas, and their position within the field. This is something that has been explored in a number of studies looking at the field of HE, for example, Crozier et al., 2008, and Reay, 2004; as well as in conjunction with the other aspects of Bourdieu's theories, such as Thomas, 2002, Crozier and Reay, 2011.

A more recent recommendation of Ferrare and Apple (2015), is that field theory should be utilised in more localised educational settings, rather than the fields of power. Looking at the structures and practices encountered there, to be able to understand the impacts of broader policy measures and inequity in education. In this way, they highlight the value of Bourdieu's field theory in exploring relationships between culture, power and social positioning, as this study intends:

> 'Following Bourdieu's insights, these accounts tend to focus on varying levels of ontological complicity established between the practices and meanings that

> constitute educational institutions and students' dispositions in relation to their inherited cultural capital' (Ferrare and Apple, 2015: 44).

As this indicates, the positions agents or institutions hold within a field are based upon the capital that they hold, which is deemed valuable by that field. Capital is the next aspect of Bourdieu's theories that will be discussed.

4.2.2 Capital

According to Bourdieu there are three forms of capital: economic, social and cultural, which, when recognised within a field, can take on different forms of symbolic capital (Bourdieu, 1986; Bourdieu and Wacquant, 1992). Bourdieu explains that: economic capital is that which can be directly converted into a monetary value, for example property rights; cultural capital is able to be converted into economic value under certain conditions, taking the form of educational qualifications for instance; and, social capital, which again can be translated into economic terms under certain conditions, but may be in the form of an institutionalised title of nobility (1986). Whilst Ashwin, points out that Bourdieu sometimes changed the use of these terms from text to text, this was largely because he felt that they should be empirically defined rather than being imposed on a specific setting (2012). However, in many educational studies that have drawn upon his theories, it is a form of cultural capital that has been deemed to be the most useful.

Cultural capital, Bourdieu outlines, also comes in three forms, embodied, objectified, and institutionalised (1986). In the embodied state, it is in the form of long-lasting dispositions of the mind and body. In the objectified state, it takes

the form of cultural goods, such as books or pictures; and, in the institutionalised state, which Bourdieu highlights is also an objectified state, but is set apart as it results in very specific properties in relation to the cultural capital that it represents, for example an academic qualification (1986). There is some cross-over here with social capital, as Bourdieu suggests that this can come from the 'membership of a group', such as alumni, or having studied at a certain school, which also provides the agent with a 'credential' (1986: 51). It is in *Homo Academicus*, however, where Bourdieu develops the idea of academic capital, which Naidoo points out is 'an institutionalised form of cultural capital', and the form of capital functioning in the field of HE (2004: 458). Academic capital is therefore that which includes properties such as previous educational experience, the 'disposition' to be academic, and demonstrate certain relevant competencies (Naidoo, 2004), which makes it particularly apt for exploring critical thinking, and will be the form of capital mainly drawn upon here.

4.2.3 Habitus

The final part of Bourdieu's theories that will be drawn upon here is habitus. Ashwin suggests that when agents have a good sense of the 'game' of the field, which comes unconsciously, it is brought about by their habitus (2012). For habitus is a combination of durable and transposable dispositions that have been developed by agents over an extended period, evolving through past experiences, that results in individual or collective practices (Bourdieu, 1990b). As internalised and embodied history, it is also 'forgotten history', according to

Bourdieu (1990b), with childhood and upbringing being particularly important (Ashwin, 2012). Not only is habitus a ‘structured structure’, based on an agent’s past, but it is also a ‘structuring structure’, in that it is how new experiences are interpreted (Bourdieu, 1990b). Habitus can therefore show how the body is in the social world, but also how the social world is in the body (Bourdieu, 1977, cited in Reay, 2004), thus it is constantly enacting adaptation to the outside world (Bourdieu, 1990b).

Habitus is not only relevant to individual agents, but to institutions as well. Whilst these are constructed in a similar fashion to individual habitus, through past experiences and history, they do not however undergo change or adaption as quickly, due to them being less fluid and part of a much greater collective (Reay, Crozier and Clayton, 2010). Habitus in HE has been drawn upon quite extensively, although Reay’s piece of work provides a very detailed analysis of its application and highlights some areas of caution (2004). Notably that, as Bourdieu declared, it is not a simple concept for reference only, being assumed or appropriated, but to be worked with, put into practice, operationalised and used to interrogate empirical data (Reay, 2004). Further caution is aired by Ferrare and Apple, who believe that it needs to be further adapted so that it can account for more local field positions in educational contexts (2015). Something that was undertaken to a degree by Reay, Crozier and Clayton, who explored the notion of habitus in relation to four different institutions, and found that there were clear institutional habituses, in relation to ethos and organisational culture, that were linked to wider educational and socio-economic factors (2010). All of which will provide useful benchmarks for this study.

There have been number of studies mentioned that have used the combination of capital and habitus to explore the field of HE (see, Crozier and Reay, 2011; Reay, Crozier and Clayton, 2010; Thomas, 2002), to great effect, which again will provide useful guides in the analysis of the data here. Furthermore, Naidoo (2004), believes that Bourdieu's theoretical constructs can help understand the relationship and impact broader socio-political forces have on HE, and why individual institutions within the wider field develop divergent responses to these. Also, as Crozier and Reay highlight in relation to this study, the forms of capital and habitus students poses is a key indicator in their success at university, and even if they have developed the 'right' attributes and skills to utilise these, once at university, the type and volume of capital will vary at different stages of study (2011).

4.3 Combined theoretical framework

The combined theoretical framework being employed here, drawing on both Bernstein's and Bourdieu's theories, has been utilised in other studies, see Crozier and Reay (2011) and Reay, Crozier and Clayton (2010). These have however, tended to take a more theoretical approach, and consideration of the wider field of HE. This then adds a further element of originality to this study, drawing on Bernstein and Bourdieu as a combined theoretical framework to help explore smaller-scale, more localised empirically generated data. Furthermore, that this is being done at the programme level within an institution, where others have tended to focus on the more general institutional habitus, field and identity, and in conjunction with practice-based observations as well as participant responses.

With the strong hierarchical element to Bernstein's 'rules' in the pedagogic device, it seems appropriate for the analysis to start at the macro level, with the distributive rules, tracing the impact these have down through the pedagogic device. Focusing down through the disciplinary knowledge practices influencing the programmes through the recontextualising rules, to the evaluative rules, at the micro level, that will consider the teach-learning interactions, as this is where participants understandings of critical thinking will be played-out, where issues of structure and agency become very apparent, and where there is the strongest connection with the observation data.

5.0 Analysis – distributive rules

According to Bernstein, the distributive rules ‘regulate the relationship between power, social groups, forms of consciousness, and practice’, with forms of consciousness coming through different forms of knowledge (2000: 28). The distributive rules therefore determine what is deemed ‘legitimate knowledge’, and the teaching-learning conditions under which that knowledge should be addressed (Ashwin, 2012). Data discussed in this section is based upon distributive factors that originate externally to the university. How these factors

are then interpreted by an institution will influence the institutional identity, its position in the 'field' of HE, and the institutional habitus, making Bourdieu's theories also relevant in this part of the analysis. As the three analysis chapters unfold, it will be demonstrated how each of the distributive factors identified go on to inform the organising and structuring of the curriculum, the teaching-learning interactions that take place, and subsequently, the different interpretations of critical thinking within the disciplines.

The analysis will start by exploring distributive factors that inform the institutional identity at Southern University, highlighting the sector metrics that contribute to this identity, with employability and the teaching-learning ethos being central. Following this, it will highlight external factors that influence the organising and structuring of the curriculum, at both the national and disciplinary level, from national frameworks and benchmarks, to the professional accreditation bodies: drawing specific attention to how participant's understanding of critical thinking align with these structures. The discussion will then introduce a new element to Bernstein's pedagogic device that has been brought about by wider, sociologically derived distributive factors that have become increasingly influential in the field of HE since Bernstein last worked on his pedagogic device. This will also include a focus on the expectations and engagement of students. Finally, data from the study concerning challenges to participants' teaching practice that derived from distributive influences, will be outlined and analysed at the end of the chapter.

5.1 Distributive influences on institutional and disciplinary identity

As Bernstein highlighted, the distributive rules have a great influence on the identity of the institution, its departments, as well as the staff and students. As a 'new' university, Southern University, drawing upon Bernstein's concept of classification, it would be deemed a weakly classified institution, with 'permeable boundaries', allowing external factors, particularly in relation to the dominant discourses of employability and widening participation, to have a significant influence on the institutional identity. In these institutions, ones Bernstein considered to be 'less fortunate', external market forces are persuasive, with institutions striving for marketable and competitive uniqueness to help project their identity to the various markets (Bernstein, 2000: 60). This, along with the many sector-wide institutional rankings, has the effect of stratifying the sector, according to not only institutional identity but also disciplinary regionalisation (Bernstein, 2000).

The market forces that HE institutions appeal to serve a number of different masters. Students themselves have been increasingly positioned as consumers of their university education, which is discussed further on. Similarly, the parents of students often have vested interests, sometimes as the source of financial support for the students, therefore also becoming customers of HE. Yet there are also employment, research, and politically motivated claims made on HE, its institutions and graduates. Many of these markets are directly informed by sector-wide metrics, such as graduate employment, which informs the Destination of Leaver from Higher Education (DLHE) survey and the Teaching Excellence Framework (TEF), as well as there being the Research Excellence Framework (REF), and Higher Education Academy (HEA) accreditation programs, to name but a few. All of which feed into a variety of

university rankings and league tables, alongside the influential National Student Survey (NSS).

For a number of years, the NSS has been the dominant performance measurement mechanism in HE, however, more recently it is the TEF that appears to be holding increasing sway. This is because it draws on both NSS and DLHE data and is seen as a measure of ‘teaching excellence’, which, it is planned, will be used to determine, or justify, any future changes to student tuition fees. These metrics, and the league tables they feed into, provide classic examples of neoliberal ’free-markets’, and the impact these subsequently have through the steady increase of the performative agenda. These in-turn, have a significant impact on the identity of any HE institution and its staff, and their approach to the pedagogising of knowledge.

In the last ten years there has been a noticeable shift in institutional identity and habitus at Southern University, which can be mainly traced back to two distributive factors. The first of these was that for a number of years the University found it a source for celebration that its population of students with declared disabilities, at around 16%, was almost double that of the national average. This gave the university very strong WP credentials, and encouraged inclusive approaches to teaching-learning within the institution. However, in 2014 when the government announced changes to the disabled students allowance, specifically that institutions would be responsible for funding the measures needed to support these students, this suddenly became a financial hindrance for the institution. The response of the institution was to shrink departments tasked with supporting students, such as Learning Development,

as well as dismantling an effective directorate for teaching and learning. Instead favouring another distributive influence, employability.

5.1.1 Employability

The second distributive factor is employability. In line with the rest of the UK HE sector, in 2012 institutions were able to set their own fees up to a maximum of £9,000 per year, which had a big impact on institutional habitus and field positioning. The increased financial burden for students meant that degrees needed to demonstrate greater value, particularly in relation to their prospects after university: and employability became the increasingly dominant agenda in HE. Changes in focus such as these at Southern, where the institution redefines the capital that it prioritises, means a realignment to the institutional habitus. In the case of Southern University, the capital it valued went from a unique version, in its approach to WP and teaching-learning, to a more mainstream version: employability. This reduced its autonomy by putting it in direct competition with many more institutions. As Zippin suggests, developing institutional capital is about trying to define HE in a way that reflects the forms of capital that institution excels in (1999; cited in Ashwin, 2012). The shift in institutional capital at Southern University did not reflect this principle. Instead, it resulted in a gradual change in teaching-learning priorities that became more responsive to the ‘exigencies of the market’, creating a new institutional identity that would permeate its departments and staff (Bernstein, 2000: 60).

The increased attention placed on employability is particularly challenging for this institution, given that the regional picture is not very positive. Many students

that attend the University (70%) come from the region, and upon graduation wish to remain there. This is in spite of the region having lower than the national average of ‘highly skilled employment’, regional employers being largely made up of small and medium business enterprises. There is tension however between the institutional and disciplinary positions, as graduate employment varies according to the programmes themselves. For example, Medical graduates enjoy almost 100% employment following graduation, due to both the way the programme feeds into the NHS, and the national context - there being a national shortage of doctors. Similarly, higher levels of employment will be experienced by students graduating with a teaching qualification, also due to shortages in that sector.

In contrast, the other disciplines, or even specific programmes within these disciplines, such as Educational Studies, might not share such high employment levels. As further examples, there is a strong environmental sector in the region, but there are also high levels of competition for relatively few jobs; and in Law and Criminology, graduates might find that they need to move out of the region in order to increase their employment options, particularly if seeking employment with larger firms. Thus, there is a considerable contrast between the employability capital of the institution overall, and that which is experienced at the programme level. Whilst the institutional employability capital will be averaged-out in the relevant rankings, there will be significant differences in the experiences of the programmes, which will be reflected in their disciplinary knowledge practices.

Employability was something that almost all participants referred to at some point in their interviews, specifically mentioning critical thinking as ‘what employers want’ (Christie ES: 625), and, ‘tooling them [students] up for a future workplace’ (Mike M: 095). Some highlighted the general employability benefits offered by their programmes, for example Mary (L&C), ‘Law gives a lot of transferable skills that perhaps not all degree programs do, so employers seem to quite like Law students’ [385], which seems to almost acknowledge that these graduates might be looking for employment outside of their discipline or degree area. However, Helen (M) also spoke of the transferability of skills, ‘critical thinking skills, whatever your job is you’ll be able to apply them’ [615]. These responses demonstrate that critical thinking is considered an important skill, even with the vocational emphasis of most degree programmes at Southern University. They also highlight the pervasive influence of employability, even in programmes where the employment prospects are good.

5.1.2 Regionalisation

Another important distributive influence of employability in relation to critical thinking is the ‘regionalisation of knowledge’ spoken about by Bernstein, as this can also influence contrasting institutional and disciplinary identities. Bernstein considers regionalising an aspect of recontextualising, however the impact this has on the disciplines and their identities more widely must be acknowledged. For example, ‘singular’ subjects such as Physics and Chemistry have merged

into ‘regions’, forming new departments, such as ‘Earth Sciences’, where discourses lean more towards broader societal and market issues. This is something Bernstein felt occurred extensively throughout the latter part of the twentieth century, and for him represented the ‘technologising of knowledge’ (2000). All disciplines in this study have experienced regionalising to lesser or greater degrees. Environmental Science, as an amalgamation of multiple disciplines, including the sciences, sociology, and law, is possibly the most affected by this. For some participants, this was important when considering their students critical thinking. Gary (ES) said:

> ‘because it is such an interdisciplinary area you’re not looking at one aspect, you do need the ability to pull together a lot of different strands and some different concepts, and I think you can only really do that effectively if you’ve got some ability to critically analyse something and to think critically about it’ [330].

Gary’s responses suggests that Environmental Science students need an appreciation of a wide breadth of knowledge, across the full range of disciplines covered, and for this reason critical thinking is essential for them. This understanding also infers that critical thinking is transferable across these different discipline areas, rather than being disciplinary specific. There is another regionalising effect in Law and Criminology, although for different reasons, as Barbara (L&C) highlighted:

> ‘Yes, it’s interesting cos we’ve got lots of single honours, but we’ve got quite a lot who are major / minor, so major / minor with psychology, with law, some of them with sociology, some with international relations, so I think it’s quite challenging for them because there are different expectations across the different programmes; things like different forms of referencing’ [425].

This means that the regionalising in this discipline is having a direct impact on the recognition and realisation for students, given that there may be different criteria and expectations, something that might well include critical thinking.

In comparison, Medicine has experienced regionalising to a lesser degree, even though Bernstein spoke of Medicine as being one of the ‘classical university regions’, in that it was one of the first disciplines to ‘face outward’ to a professional body, alongside the likes of Engineering and Architecture (2000: 55). However, it now appears strongly classified, being less answerable to external markets and overseen by its own governing body the GMC, therefore holding more power. In contrast, regionalisation in Education has been of a slightly different kind. As Education graduates can now go into a wider variety of roles within the field, there is the need for a broader range of programmes, from general ones such as Educational Studies, to specific ones like BEd. Primary, that provides a teaching qualification.

This broadening of programmes results in less ‘unique voices’ and disciplines, that have to be responsive to a wider range of external influences, thus weakening their classification, and demonstrating less power. These examples of the regionalising knowledge are in response to distributive influences, and particularly that of employability, and whilst there is an impact in the classification of the programmes, the most significant impacts might be in the structures encountered by the students in the teaching-learning interactions at the evaluative level, as outlined by Barbara.

5.1.3 HEA accreditation

The next distributive influence on institutional identity is in relation to its teaching-learning practices and is in-part provided by the Higher Education Academy (HEA) accreditation scheme. Southern University is a 'strategic partner' of the HEA, the highest level of subscription an institution can have with the organisation, which provides a range of benefits and incentives. Subsequently, there is a strong Educational Development department, which conducts and certifies the HEA accreditation programmes. The most recent figures available for the teaching qualifications of staff in HE, places Southern University 12th out of 130 institutions from across the UK, with 74% of staff holding a teaching qualification (HEFCE, 2016), the majority of which will be HEA related. It is also highly placed (16th) for staff that have 'Successfully completed an institutional provision in teaching in the higher education sector accredited against the UK Professional Standards Framework', such as a Certificate of Academic Practice (CAP). These figures are in quite a contrast to the University's overall ranking in the various league tables, which is currently around 70th to 80th out of 130, and therefore provides a contrasting picture in relation to its teaching and learning. On the one hand, outwardly, it seems to value institutional capital in the form of teaching qualifications, which incorporates HEA accreditation. However, inwardly, the dismantling of a directorate for teaching and learning does not suggest it values an institutional teaching habitus.

The accreditation programme is not just significant in institutional identity, but for many staff too as it represents the only formal training they may get in teaching-learning. The approaches preferred by the CAP programme therefore

become influential in the approaches adopted by the staff. For example, the CAP at Southern University favours an approach to teaching called constructive alignment, which by its structured nature could be seen as limiting in the development of critical thinking, this is discussed further in the Evaluative Rules. Bourdieu believed that these accreditation programmes are how the university system ensured its own stability and reproduction, 'by producing teachers endowed with fairly stable and homogenous social and academic characteristics'; and subsequently, an individual academic habitus that 'causes the individual agents to realize the law of the social body without intentionally or consciously obeying it' (1988: 143). Thus, acting as a form of social reproduction in relation to teaching-learning practices within the institution.

HEA accreditation was spoken about by seven of the interview participants, so appears to have been somewhat influential on their identities. For example, Anna (L&C), highlighted how colleagues who had completed the CAP, or, who were involved in similar teaching-learning forums, might have been influenced by this in their teaching style, but she was 'not trained as a teacher' [300], so she did not see herself as a 'teacher' without this accreditation, despite 35 years of lecturing experience. Others spoke of their participation when they first started in a teaching role, albeit some time ago, and as such, it had been an initial influence on their teaching. Gary (ES) said, 'I've developed a style of teaching, ok I was aware of some of the aspects when I did the LTHE (a former version of the CAP), so that helped me inform some of those models' [320]. For others the programme appeared to represent the limit of their teaching-learning expertise 'I wouldn't say I'm an expert, no further than my CAP' (Mary L&C:

370), which indicates that it is not something they have considered any further after completing the programme.

The influence programmes such as CAP can have on the identity of academic staff has been commented on by other authors. In a study by Jones, the term ‘ontological uncertainty’ was used by participants, with some referring to the educational development team that ran the programme as the ‘teaching police’ (2007: 217). Also, in her study, some of those interviewed expressed how the educational development approach was considered to be the exemplar of good teaching in HE, which along with the accreditation process, was seen as a form of managerialism (Jones, 2007). This, Jones states, left participants feeling undermined, no longer like experts in their own teaching, and subsequently compromised their teaching style: it reflected strategic incentives and decisions rather than their natural educational philosophies (2007).

Other authors, such as Ingraham and Ingraham, have also suggested that these programmes ‘codify’ academic practice, so that it can be taught in a structured way, which creates unnecessary levels of bureaucracy and performativity, and alienates academic staff (2006). These points highlight how the HEA accreditation process, an external distributive influence, not only impacts on the institutional identity, but can also have a great influence on the disciplinary knowledge practices and teaching-learning interactions taking place. That these external influences appear to be largely driven by neoliberalist managerialism and bureaucracy, feeding into market driven metrics, and with little positive impact evident on the actual teaching-learning, was not lost on the participants of this study.

5.2 National Frameworks

One way in which almost all discipline areas are affected by a strong distributive influence is through the Framework for Higher Education Qualifications, as set out by the Quality Assurance Agency (QAA). Although the QAA is an independent, not for profit organisation, it does nonetheless operate on behalf of the state. The QAA framework sets out the criteria, or qualification descriptors, that, 'exemplify the general nature and outcomes of the main type of qualification at each framework level' in HE study (QAA, 2014: 19). As such, the QAA sets out the skills and knowledge students are expected to have obtained upon graduation, outlining the following:

> 'to use level descriptors to describe the relative intellectual demand, complexity, depth of learning and learner autonomy associated with a particular level of learning and achievement' (QAA, 2014: 19).

The framework informs all HE programmes of study, except Medical degrees, and at all levels, influencing things like module learning outcomes, and the marking criteria for assessments. In relation to the focus of this study, critical thinking, there are specific criteria that are relevant. At level four (certificate of HE - generally the first-year of a degree programme), students should have demonstrated, 'an ability to evaluate and interpret', and, 'to be able to develop lines of argument and make sound judgements' (QAA, 2014: 20). For level five (foundation degree and second-year of study), students have to demonstrate, 'critical understanding', 'evaluate critically', as well as evidencing the 'critical analysis of information' (QAA, 2014: 23). Finally, for level six (bachelor's degree, and final-year of study with honours), students should be able to

‘critically evaluate arguments, assumptions, abstract concepts and data’ (QAA, 2014: 26). These descriptors highlight the stepped development that is expected between the different levels of study, and that critical thinking, in the form of analysis and evaluation is a key component in that.

How critical thinking is developed across the different stages of study was mentioned several times by participants in all of the discipline areas studied. In Education, Paul spoke of there being an expected progression, which was reflected in the assignment grids they used [540]. Whilst Sharon (E) thought that critical thinking was to be encouraged, ‘right from the first’ and throughout all levels [680], yet she also acknowledged that at level five students should be moving beyond description, and at level six they need to ‘be able to put forward a convincing argument’ [715]. However, further on in Sharon’s interview she appeared to be at odds with this, by firstly suggesting that at level six students had to ‘move into a more mature state’, but then stating:

> ‘it’s bonkers to think that suddenly in the third year of a degree that suddenly you’re a critical thinking person’ [1090].

It therefore appears that there is some tension, or confusion, around determining critical thinking by levels, as per the QAA expectations, a process or framework that seems at odds with how participants actually spoke about critical thinking. This is even more evident when a number of the participants specifically mentioned student’s maturity as being important in the development of their critical thinking, in addition to them becoming more cynical (Mary, L&C: 220), or systematic in their thinking (Sharon, E: 1080), and curious (Rita, M: 215; Sally, ES: 255; Gary, ES: 300). Other responses included reference to students nurturing, upbringing and backgrounds (David, E: 705; Rita, M: 190;

Sally, ES: 285), which indicates that the development of certain forms of capital is important. These attributes or aspects, such as maturity and capital, are difficult to determine, measure, or indeed address, let alone map onto a framework. Evidently there are significant differences between the ways critical thinking is understood by participants and how the official body (QAA) proposes to approach it. David (E), had yet another view on the levels of study, how students engaged with them, and what their expectations might be in relation to this:

> ‘But I don’t think all level four students are, I think they’re frightened to, they don’t quite grasp straight away the need to go off and be independent in their learning, so they’re used to wanting, not to be spoon-fed necessarily, but wanting to be taught rather than following the line of enquiry that really that’s what university’s about increasingly as you go through the years’ [685].

This relates to how Bourdieu likens his concept of field to a game, although unlike a game, the rules, or regularities of the field are not explicit or codified (Bourdieu and Wacquant, 1992). David’s response above alludes to there being implicit regularities that students need to understand in order to make progress in their critical thinking.

The indeterminate nature of critical thinking was reflected in the other disciplines too, Anna (L&C) related it to students finding their ‘academic voice’ [360], and a ‘clicking into place’ [420]. Mary (L&C), interestingly thought that some students might ‘start to develop that way of thinking’ at the end of the first-year, although ’they might not necessarily recognise it’ [352], again intimating that it might be implicit for many students. The implicit nature of much

surrounding critical thinking is something that came up quite regularly in the interviews and will be discussed in the Evaluative Rules analysis.

When participants did make specific reference to levels of study there seemed to be a mixture of views here too. There was a general sense that students should be developing it by their final-year, and that assessments at this stage tended to focus more on this. Gary (ES) felt that some of the better students might show glimpses of it in the second-year, but that it was not consistently measurable. He added that if students had some work experience behind them then they were more likely to display critical thinking sooner. Peter (ES) however, didn't feel it was a good idea to be leaving it until the last stage, and that students should be getting a 'taste of it as early as possible' [380]. Whereas Christie (ES) likened it to another often-troubling topic for students, referencing, saying that even though it is introduced in year-one, some will graduate 'not having a barking clue … some will get it some won't' [540]. Once again, these responses highlight the problematic nature of frameworks and criteria being divided into different levels as it is very hard to determine or predict when students will develop these attributes.

While most programmes are informed by the national QAA frameworks, Medicine is the exception to this and will be discussed shortly, there are also specific disciplinary accreditation bodies that have to be taken into consideration. These, through their subject benchmark statements, often outline not only what is considered 'legitimate knowledge' and should be covered in the programmes, but also what skills or attributes need to be addressed, and in some cases the teaching-learning and assessment approaches to be taken.

These accreditations are often programme and not discipline specific. For example, BA (Hons) Early Childhood Studies has no accreditation, whilst BEd (Hons) Primary (Early Childhood Studies) is accredited by the National College of Teaching and Leadership. Similarly, LLB (Hons) Law with Criminology and Criminal Justice Studies is accredited by the Solicitors Regulation Authority and Bar Standards Board, but BSc (Hons) Law with Criminology and Criminal Justice Studies is not accredited. This variety in accreditation introduces even more criteria that has to be taken into consideration in the organisation and structuring of the programmes, as well as the additional administrative burden this requires, something that was spoken about as a challenge by many of the participants. Furthermore, it potentially weakens their disciplinary classification.

Medical degrees are different to all other programmes of HE study, in that their criteria are set by the General Medical Council (GMC), who 'set the standards and requirements for the delivery of all stages of medical education and training' (GMC, 2016; 04). The document responsible for determining the standards expected of medical students is called *Outcomes for graduates* (GMC, 2015). This takes a slightly different approach to the QAA framework. The GMC sets out the knowledge, skills and behaviours that medical graduates must be able to show consistently throughout their studying, through a series of outcomes (GMC, 2015). For example, outcome 'One' focuses on, 'The doctor as scholar and scientist', with point (8 g) stating, 'Make accurate observations of clinical phenomena and appropriate critical analysis of clinical data', whilst point (12 a), referring to scientific method and medical research, states that they should be able to, 'critically appraise results'. These are the only references to critical thinking and analysis in the document, with evaluation only being

mentioned in terms of clinical procedures. This highlights a very different approach in the medical programme, with not as much direct or prescriptive reference to critical thinking, but that it might also be implicit and an on-going expectation.

What is particularly interesting in the GMCs approach, in contrast to the QAA framework, is the emphasis on consistency and that there are no distinctive levels. What is expected instead, is that outcomes are consistently worked towards, and that students will always be aiming to improve in each area. This was highlighted by Chris (M), saying that they 'try to build on it [critical thinking] spirally as you go', and expecting a 'fairly steady progression' [415 & 420], with Mike (M) also saying that they tried to make it 'a gradual journey' [515]. This evokes a much more fluid approach, compared to the 'stepped' approach of the QAA. That students' development is often unpredictable and related to personal development and experiences was also highlighted by Chris (M), who felt that often, 'individual[s] will have points at which they make significant jumps, I think you have transformative experiences' [420]. The different approaches taken by the distributive governing bodies, the GMC and the QAA, with regard to student progress, will be of significance in both the organising and structuring of the curriculum, and in the teaching-learning interactions: a macro influence working its way down to the micro. It also highlights Medicine's more 'singular' nature as a discipline, with stronger classification, and subsequently greater autonomy in the structuring of its curriculum, in comparison to the other disciplines.

At several points throughout this thesis I have drawn on the work of Brookfield and the approaches to teaching-learning that he deems favourable for the

development of critical thinking. In this instance it is interesting to note how his suggestion of facilitation through an incremental and developmental process (2012), perhaps lies somewhere between the QAA and GMC approaches. Developing incrementally does not appear to suggest the significant leaps between levels that the QAA sets out, yet it does not sound quite so fluid, or as smooth as a 'spiral', as the GMC and participants from Medicine seem to allude to. Whilst I appreciate that there would be challenges in trying to map student's progress in critical thinking visually as a spiral, particularly given today's structural preferences and priorities, it would seem to offer some benefits. Namely that continuous movement or development is possible, allowing students to visualise this progress, as well as not experience the periods of 'stasis' that are suggested in a stepped approach, between more significant 'hurdles' at each level.

Overall these comments highlight the ways in which criteria and frameworks that stem from distributive influences external to the university can be interpreted in multiple ways. In some situations, they seem to be used as guidance only, and drawn upon with some interpretation. Yet in other contexts or disciplines, or with other individuals, they are used in more prescriptive and rigid ways. It is not only questionable how clear and transparent these different interpretations are to the students, and how explicitly they are informed by these criteria, but also this idea that a concept such as critical thinking can be mapped so readily to prescriptive criteria. As with all educational processes, students develop them at different times and in response to different stimuli. To think that a student can finish one academic year in June, coming back three

months later in September suddenly able to work at another level, is a very performative and rigid approach.

What is also apparent from the responses, is that whilst most of the participants teaching practice is informed by official structures such as the QAA level descriptors, in relation to critical thinking, this approach seems in tension with how they developed their own individual understanding. There were a number of references to how influential their own upbringing, and backgrounds had been in developing their own understanding of critical thinking:

> ‘I had endless debates and discussions with my father, clashing horribly, of course that developed the capacity to debate, as well as take a number of different arguments into account and forming my own opinion’ (Sally, ES: 285).

> ‘Our family used to discuss things a lot, over mealtimes in particular, and neither of my parents was afraid to question the so called self-evident truths … [my uncle] loved nothing better than a political argument every mealtime, and would adopt the most outrageous points of view just for the joy of argument’ (Barbara, L&C: 200).

> ‘I was brought up to be like that, my parents were particularly keen that you didn’t get sucked into things as a young person, but you cast a critical eye over stuff and took a properly analytical view of what you were being asked to do as a person’ (Sharon, E: 425).

These were just some of the responses by participants when asked how they felt they had developed their own critical thinking. In addition to these, others felt it had been, ’individually created’ (Debbie, L&C: 285), and ‘kind of intuitive’ (Peter, ES: 345), ‘over a long period of time’ (Rita, M: 120). All of which reinforce the need for the development of certain forms of capital and are in stark contrast to critical thinking being mapped by criteria and frameworks.

5.3 Student expectations and engagement

The final point to be made under the distributive rules is the general relationship between students and their universities, and the expectations they have of the institutions and their programmes, as this is increasingly informed by wider social factors. A number of participants spoke of frustration in relation to student expectations, engagement, and how students are increasingly positioned as customers and consumers. This was reflected in all four disciplines. David (E), and Paula (L&C) both mentioned this positioning, 'quite why they are here and they're customers now in a sense aren't they?' [185], with Paula adding, 'I think again in this consumer culture it's almost as if, if they're not being given reams of this and that then nobody's doing enough for me' [375]. David's response brings into question students motivation once they are positioned as customers, whilst Paula's then relates to their expectations as consumers, and that their sense of value comes from the accumulation of a commodified product, rather than their active participation. Both of these examples show mind-sets that participants felt would not be conducive in developing critical thinking. As well as questioning their engagement and participation, Rita (M) also questioned what it is that students value, particularly in relation to student satisfaction, saying:

> 'We struggle as well with student satisfaction and student engagement, students are satisfied when you tell them something … and they're less satisfied if you make them find out for themselves, but it's where does the value lie?' [380].

These points clearly highlight the impact that conceptualising the field of HE in terms of a free-market system has had on student's relationship with universities. The choices individuals have, which are informed by the various ranking mechanisms, and the increased competition that this results in between

institutions, will naturally lead to the sense of being consumers for the students. This was summed up by Christie (ES), who spoke of student expectations and the changing nature of HE:

> ‘HE is changing and becoming more market-driven, so the students are coming in thinking … I pay nine thousand pounds so therefore, I’m expecting to go out with a 2.1, and if I don’t go out with a 2.1 it’s your fault, you didn’t tell me the information I needed to pass that exam, and that’s a very difficult one because you’re then battling against student expectations about what they should receive at university, and what they think they should receive’ [690].

A significant contributing factor to this positioning by students stems from the now fierce competition between institutions, with students’ early expectations being informed by (sometimes misleading) ‘glossy’ promotional material (Longden, 2006). Overall this suggests that the ‘exigencies of the markets’ (Bernstein, 2000), do provide students with choices; however, the other neoliberalism mantra of driving up quality through competition is not materialised, and thus the strategy may actually be incredibly damaging in relation to what students will get out of there HE experience.

Whilst these comments obviously do not reflect the whole student population, it is still worrying that this was quite a widely held perception among the participants involved in this study, and particularly in relation to the development of critical thinking.

Universities, their staff, and relevant external bodies all contribute in structuring programmes of learning, helping to develop the capital and habitus of both students and staff involved in the teaching-learning interactions. Indeed, in the section on Evaluative Rules, it will be evident what role the teaching capital and

habitus of academic staff can have in encouraging student engagement. However, there does also have to be a commitment, and degree of motivation and understanding on the student's behalf in order to fully engage with this process. This is something that is even more important when considering skills such as critical thinking: skills that may be more implicit in the curriculum, or elusive, are less tangible to the students than the obvious accumulation of information. Skills that are not easily commodified and therefore consumed, making it very important to therefore challenge this mind-set, or discourse of consumers.

5.4 Official, pedagogic and social recontextualising fields

In considering the distributive rules collectively thus far, there is an apparent tension between national structures and the institutions and their staff, or what Bernstein would consider between the pedagogic discourse and autonomy of education (2000). In this struggle, Bernstein distinguishes between an official recontextualising field (ORF), which stems from the state and its agents, and a pedagogic recontextualising field (PRF), which is driven by educational institutions (2000). If the PRF can influence pedagogic discourse independently of the ORF, then there will be some educational autonomy and some struggle in the pedagogic discourse. If however, there is only the ORF, then there is no autonomy. In 2000 Bernstein felt that:

> 'the state is attempting to weaken the PRF through its ORF, and thus attempting to reduce relative autonomy over the construction of pedagogic discourse and over its social contexts' (2000: 33).

Nearly two decades on from this claim it appears that the PRF has been weakened, and there is less educational autonomy, although this perhaps is not because the ORF has strengthened. Although Bernstein states that there is no ORF in the HE context (2000), what appears to have happened is that the distinction between ORF and PRF has become blurred. Or that, a significant amount of the PRF has been subsumed by the ORF, or vice-versa, in that much of the pedagogic recontextualising now stems from the state and its agents, through organisations such as the HEA and the QAA.

However, with the reduction in central funding, the state's influence has also waned, and there are now new actors influencing the recontextualising field: the markets. The new recontextualising fields that carry greatest influence could be defined in a number of ways according to what is considered to be the main driving force behind them, whether that is economics, industry, employment, managerialism, other markets, or society more widely. We could therefore introduce to Bernstein's pedagogic device, a new field, the social recontextualising field (SRF).

The SRF would represent the most dominant form of capital currently perceived by society. At this moment in time it would appear that the SRF driver is employability, with degrees largely being viewed in terms of what job opportunities they provide graduates with. The danger in a 'market' situation however, is if any of its actors become too dominant, creating a monopoly: something it could be argued that employability is not far off achieving in HE, particularly so, given that the ORF/PRF are also influenced by it through the TEF and DLHE metrics. Carrying Bernstein's interpretation forward, it now looks

as though the SRF is trying to weaken both the ORF and PRF. When what is needed is a balance. This is a point that McArthur makes very well in her book, *Rethinking Knowledge within Higher Education*. That the preference of one over the other, for example, the training of a willing workforce, the SRF, over the view of learning for the sake of learning, the PRF, ultimately leads to a narrowing of how these ideas get conceptualised (2013). This in-turn has a negative impact on the curriculum, something that will become evident from the analysis further on in this study.

What is of significant interest here is how students would feel about these priorities, what agency do they actually experience in this balancing? Coming to university already laden down with the effects of a commercialised society, and schooling driven by meritocracy, university could provide a beacon of hope in escaping that. Already all too aware of current employment trends in relation to austerity and the gig economy, alongside the prospect of increased debt, what they really might prefer is a critical and creative pedagogic discourse, and overall HE experience, one that will help them not only 'stand-up' in the future but to 'stand-out' as well.

A third factor such as SRF adds more complexity to the pedagogic device, although this may be off-set if the ORF and PRF are considered increasingly merged. However, the SRF is better able to reflect the up-to-date distributive influences on the pedagogic discourse, and therefore the current sites for struggle. Interestingly, when there is a shift in pedagogic discourse such as this, Bernstein states that there is a transformation from one position to another, which creates space for ideology: 'no discourse ever moves without ideology at

play' (2000: 32). The ideology in this instance being that of neoliberalism. How this plays out in the organising and structuring of the curriculum will be discussed in the next chapter which looks specifically at the recontextualising rules.

5.5 Challenges

Before moving on to the recontextualising rules, as mentioned at the start of this chapter, participants also spoke of challenges to their teaching that they experienced as a result of distributive influences. The first of these challenges was the increased amount of administrative duties expected of them. Whilst this increased administration is not exclusive to distributive influences, it was often spoken about in relation to the recording and reporting of data required for a number of the metrics and markets already mentioned, or for the accreditation bodies. This is a natural consequence of increased accountability, performativity and managerialism brought about by neoliberalism: it all has to be administered, measured and recorded. Clearly the SRF is also impacting on the agency of staff too.

The increase in administration was experienced in all of the discipline areas apart from Medicine, once again highlighting its position of power. David (E) and Sharon (E) both highlighted how the volume of administration had increased, but also added that this was a frustration because it is at the expense of time that could be used to 'create more exciting lesson plans' [270]. Although Sharon did recognise that some of this administration was necessary, she also said that, 'there's an awful lot now that I'm not sure about' [170]. This again shows

that whilst the intention of competition and free-markets is to increase choice and drive up standards, the reality could actually be counter-productive, and potentially damaging for current students, as they suffer the consequences of increased workloads for academic staff, and therefore less contact time for the students.

Perhaps related to the increased administration, increased workloads and general squeeze on available time, was another factor participants spoke of as an increasing challenge, this time across all discipline areas. Participants felt that they did not have as much time as they would like to teach. Sometimes this lack of time was a factor of the curriculum, as highlighted by Paul (E), 'it's the time pressure and the amount that you have to plough through' [85], which suggests a pressure on the curriculum and what has to be included: something that is quite often determined by the accreditation bodies. Chris (M) and Mike (M) both felt compromised by the lack of time, with Mike (M) admitting that it was now a case of 'knowing where you can get away with cutting corners' [175], again demonstrating these additional initiatives were having the complete opposite effect of improving standards. Specifically, in relation to critical thinking, Gary (ES) felt that changes are needed in the system in order to engage students more, thus it was necessary to acknowledge that developing and delivering teaching-learning interactions that engage students is more time consuming, required more resources and the time to develop them [505].

Both the administrative and time pressures participants are experiencing can be seen to be a direct result of neoliberal distributive influences, and furthermore, these pressures are having negative consequences at the micro level, on the

teaching-learning interactions. In the final analysis chapter, Evaluative Rules, many of the teaching-learning interactions spoken about by participants that are deemed good for the development of critical thinking, need time and resources to develop and operate effectively. It therefore appears that these macro distributive influences represent less benefit to the students than they do to the markets.

Overall, the points considered above under the distributive rules clearly indicate how a university's response to external markets such as the NSS, and TEF, can have a great influence on their identity, as well as that of their staff and student's. Furthermore, each of the above points also shows how macro distributive issues that favour the SRF, directly or indirectly impact on the disciplinary knowledge practices and teaching-learning interactions; this will be explored further in the following chapters.

In comparing the different discipline areas, Medicine does appear to stand apart from the other disciplines with its stronger classification, in that it has a degree of autonomy regarding its distributive factors, whereas as the other discipline areas are very much more guided by both national and disciplinary specific influences. Whilst this does not seem to have a significant impact on the understanding of staff in relation to critical thinking, it does influence the relevant teaching-learning interactions, particularly in relation to the expectation of stepped development by levels, or continuous, spiralling development.

6.0 Analysis – recontextualising rules

For Bernstein the recontextualising rules ‘regulate the formation of specific pedagogic discourse’ (2000, 28), with this regulation and formation being reflected through the organising and structuring of the disciplinary knowledge practices. It is, therefore, where we will start to see distinctions in the different structures and disciplinary knowledge practices of the disciplines involved in this study. The analysis in this chapter will draw on Bernstein’s concepts of classification and framing in trying to understand the different types of curriculum represented within the disciplines, whether that be visible or invisible, competence or performative models (Bernstein, 2000). It must be noted that Bernstein also introduced the concepts of recognition and realisation with classification and framing. However, as these are both considered to be at the level of the acquirer, it was felt that they would be applied more effectively in the final chapter of analysis, the Evaluation Rules. On a similar note, although Bernstein discussed ORF and PRF, and the regionalising of disciplines in relation to recontextualisation, these have already appeared in the previous chapter so will not be addressed here. This, I believe, is what Bernstein meant by his theories not being simply applied, but rather they were empirically tested, as is the case here.

It is also true that Bourdieu wanted his theories of field, habitus and capital to be empirically tested, rather than theoretically mapped (Ashwin, 2012). This is because the limitations of these concepts are being tested constantly, and thus there is always the potential for the value, or forms of capital to be redefined (Bourdieu and Wacquant, 1992). This chapter will now consider Bourdieu’s

concepts at the disciplinary rather than institutional level. As Ashwin points out, institutional field position and habitus are ‘refracted through a range of internal fields’ before they are situated in teaching-learning interactions (2012: 114), which again will start to tease-out any differences between the disciplines.

Topics identified through the interviews and observations that inform participants’ understanding and approach to critical thinking through the disciplinary knowledge practices, and the organisation and structuring of the curriculum have been considered here as recontextualising rules. Whilst there were a good number of topics raised in this section of analysis, those that have been drawn out were either mentioned regularly by participants or were particularly evident through the combination of interview and observation data. The chapter will begin by discussing a general institutional reorganising and restructuring event that affected three of the four disciplines in this study, in the form of a curriculum restructure. This restructure is relevant because it helps to provide both an institutional and disciplinary context, which subsequently impacts on the disciplinary knowledge practices. It will then focus on three of these disciplinary knowledge practices that were identified as being particularly relevant to the development of critical thinking: small-group work; programmes with practice, placements or practical elements; and, the role module design can play in this process. The chapter will conclude by looking at how participants felt in general about the structuring and organising of the curriculum for critical thinking.

6.1 Curriculum restructure

Southern University's recent curriculum restructuring, across all programmes of study except Medicine, was of great relevance to this study. One of the main focuses of this restructuring was to place a greater emphasis on employability, reinforcing points made in the previous chapter, and how this increasingly influential source of institutional capital - employability - is a distributive influence that impacts on the disciplinary recontextualising. The main objectives of the restructure were to have: a more 'blocked' curriculum with end of module assessment; increased opportunity for students to broaden and contextualise their learning; more inclusive assessment; a greater emphasis on feedback; and, a more tailored and explicit approach to preparing students for life after their studies, which included more cross-disciplinary modules. All of these objectives will, directly or indirectly, impact upon the disciplinary knowledge practices of the programmes and the recontextualising of their teaching-learning interactions, and therefore their understanding or approaches towards critical thinking.

The points of particular relevance here are the 'blocked' curriculum, which resulted in a switch to 'short fat' modules that ran over six or eight weeks, and a shift from one to two-hour lectures. Both of these factors not only resulted in changes to the timetabling of teaching, and thus the framing of the programmes, but also to the nature of the teaching as well. The extended lecture time being intended to bring about more interactive teaching methods. Participants made several points specifically in relation to this curriculum restructure and its impact on module design, student engagement and the wider

curriculum, some of which will be touched upon further on in this chapter. Other topics that stemmed from it, such as teaching style and assessment, have been considered in the next chapter.

At the programme level, the changes implemented indicate weak classification, as the programmes involved in the curriculum restructure (Law and Criminology, Education, and Environmental Science) are being treated as a collective of disciplines rather than as individual ones. Furthermore, the request to develop more cross-disciplinary modules, again weakens their classification, and represents yet further regionalising of the disciplines. Interestingly, in relation to classification and the insulation of the programmes, some responses from the participants did focus on the process of implementation of the curriculum project:

> ‘The way it was first conceived was a massive burden’ (Sally, ES: 70).

> ‘and that’s because we’re getting asked to do more and more and more, the curriculum project has made a nonsense of the summer period’ (Gary, ES: 125).

> ‘Well in my view I think having things imposed upon us… well the curriculum project thing’ (Paula, L&C: 100).

Paula highlights the weaker classification by her use of the word ‘imposed’, which also raises an important issue regarding Bernstein’s polemic language use. By referring to classification in terms of strong and weak, as Bernstein also does in relationship to framing, suggests degrees of domination and subordination in these contexts. The reality was that the project was implemented quickly, in less than a year, with little staff consultation, and therefore may actually reflect differences in power, capital and field position

within the institution. This, Bourdieu made reference to when discussing the ‘Conflict of the Faculties’, and how there were ‘temporally subordinate faculties’, which at the time he felt were Science and Arts, and ‘socially dominant faculties’, which were Medicine and Law. With their positions of power being reflected through a range of economic, cultural and social differences (Bourdieu, 1988: 41), something that seems to have been reflected in the implementation of the curriculum project.

Bourdieu’s reference here to social dominance and its sources, connects with the introduction of the social recontextualising field (SRF) in the previous chapter. Although that was from a more external, distributive perspective, it seems that there are also dominant social drivers at work within institutions at the disciplinary level too. The fact that the Medicine programme, in not being involved in this curriculum restructure, once again appears to be more strongly classified, and as such, in a position of dominance within the institution. The classification of the different disciplines will be a reflection of the institutional capital that they poses, which, through the disciplinary knowledge practices and their associated structures, will influence their approaches to critical thinking. The analysis will now go on to look at some of those disciplinary knowledge practices in more detail.

6.2 Small-group work

In discussing critical thinking and reviewing the observations of practice, one specific teaching-learning environment came up regularly, and that was small-group work, which is taken here to include seminars and problem-based

learning (PBL). Whilst these will be discussed from a teaching-learning perspective in the Evaluative Rules chapter, there are organisational and structural issues that are relevant in their recontextualising. If, as stated by the participants, the intention of small-group work is to explore topics in greater detail through discussion and debate, then a pivotal organisational factor will be the number of students in the groups. In Medicine, the resources available and timetabling allow for their PBL groups to be under ten students. Contrastingly, in Law and Criminology Debbie highlighted that 'if all the students turned up' their seminar groups could contain twenty or more students, when she felt the ideal number would be between six and eight students [455]. These numbers are very much a factor of the resources available to the programmes, particularly time, which was an issue raised by Gary (ES). He felt that to be able to address more of the curriculum in small-group work, 'you'd probably need double the time to do it' [655]. Gary's response suggests that he would be in favour of more small-group work but recognises that this may not be practically possible in his programme.

Variations in group size will result in quite different experiences for the students involved regarding the development of their critical thinking. As Brookfield (2012) suggests, the development of critical thinking is improved when students are in social environments. However, if group sizes are too large there can either be too many voices, or a few more dominant voices that always come to the fore, allowing others to take more passive roles in the group, what have been termed 'free-riders' (Brown and McIlroy, 2011). Student confidence is also big factor in this, which is spoken about in the next chapter. Great importance therefore lies in the programmes creating the appropriate structures so that

students have the agency to participate effectively in these environments. Seminar groups of twenty or more would not appear to be conducive to this, as students would not be able to develop the relevant forms of capital required for effective participation, and thus experience the potential benefits, particularly in relation to critical thinking.

There is now a growing body of evidence that highlights the potential for negative learning experiences if small groups are not organised effectively (Brown and McIlroy, 2011). For this reason, Brown and McIlroy express caution for small-group situations, particularly where students are left to their own devices with little or no direction other than information sheets, as this will rarely result in the learning objectives being met (2011). This highlights how the organisation and structuring, as well as the framing and control exercised by the facilitator (which will also be discussed in more detail in the next chapter) are important factors in small-group environments. It is worth reiterating that the points made above about resources and the time academic staff have available for teaching were spoken about in the previous chapter as significant challenges for many participants.

From an organisational perspective, not only does the Medicine programme seem able to accommodate PBL groups with smaller numbers, they also run throughout the year, whilst in the other disciplines they tend to be associated with specific modules and only run at certain times. As a consequence, the PBL sessions came across as more of a significant element of the pedagogic discourse in Medicine. It is not clear why Medicine is able to accommodate the smaller groups at more regular intervals, staffing resources and possibly

timetabling affordances will no doubt play a role, and the reality may be that as a programme it does enjoy a privileged status within the institution in relation to these factors. All of which enables it to make full use of this teaching-learning approach that benefits the development of critical thinking for their students.

The potential benefits of teaching in small-groups were highlighted by a number of participants. David (E), like Brookfield, noting that, ‘we don’t learn as well as we do when we’re with a group of likeminded individuals’ [415]. Whereas, Sally (ES) and Gary (ES) felt the benefit to small-group work was that they found it easier to work with the students, provide them with feedback, and get a more accurate sense of the student’s learning, all of which Brookfield believes to be important in the development of critical thinking. Furthermore, that this went all the way through the Environmental Science programme, from fieldwork, to lab-work and its analysis and presentation, to the extent that their curriculum seems to be centred on this approach. Brown and McIlroy (2011) also note that good facilitation and role-modelling are vital parts of effective small-group work, taken with a ‘step-wise’ approach, which will reinforce and encourage the valued forms of capital from both students and academic staff. The ‘step-wise’ approach is also something that Brookfield highlights as effective with critical thinking, through its incremental development and scaffolding (2012).

There are also challenges to the effectiveness of small-group work. One pivotal requirement is that students come prepared, which is something that Debbie (L&C) said does not always happen in her seminars. This relates to a point already made regarding student expectations in the Distributive Rules, that ‘they [students] just want to be told the answer’ [425], rather than engaging with

the processes of learning. This suggests that the power balance is not equal, as there are differences in understanding as to what capital is relevant: from the academic's perspective, they hope that students are informed on the topics to be addressed so that they can contribute to the discussions and process; from the student's perspective, it might be more about knowing and understanding the assessment process and how they can achieve this. For example, the PBL sessions in Medicine are all assessed by both the facilitator and student peers, based upon individual contributions to the session. Conversely, in Law and Criminology, students receive an automatic allocation of the module marks just for attending the seminars. This could explain Debbie's complaint about the pre-seminar work often not being completed, as it seems to carry no extra reward for them if they know they will have already achieved some of the marks. This structural and organisational decision for seminars in Law and Criminology will clearly impact on the small-group habitus of the students and academic staff, as they value and try to develop different forms of capital in these environments, of which critical thinking is one.

Assessment in small-groups was raised by Christie (ES), when responding to the use of discussion and debate in teaching. She pointed out that students would say, 'if you are not going to assess us on it what's the point in doing it … if the students can't see the immediate relevance of why they are doing something, then they disengage' [525]. This highlights the difficulty in assessing these sorts of teaching-learning interactions. One the one hand, offering marks for attendance is clearly aimed at getting students to attend in the first place, but if there are no further marks available for their contributions, and they are not made aware of the potential benefits of engaging with the process, it will not

be valued by them. Or, if there are structural factors limiting the potential of small-groups, such as high numbers, then students will not be inclined to engage with the process fully. Small-group work from a teaching-learning perspective is discussed more fully in the Evaluation Rule chapter, however, what is clear from these points is that there are critical organisational and structural factors that will influence how effective they can be, particularly in relation to developing the forms of capital that will have a bearing on students developing their critical thinking in these teaching-learning environments.

6.3 Placements and practice

The second topic considered in the recontextualising rules is the value of placements and practical work to critical thinking. This is something that is integral to three of the discipline areas: Medicine; Environmental Science; and Education. As such, it represents a pivotal source of capital that needs to be developed by the students, where their practice, or even professional habitus will start to develop alongside their academic habitus. In Medicine and Education, the practice element of the curriculum comes in the form of placements, such as in hospitals and schools. In Environmental Science it is through fieldwork, and the follow up lab-work and analysis. Participants in Law and Criminology made no mention of any practical element to their curriculum, which is not to say that none takes place.

In the discipline areas that incorporate practice or practical work, the general benefit was felt to be that it enables students to make stronger connections between theory and practice, which then provides further opportunity for

analysis and the demonstration of critical thinking. Both Jan (E) and Sharon (E) mentioned this, applying theory ‘to what they’ve seen practically’ [555] and having ‘a dialogue between this is what I’m doing in practice and in my teaching and seeing and hearing and doing, and this is what I’m writing about as a theme’ [770]. These responses not only reinforce how pivotal the placements are in education, but also how the practice provides that extra dimension to analyse: through the dialogue between theory and practice.

One of the overall benefits of practice was emphasised by Sharon (E) who added, ‘for any programme where there is a practice element to it, there is a benefit to that because you’ve got something to work with which hasn’t been given to you from somebody else’ [775]. This was echoed by Gary (ES), ‘knowledge and context, taking ownership of the issues that is very, very important’ [630]. These responses highlight the increased agency students experience in these contexts, in relation to the structures they are working within and the distribution of power, as well as a greater sense of ownership of the information they are working with. This is not only likely to increase their engagement, but also weakens the framing, so develops more of a competence pedagogic model, which will have a positive impact upon their critical thinking from a practice perspective.

There are drawbacks however to practical work as outlined by some of the participants. The first of these is on the curriculum itself, as the time and space required for the practice or fieldwork needs to be created in the curriculum, which can have a number of consequences. Firstly, a continuous point of contention for participants has been about time constraints on teaching, which

can manifest itself in a number of ways. For example, as Sally (ES) pointed out, the ‘front-loading’ [480] of lecture content prior to students going out on placement. This was observed in two Environmental Science lectures and is discussed in the next chapter. In short, large amounts of lecture content and information are squeezed into a shorter space of time, making these sessions strongly framed, and therefore representative of a visible and performative pedagogy. Yet the overall process of practical work would be deemed weaker framing, with less control exerted by the academic, and therefore a more competence based model.

Whilst practical work does appear to create good conditions for the development of critical thinking, it is perhaps not consistent across all of the teaching-learning activities involved in the process. Students may then have to interpret for themselves which approach is required, performative or competence, both of which will require the recognition and realisation of different forms of capital.

A second draw-back to practical work, again involves its framing and the degree of control programme staff have in relation to external factors when the students are out in placement. Helen (M) spoke of Medical student’s first years of academic lives being largely controlled by the faculty and its staff. However, as the practice element increases the students are informed by a wider range of individuals, which can result in mixed messages [340]. Research supports this claim, and specifically in relation to critical thinking in Medical education. A study by Krupat et al., found that there was a noticeable disconnect in how critical thinking was conceptualised in educational and clinical settings, with the

findings suggesting that the definitions used throughout the curriculum did not reflect the definitions used in clinical judgement (2011). This disconnect was highlighted by Helen (M):

> ‘From year three onwards particularly more and more happens out in the clinical setting with a wider range of clinicians who will come from different perspectives and those people are immensely powerful and far more powerful than anything we teach them in a classroom I suspect, so the messages they pick up there are absolutely key and sometimes they conflict with what we’ve taught them, but what they’re seeing is what doctors really do and what they really think, and I think a lot of the stuff we’ve been talking about [critical thinking] doesn’t get modelled very well in the clinical setting, doesn’t mean people aren’t doing it, they might not be explicit about what they’re doing and why and their thought processes’ [345].

This results in a weakening of academic staff’s framing, with them becoming less influential and having less control over their students and the disciplinary knowledge practices: the clinical setting becoming increasingly dominant. This will also result in a change in habitus for students, and the valued forms of capital may no longer be aligned to those of the programme. Whilst the weaker framing may result in a more implicit curriculum and therefore a competence pedagogic model, there could be some negative implications to this. Students may still have exams and assessments that will be based upon the curriculum and its formal knowledge, yet they could increasingly prioritise the informal knowledge that they pick up in practice, as Krupat et al., discovered (2011). This was something that was put to all of the participants, whether they felt that there was scope for students to exercise the critical thinking being developed in the programme when they graduated and become professionals. There was an interesting and mixed response.

In Education Jan thought that critical questioning would not be well received where the national curriculum was being applied, saying, ‘yeah, don’t question what we’re doing’ [645], whilst David put this in terms of there being, ‘less room to manoeuvre in terms of being a free thinker’ [475]. However, in other settings such as academies and free schools, Jan thought there would be a lot more capacity for graduates to exercise their critical thinking. This is somewhat of a contrast to the general statements made in the previous chapter about critical thinking being ‘what employers want’, which should perhaps read ‘what some employers might want’.

Peter, in Environmental Science, stated that critical thinking is what employers want and it is essential for their graduates to be successful, as they are required to continuously critically evaluate and prioritise a wide range of information. Responses in Medicine however, were more mixed, from Rita saying that all doctors needed to be really good critical thinkers, to Mike who felt, ‘they could go through their entire career and not have to really tax themselves with critical thinking’ [530], further adding that it might only be when they reach consultant level and get something that is complicated, that they then need to think critically [535]. These comments cast some doubt over the transition from critical thinking at university to that in the workplace and suggest that there might actually be different forms of critical thinking, or capital that are being referred to. This relationship, between study and employment in the professions, would therefore require a very good understanding at the disciplinary level, so that the disciplinary knowledge practices can be informed appropriately.

On the whole, placements and practical work clearly offer a valuable teaching-learning activity that can enhance student's critical thinking, even though that might mean other teaching-learning activities, such as lectures, are slightly compromised. Not only do they provide students with a different perspective from which to approach topics, and therefore analyse them from, but also, the explicit connections between theory and practice encourages more analytical approaches. What is important however at the disciplinary level, is that there is some congruence in the forms of capital being developed in studying with that which is expected in practice, particularly in relation to concepts such as critical thinking.

6.4 Module design

The final organising and structuring element of the curriculum to be discussed in the recontextualising rules is module design. This is not in relation to the complete process of module design, as that is beyond the scope of this study. It is about the 'struggle' between academic staff, programmes, and the accreditation bodies; and, the use of specific modules being tailored towards critical thinking. In Medicine the programme is required to teach a standardised nationally recognised curriculum, however other disciplines will only have parts of their curriculum determined by their respective accreditation bodies. This often means that there are core modules at each level that all students have to take, with some flexibility in module choice available around these. Having elective modules was something that Mary (L&C) highlighted, and that there was 'more manoeuvrability' for academic staff in elective modules compared to the core modules in her programme [490]. This 'manoeuvrability' enables

programmes to influence the curriculum and disciplinary knowledge practices from an institutional and departmental perspective, allowing them to be more responsive, and able to reflect the regional needs of their students. Elective modules can often provide additional benefits as well, in that they are often focused on the research areas of academic staff, so the students involved can get a sense of participating in primary research and knowledge creation, which was identified by some participants as being positive from a critical thinking perspective.

In Education, Law and Criminology, and Environmental Science, many of the participants spoke of modules where critical thinking was being specifically addressed, or that were particularly effective in doing this. In Education this was a final year module called 'Vision and Values', that considers both philosophical and political aspects of education to encourage students to develop 'personalised standpoints to ground yourself in as a teacher' [Paul: 560]. However, David (E) pointed out that whilst this module was 'the ideal learning module' [425], it was only available in the Education Studies programme, and not part of the degree pathways that lead to teaching qualification, so not all students will get to take it. This reflects Mary's thoughts on core modules and them being slightly more restricted in terms of module and programme design. In Law and Criminology, the module 'Contemporary Legal Issues', was referred to several times by its participants, with it being described as:

> 'just critical analysis essentially, that's all they pretty much do, it's all about things that are going on in the world right now, how we might look at them, having discussions about them, probably having arguments about them during the lectures' [Mary: 320].

In Environmental Science Christie highlighted a module that she had implemented herself, to help develop student's communication skills for employability. It was called, 'Science Communication', and is 'deliberately focused on bringing up issues that are provocative … and issues they [students] felt strongly about, … then they're going to want to debate it' [325].

The first point that stands out here is the way participants spoke about these modules, as being current, 'philosophical', and 'provocative', which suggests that this might not be the case for the core modules. Furthermore, the fact that critical thinking was being addressed specifically 'in some modules not in others' [320] was highlighted by Jan (E), and raises issues not only of consistency, but also that critical thinking might only be seen by students as relevant or necessary in specific contexts. An additional issue here is if students are aware of the differences between these modules, and if there would be specific module marking criteria that perhaps differed from other modules. Such inconsistency in relation to the development of critical thinking, where it is a focus of one module but perhaps not as much in another, and the variation in disciplinary knowledge practices that this would result in, is unlikely to be an effective approach. If critical thinking is addressed more specifically in certain modules then the explicit nature would lead to stronger framing and students perhaps 'performing' critical thinking in those modules, not demonstrating competency consistently throughout their studies. It could also lead to uncertainty among students regarding what is expected of them, and the forms of capital that are valued, which is something that participants spoke of across all discipline areas: the often-implicit nature of the disciplinary knowledge practices.

Another notable point here is the nature of the processes or activities participants outline in these specific modules, such as ‘developing personalised standpoints’, ‘having arguments’, and debating issues ‘they feel strongly about’. The participants’ emphasis on these processes in this context suggests that whilst they are the sorts of activities they feel are effective in developing student’s critical thinking, yet they are potentially limited to only specific situations in the programme. Some of the teaching-learning interactions just mentioned, and the implicit nature of the curriculum are both points that are considered more fully in the next chapter of analysis in the Evaluative Rules.

This chapter has narrowed the gaze of the research from the institutional to disciplinary level. Looking at specific examples of how distributive influences have been interpreted and refracted within the disciplines, and how the structures that these create go on to have a direct impact on the capital and habitus of the staff and students. Specifically, in relation to critical thinking, Bernstein’s recontextualising rules, in the form of classification and framing, have provided a useful lens for looking at a range of disciplinary knowledge practices. For it is not just a case of organising and structuring teaching-learning activities in the curriculum, but as much about the approach that is taken in these, that will determine how effective they are. Small-group work, practice and placements, and designating specific modules can all be seen to have a positive impact on the understanding and development of critical thinking, but there are also critical elements in the organising and structuring of them that need to be considered at the disciplinary level.

Before closing this chapter, it is worth highlighting some responses made by participants when talking in general about the teaching of critical thinking. The previous chapter has already touched upon how participants felt that their own understanding had been individually formed through a number of different channels outside of their education, with upbringing being particularly relevant for some. Further comments bring into question much of what this chapter has covered about the structuring and organising of disciplinary knowledge practices aimed at addressing critical thinking. Sally (ES) questioned the teaching of it in the first place, 'it's tricky to teach critical thinking, I don't think you can' [240], whereas, Christie (ES) put this in terms of the context, 'I see it as my responsibility to help them develop the skill, I just don't think it's something that you can teach as in it is not something you can transfer … what I can do is provide the context in which they can develop that skill' [585]. Further responses, such as helping students develop the 'confidence to challenge' (Gary, ES: 260), 'empowerment' (Peter, ES: 520), and 'that they [students] have the authority to ask' (Paul, E: 425), all indicate that the environment that is created, or habitus, might be more important than the actual activity being undertaken. The next chapter will explore this point in more detail.

The variations in disciplinary knowledge practices experienced by the different disciplines appears to be quite subtle, again apart from the Medicine programme. On the issues of time and resources, this programme does seem to occupy a more powerful and privileged position within the institution. Thus, it is able to utilise the teaching-learning interactions that have been identified far more effectively. The other discipline areas appear to be more affected by certain pressures that stem from wider, and often neoliberally driven agendas,

not always to the benefit of the students. In the next chapter the focus of the analysis will narrow even further to consider the teaching-learning interactions in the Evaluative Rules.

7.0 Analysis – evaluative rules

The evaluative rules represent the point in Bernstein's pedagogic device where pedagogic discourse is transformed into pedagogic practice, or teaching-learning interactions (Ashwin, 2012). Teaching-learning interactions themselves rely upon the transmission of criteria to an acquirer, so the acquirer has to be able to both recognise that criteria, and what meanings are relevant, and realise these, putting them together in the form of 'legitimate texts' (Bernstein, 2000). Whilst Bernstein introduced the concepts of recognition and realisation in Recontextualising, it was felt that they would be of more use in this, the teaching-learning section of the analysis, as they are at the level of the acquirer. Furthermore, recognition and realisation connect more naturally with Bourdieu's theories of individual capital and habitus, as this is where students are expected to identify and develop their academic habitus and the valued forms of capital.

This chapter of the analysis will begin by focusing on the observational data from the teaching-learning interactions, before then analysing the interviews, all in relation to critical thinking and teaching-learning interactions. This therefore provides one of the critical points in the analysis, given the research questions of how academic staff understand critical thinking, and, how this understanding correlates to their teaching practice.

As mentioned in the previous chapter, the main points considered here will centre on the context, or framing, of the teaching-learning interactions, specifically looking the teaching style and approach utilised by academics in the different settings of lectures, seminars and PBL. In addition to this, it will also

consider the actual teaching-learning activities that take place in these contexts, such as discussion and debate, and assessments.

An essential part of any teaching-learning interaction is the teaching style adopted, which was summed up by Paul (E), who said, ‘you can teach anything you want content-wise, it’s about how you teach it and the process with which people engage with that that’s important’ [195]. This statement highlights the influence that framing can have on the curriculum and the teaching-learning interactions, particularly in relation to critical thinking. According to Bernstein, how strongly or weakly framed teaching-learning interactions are will impact upon their visibility to students, and therefore how able they are to recognise, and then realise the expectations associated with those interactions in the form of evaluations (1990; 2000). Furthermore, strong and weak framing also determines the type of pedagogic model, with strong framing leading to a performative model, and weak framing leading to a competence model of pedagogy (Bernstein, 2000). What will also be demonstrated is how the approach to teaching-learning interactions, and their framing, are also reflections of the distributive and recontextualising influences that have been raised in the previous two chapters.

7.1 Lectures

One of the most common teaching-learning methods traditionally linked with HE is lecturing. Naturally, quite contrasting styles and approaches were witnessed in the lecturing observations: from didactic, content laden, and strongly framed, to those that were more discursive and weakly framed.

As highlighted in the previous chapter, Bernstein's use of language is again telling. To determine the framing, or the control exercised by the academic, as either strong or weak, suggests negative connotations for the latter. Yet as this chapter will highlight, it is the weaker framed teaching-learning interactions, being less structured or visible, that require the greatest amount of skill, teaching capital, and habitus to run effectively. Furthermore, when the teaching-learning interactions are framed weakly, in developing a competency model, they are generally better suited to the development of critical thinking.

Lectures, on the whole, are strongly framed, with a great deal of control exercised by the academics, over the topics covered, the pace of delivery, and students' levels of engagement. Christie's (ES) response on lectures summed this up well, 'the lecture component really you can't get away from it, you have to give them facts, there's certain information that you just have to put out there, how effective that method is, is debatable' [80]. This fits with the understanding that disciplinary knowledge is required for critical thinking: as Gary (ES) remarked, 'unless you've got some knowledge you don't have the confidence, or you don't have the understanding to be able to say well hang on a second' [285]. As outlined in the introduction, this is quite a widely held view of critical thinking, and one that the Environmental Science programme appears to subscribe to. However, Christie also questioned how effective an approach lecturing is, particularly in relation to the development of critical thinking.
One important factor of lectures is their timing, which can impact on the academic's approach and subsequently student engagement. This is something that Christie (ES) and Sally (ES) disagreed on. Christie (ES), remarked that 'lecturing for two-hours solid is really hard work in keeping the students

engaged when it is a very didactic situation and they're just passively receiving, it's hard work' [155]. It would be difficult to argue against this statement, talking for two-hours is hard work, let alone keeping students engaged whilst doing that. Her comments also suggest that she does not feel that she has a choice in the didactic nature of the lecture. In contrast, Sally (ES) preferred two-hour lectures, as she believed it provided her and the students with the opportunity to do a task and come back, so they can 'think for themselves' [485]. It seems that Sally is more inclined to use the time to include activities that then engage the students, as per the expectations of the curriculum project. This point was summed up by Gary (ES), 'I think many of us appreciate it's not just dishing out information, it's engaging with them and getting them to come back to you, but it's hard to get across that bulk of information' [645].

These points highlight how distributive and recontextualising influences can play-out in the teaching-learning interactions. The 'bulk of information' Gary spoke of, will largely be determined by external bodies such as the accreditation organisations; whilst the structuring and organising of the curriculum in Environmental Science means that this is then 'front-loaded' into a few lectures; yet this is still open to interpretation by the academics — either didactic and content laden, or more active and engaging. The consequences of this decision will have a significant bearing on whether lectures are an environment where critical thinking can be developed.

One of the main approaches used by academics to engage students in lectures is by using questions, something that was spoken about by most of the participants, and specifically in relation to encouraging dialogue and critical

thinking. For example, Jan (E) said, ‘so build in questions and space for them to talk, because I think they come alive anyway when you do that’ [450], as well as Gary (ES) remarking:

> ‘I do try and ask them questions, simple things, throwaway things, which I expect quite a few of them in the audience to know and therefore possibly to throw back at me in terms of this, but just to try and get a dialogue going’ [570].

Based on the observational data, how effective questioning was in generating dialogue varied a great deal. Both Sally (ES) and Peter (ES) asked a number of questions in their lectures but received very limited responses. Strong framing however, as just mentioned, was apparent even when questions were incorporated, as they were controlled by the academic staff, with no questions being encouraged or raised by the students. Whilst this might have been because they were shorter one-hour lectures, it was particularly interesting with Peter (E), because when asked about developing student’s critical thinking, he replied:

> ‘Yeah it’s funny isn’t it, when I first started lecturing I thought it was all about me telling them the stuff, but no it’s carefully designing things so that they’re running it and motivating them to, it’s all back to facilitating’ [445].

This statement is in contrast to the approach Peter took in the lecture observed, which was very didactic. It therefore seems that there may be a disconnect between what he understands as a preferred method of lecturing, and the actual approach he takes, or has to take, and any compromises in this might be a reflection of individual preferences as just highlighted, or due to other pressures on the curriculum.

The lectures observed in Law and Criminology provided further demonstration of how effective the different approaches taken by academics can be. In one of these lectures the academic outlined that it would be particularly engaging because it was based on ‘a contentious and controversial legal issue that would bring out the students critical thinking’, whilst in the others a range of media was utilised in their lecturing style, such as audio and video to try and increase student engagement. The overall sense however, was still of them being very strongly framed with little student engagement. In one case the academic read large chunks of text from a projected screen, remarking, ‘I’m surprised you are not more talkative, this is a contentious issue’, and, ‘you must have an opinion’. In the other lecture, despite a number of questions appearing on the projected slides, none of these were actually put to the students, as such both lectures seemed to be a process of didactic ‘delivery’.

There was a noticeable difference in the approach taken by Debbie however, in the final Law and Criminology lecture. She spoke for much shorter periods of time, questioning the students more regularly, receiving many more responses. If her questions were not answered she would rephrase them, or draw parallels to help students understand, as well allowing time for them to consider their responses. All the while, she encouraged students to reflect on their own perspectives in relation to the topics discussed. This approach, which appeared weaker in its framing, provides students with some agency, sharing the authority, which encourages their engagement and participation by valuing their diverse voices (McArthur, 2009). This is perhaps no surprise given Debbie’s thoughts on helping students develop their critical thinking, and how strongly she felt that ‘you do need to be shown, or you do need people to respond to

your questions, or to show that sense of engagement' (Debbie, L&C: 305). Her lecturing style indicates that she is keen to model the behaviours she expects the students to be developing, which did not appear to be the case in the other lectures.

Questioning in lectures was also popular in Education; David (E), suggested more generally that, 'the best teachers' are those that 'subvert and ask questions', although he also added, 'you can get in trouble for asking questions, or you can make life more difficult for yourself' [750]. When pressed on who he felt he would be in 'trouble' with, he related it to his teaching in schools, explaining what a pressurised environment it is, and straying from the curriculum can, sadly in his view, cause problems for teachers. David (E) also reiterated the need to model the expected behaviours, 'at the end of the day it's about modelling questioning attitudes and saying well don't just accept this' [775]. Brookfield's theory on developing student's critical thinking talks about modelling the behaviours, but also 'scaffolding' the processes (2012). This is something that Jan (E) seemed to do very well, with her questioning, starting off easy and becoming more challenging. Building the questions up gradually, so that students can demonstrate and exercise their foundational understanding, before asking them to comment on more complex topics and issues, which the students seemed to respond to well.

These examples have highlighted a number of teaching-learning factors in lecture theatre environments that will impact upon their effectiveness in developing critical thinking. Practical issues such as class-size, and classroom or lecture theatre layout, and the duration, will all affect student engagement,

and thus their willingness to participate in any activities planned. However, what appears to be even more influential is the framing and control exercised by the academic, and their general approach, teaching capital and habitus, which will be addressed further on. Certainly, in lectures, it appears that not only taking more time to build up and scaffold questioning may be effective, but also that modelling the expected behaviours is valuable too.

7.2 Seminars and PBL

All of the programmes in this study use smaller group sessions in the form of seminars or PBL. From an organisational and structuring perspective these were discussed in the Recontextualising Rules chapter, they will now be considered in relation to their teaching-learning. In general, participants felt that discussion, questioning and debate are the teaching-learning interactions best suited to developing student's critical thinking, which is why seminars and PBL groups are thought of a particularly effective for this.

Overall, there was more discussion in the small-group sessions observed compared to the lectures, but this was still quite often strongly framed by the academics. In Law and Criminology, students were given pre-reading tasks, as well as having set tasks in the seminar with specific questions to answer, with time for students to debate their findings at the end. Within this set up Anna (L&C) maintained a lot of control in her seminar, and in making frequent connections between the lecture content, discussions in the seminar, and the assignment question options, made it a very strongly framed situation, and module overall, similar to constructive alignment. The performative

consequences of this might mean that the students would be able to do the activities being asked of them, but only by following a set of instructions, or under certain conditions, being guided in what questions to ask, what to look for, and what was interesting and warranted further research. Without these cues it is questionable whether the students would be able to transfer this to other contexts, demonstrating independent competency or autonomy regarding the skills being developed, or just a form of ‘mimicry’ and performativity according to the criteria set. Mimicry being dependent upon a subject to copy, has the potential to be particularly damaging in the development of critical thinking, if, as a number of participants said, it is about developing independent thought.

The other discipline to use seminars was Education, with one of David’s being observed. Two points stood out from David’s (E) seminar. The first was that he used a minimal amount of resources, such as handouts or projected slides, so it did not seem such an act of structured delivery. Instead he talked around the topics asking lots of questions and trying to get all of the students involved. As with Debbie (L&C) and Jan’s (E) lectures, his approach seemed to draw better responses from the students. This might have been because there was a lower number of students in the classroom, or to do with his framing, but he was also very friendly with the students, sometimes humorous. Like Debbie, he also encouraged the students to think from their own perspectives, saying, ‘there is no right answer’, and ‘ask yourself what is important to you?’, which might have minimised any fear the students might have had in trying to get the ‘right’ answer. What he also ensured was that all of the students were involved in the questions and discussions, specifically asking some of the ‘quieter’ students

‘what do you think?’ This seemed to not only create a more collegiate atmosphere, but also empower the students with a greater degree of agency.

The second interesting point from David’s seminar, was the level of contribution made by the students, with the second half of the seminar taken up by students presenting on topics. Overall, this demonstrated weaker framing in comparison to most of the other teaching-learning interactions observed, as David (E) was not always in ‘apparent’ control of the discussion topics, and students were presenting on their own findings for much of the seminar. As such, it represents a less visible form of pedagogy, but one where the students will be developing a greater degree of competency in relation to the activities being undertaken, such as voicing their ideas, backing these up with evidence, listening, and being able to defend their positions, all of which are important attributes in the development of critical thinking. It must also be noted that David’s seminar was with third-year students, who will have had more time to develop their academic habitus and capital, thus are better equipped in recognising and realising the expectations in these environments.

The discipline area not mentioned in relation to the observations thus far is Medicine. The only observations that took place here were of two PBL sessions with Rita (M). In the Medicine PBL sessions the role of the facilitator is seen as ‘lighter-touch’, with the students given more autonomy in the overall process, which would be considered weaker framing. Compared to the other seminars the students appeared more engaged in these sessions, which could be down to a few factors. Firstly, according to one of the interview participants, there is an ongoing assessment taking place throughout the PBL process, which will

naturally heighten student's engagement. Secondly, the groups were smaller, with eight or nine participants, and these groups stayed together throughout the year. This results in groups getting to know one another, developing a collective sense of habitus and capital. This was apparent from the PBL process they went through, with the students having established processes, including nominating a chair for the session, each reading sections of the PBL session material, and peer feedback at the end of the session, all of which would encourage the development of a collective habitus and capital accumulation.

Assessing small-group sessions such as PBL is something that Zhang et al*.,* recognise as a notoriously challenging process, particularly if peer evaluation is incorporated into to it (2008). However, the peer evaluation process observed in Medicine seemed to be very effective. Participants provided each other with very honest, analytical and constructive feedback, something that is not always witnessed in peer evaluation, with it often being considered unreliable (Brown and McIlroy, 2011). This process of peer-feedback would also encourage students to develop their reflective skills, something which Chris (M), among others, felt is valuable in critical thinking, 'In terms of their critical thinking I guess it's just trying to encourage the students to reflect on their behaviour' [385]. Unlike Brown and McIlroy's suggestion, that small-groups, like PBL, work best when the assessment is kept formative (2011), this is not the case in Medicine, as the PBL sessions form part of their summative assessments, which could be another factor in explaining why the sessions appeared to work so effectively.

There are other aspects potentially contributing to the effective nature of the PBL sessions in Medicine. Firstly, that it is one of the few programmes at Southern University that is in a position to 'select' its students, unlike the other programmes in this study that are all recruiting programmes (Wilde and Wright, 2007). Due to this, and also because it is a Medical degree programme, there is a higher proportion of higher achieving students, many of whom will come from families where university is familiar territory, so will have accumulated more of the academic and social capital that enables them to flourish in HE in general, and particularly in situations such as PBL.

Overall it appears that Debbie (L&C), Jan (E), David (E), and Rita (M) have all developed personal forms of academic or teaching capital, and a habitus where they are able to exercise that capital, which encourages students to be more active participants. David's (E) approach is perhaps highlighted best when he spoke of the need to encourage students to think independently for themselves (something that was evident in his seminar) and how students might feel about this in general terms:

> 'I make a big thing of saying that I'm not here to fail you, I'm not here to catch you out, actually I'd like to pass you, you've got to actually demonstrate why I shouldn't pass you, so write or create a poster or do a presentation, try and do it completely free of the feeling of fear that I'm going to fail you and so on, so I try to remove that from them to free them up to be independent' [820].

The points David makes here indicate that student's agency might be in tension with some teaching-learning interactions, and reveals that how they often position themselves is in contrast to the expectations and structures being presented to them by the academic and their habitus. As Archer's social realist

theory questions, are structure and agency in a complementary or contradictory relationship (1998)? Participants in this study often spoke of issues around student engagement and interaction, yet also many of their remarks acknowledge that students can lack confidence, are fearful of being judged and assessed, and wanting to get the 'right' answer. Sharon (E), spoke specifically of this:

> 'But there are some students who either their confidence in their academic ability or where they are in their own thinking at that stage in their life, means that they find it more difficult to really open up to being brave enough and confident enough to allow for there to be sometimes open-ended answers, and that can take a confidence that they aren't always ready for' [810].

In reference to critical thinking, Sharon (E) also spoke of students having the 'tools you needed' [1090] for this, tools which, from her previous statement, could be interpreted as confidence and bravery. However, she also mentioned that students need to feel that they have permission to be critical and to question, which again is very much about the agency that they experience. Why students might lack confidence and be reticent in being critical is also understandable, in a situation that Mary (L&C) describes as a case of 'just get on and do it and sink or swim' [355].

Again, drawing on McArthur's work on disciplinary discourses, her research highlighted how students participating in mutual meaning making can happen in most teaching-learning interactions, including lectures. Furthermore, that this can also be easily stifled, drawing on an example from a seminar where lots of questions were being asked, but the nature of the questioning gave the impression that the 'meaning' was already established (2009). As mentioned

before, McArthur puts this down to the sharing of authority, and emphasising that the academics view is just that, their interpretation, not necessarily the right answer, which would not encourage students to challenge this anyway. It seems that getting this across to students is going to be very influential on their engagement.

Clearly there are a number of factors that influence these relationships, including the academic habitus and capital of both staff and students. This includes the framing and control exercised by the academic, the different ways in which the teaching-learning structures are presented, the physical environments within which the teaching-learning interactions take place, and how empowered the students feel in these processes. All of which mean that it might be hard to generalise about complementary or contradictory relationships, as they are going to be individually experienced.

Bourdieu's theories of habitus and capital are of notable relevance here, both for students and staff. For example, the year of study for students will be a determining factor in the academic capital they have accumulated, and the studying habitus they have developed. For some, the capital involved in responding to questions or speaking out in public might have evolved through their upbringing, or prior educational experiences; as Bourdieu emphasises with habitus, it is developed through past experiences, of which, childhood experiences are particularly relevant (1990b). For others, who are less accustomed to HE practices and its structures, it will take time for them to develop their academic habitus, awareness of the teaching-learning processes, and the expectations of what their role or behaviour should be within that. It

should be noted here how a number of the participants remarked upon the value of their own upbringing in the development of their critical thinking, which will also be true for students.

A number of studies have highlighted the strong links between students' capital accumulation and their experiences at university, for example, Crozier and Reay (2011), and, Reay, Crozier and Clayton (2010). There is also a strong connection to Bernstein's theories here too, as student's academic capital and habitus are going to be of great influence in their recognition and realisation of the expectations associated with their study. In some of the teaching-learning interactions mentioned above it might not be explicit what the valued forms of capital are, with academics personal understanding being in conflict with official versions, therefore making it difficult for the students to recognise and realise their capital.

As this section of the analysis has identified, teaching or lecturing capital, and habitus are as relevant, if not more so, for the academics conducting the lectures. The approaches of Debbie (L&C), Jan (E), David (E) and Rita (M), did result in noticeably higher levels of student engagement compared to the other observations, whether they were lectures or seminars. This seemed to be a reflection of the teaching habitus they created with the students, an environment where students either already knew or were better able to recognise the expectations in relation to their role. This is emphasised by Bourdieu, where he states that the field structures the habitus, but 'habitus contributes to constituting the field as a meaningful world, a world endowed with sense and value, in which it is worth investing one's energy' (1992: 127). These

academics developed a habitus which not only provided a sense of value for the students, but also handed them some authority or agency, and thereby made them more inclined to engage and invest their energies.

The habitus and capital accumulation displayed does not appear to be just a factor of teaching experience: Debbie has been teaching in HE for 23 years, whilst Jan has only been teaching in HE for eight years, although she has been a teacher for many more years than that. However, when other academics were observed, who have been lecturing for up to 35 years, very different situations were observed, so it is not just down to their experience. It is also very much about the individual and the conditions for teaching-learning that they create. The skill that this requires, of 'good' teaching was remarked upon by Helen (M), who said:

> 'I think you need really good quality educators, I think you need to be very skilled to be able to effectively challenge students, it's very easy to impart information, but to supportively and effectively challenge, help them understand and look differently at things, and help challenge their existing belief systems, or their views, and help them through really troublesome bits, it's a very skilful role and we all struggle with doing that, and so for me the minute education is seen as just something anyone can do, education's going to become a very different thing' [535].

Helen clearly identifies the significant difference between imparting information and effectively challenging students, which will be pivotal when trying to develop critical thinking. Other participants also spoke of the importance of challenging students in relation to critical thinking. Sharon (E) felt this was a pivotal part of university, 'a universal environment where ideas can be put forward and challenged and tested and revised' [302], and not just for the

students but modelling that approach as well. The remark by Helen above, clearly suggests that not only do academics need to develop their teaching capital, but also to be able to create the right environment, or habitus for students, so that they have the agency to be able to participate effectively. This is even more so for the activities Helen (M) mentions above, such as challenging existing belief systems, which in the form of reflection is considered very important in the development of critical thinking.

It is difficult to pinpoint exactly what enables Debbie, Jan, David and Rita to develop a teaching habitus that seemed to be more effective, in relation to critical thinking, than the other participants. Certainly, the relationship, between academic staff and students, is influenced by a number of different social factors, such as prior educational and life experiences, socio-economic background, ethnicity, age or gender (McArthur, 2009), making it hard to determine exactly what could be influential in this. What seems pivotal however, and evident in the case of these four participants, was the sense of shared meaning making that they endeavoured to undertake with the students. At least attempting to minimise or dissipate the traditional power imbalance that exists between staff and students, and not positioning themselves as the all-knowing experts in the field, but rather as similarly interested parties ready and willing to challenge and explore the topic.

This is not to suggest that the other participants observed do not attempt this, it was just not observed in these instances, which again may be to do with any number of social or structural factors, such as the time they had available, the content they needed to cover, or even their own level of understanding of the

topic. The lecture observed with Sally was not in her specialist field, and she highlighted prior to the lecture that she was standing in for a colleague, only getting notification of this a few days before the lecture. Her own confidence would therefore be a potential issue in feeling able to discuss and explore the topic openly with the students. Similarly, not necessarily being informed of what questions would be helpful or appropriate to ask. This further highlights the multiple social and structural factors that influence each and every teaching-learning interaction, and how variable the response to these can be.

The data drawn upon thus far in this chapter has mainly stemmed from the observations of participants practice, with some comments from the interviews, and how these relate to the evaluative rules. The attention will now focus more on points raised through participant's interview responses.

7.3 Debate

Another popular method used to engage students in teaching-learning interactions, which many participants also spoke of as being helpful in developing critical thinking was the use of debates. As has been seen in the discussion on seminars and PBL, there are challenges around the facilitation of more discursive sessions. One pivotal challenge is that it is a time-consuming process, in already squeezed curricula. Jan (E) spoke of this as being problematic because students would see it as 'not get[ting] so much content knowledge' [450]. There are also issues around assessment, how it is facilitated in larger group sessions, as well as the influence of individual student personalities, and the 'problem of very shy students' (Debbie, L&C: 470), or

students who ‘are not particularly articulate’ (Anna, L&C: 545). The benefits however, are that students ‘come alive’ with a good debate (Jan, E: 450), and that you are able to explore things in greater depth (Paul, E; 765), with the facilitator becoming almost a ‘participant’ in the process, and the students can be ‘left to it’ when it goes well (Paul, E: 60 & 480). It is not just about being able to voice views either, as Jan (E) feels that part of the real value of debating, is the development of listening skills too, which is also important in the development of critical thinking.

How explicit or visible the benefits of debating are for students will depend upon the framing and facilitation. The approach shown by some of the participants in the seminars and PBL sessions was of weaker framing, with students having more ‘perceived’ control. In contrast to this, David (E) and Sharon (E) both felt that they needed to remain in control, as debates need ‘structure … and a systematic element to them’ [925], with David (E) also pointing out, ‘we pick a contentious issue, … and we create a notion’ [590]. These comments suggest little agency on the student’s behalf and seem in conflict with the approach David took in his seminar. However, they might explain why he felt that, ‘discussion isn’t as forthcoming as I think I sometimes I would like it to be’ [580], and, how he would like to have, ‘more lively discussions in sessions’ [655]. That they are not more forthcoming or lively might be a reflection of the control he endeavours to retain.

Other participants also seemed to want to retain control, Peter (ES) mentioned, ‘exposing students to a debate’, and that, ‘they [students] were listening to our debate, they weren’t undertaking one’ [95 & 385]. As well as, ‘assigning people

to different sides of an argument' (Christie, ES: 520), and finally, Sally (ES), 'we have strict rules for the discussion and debate that are ground rules laid out' [580]. All suggest that the students have little agency in the debating process, being given topics, assigned to sides of an argument, or just watching them take place, none of which will really develop their own capital in these situations.

Another, often invisible, element of debating as a teaching-learning method is its evaluation, which tends to be done informally most commonly. Jan (E) outlines her approach as, 'I probably won't be formally recording their progress in lectures and seminars, but obviously I would know, so I would have a mental note of it' [510]. Similarly, Paul (E), spoke of not having formal presentations in his modules, but he is assessing the students 'informally in classroom discussions' [400]. Quite what happens to these 'mental notes', or assessments of 'informal discussions', and whether they go on to inform more formal assessment processes is unclear. It did not sound like there were formal processes for them, or, that there was consistency across the programme, which would suggest it was implicit, and possibly sporadic. Thus, it remains difficult for students to recognise and interpret the expectations and might be why some are not inclined to get involved, as they are not aware of how, or even if, they are being assessed, and are therefore unsure as to what they are expected to realise in these environments.

This once again highlights the dilemma facing academics, in either making the activities and expectations explicit with clear guidelines, and risk performative responses from students. Or, create more loosely framed activities, with less

structure that students hopefully engage with, or even lead on, in an effort to develop greater competency.

7.4 Assessment

The next topic, assessment, is a particularly challenging one as far as critical thinking is concerned. Academic staff are obviously informed by various structures in their assessments, such as the QAA level descriptors, which go on to inform marking rubrics. However, as was highlighted in the Distributive Rules, the understanding academic staff have of critical thinking is often in tension with these official versions. The difficulty in assessing critical thinking was put most simply by Christie (ES), when she said, 'I mean how do you assess critical thinking, it's a really, really difficult one' [500]. Sharon (E), also spoke of how challenging this is, when she said:

> 'If you are particularly talking about critical thinking, how do you assess somebody's, not necessarily their ability to do it but actually doing it, because in a way there's two steps towards it, one is demonstrating that you have the capacity to think critically and you're willing to engage with it, and the other is the effectiveness with which you can do that' [955].

This is similar to Brookfield's view of there being two elements to it, the process, so actually doing it, and the purpose, recognising where and why to use it (1997), both of which potentially need recognising in assessment. Mike (M) on the other hand, questioned 'how much critical thinking do you have to be able to show?' [480], leaning towards a more performative stance on it. The challenge in trying to develop student's competency in critical thinking was touched upon by Helen (M), 'just because they perform in an assessed environment does not mean they're necessarily going to be critical when they go out into the real

world, it means they can perform in situ' [470]. So also acknowledging the purpose side of it.

These responses indicate what is perhaps the critical issue in assessing critical thinking: in order to be able to assess critical thinking in terms of the current structures of HE, there needs to be a performative aspect to it, but that approach will not demonstrate whether students are actually competent at it, able to judge when it is required, and capable of applying it in different contexts. Part of the challenge lies in the increasing desire for assessments to be aligned to clear criteria, so that students are aware of what is being asked of them, and there being marking frameworks in order to encourage assessment consistency, which are factors of the neoliberal performative agenda. In order to appease these, students will naturally be pushed into narrow and performative modes of learning, perhaps to the detriment of developing their competency in this area.

In relation to what form of assessment was best suited for allowing students to realise their critical thinking, there was a mixed response. Anna's (L&C) view was that some students find it difficult to articulate their thoughts. They can feel 'terrified' by oral presentations, whereas an essay can give them time to think through and formulate their response. However, Jan (E) thought that writing can also be a barrier for many students, so Mike (M), pointed the quite widely held view that a combination of the two, writing and verbal, was a good solution:

> 'you can use both and the thing that really helps you understand whether somebody's truly grasped the concept and has really looked at things from every point of view possible, is by questioning them about it' [625].

Mike's thoughts reinforce the idea of there being two versions of critical thinking. One that is realised in the form of writing, which is more performative, being generated in response to criteria and a structure set out by an assignment brief. Whereas, if students have to demonstrate or realise competency in it, then verbal assessment is going to be better. However, the latter approach is only going to be feasible in one-to-one or very small group situations, such as seminars and PBL, which, due to time availability and resources (distributive and recontextualising influences) has previously been identified as problematic. The reality of this was made clear by David (E):

> 'if we had the time in an ideal world, I would prefer to set a question and talk individually with the student and then assess whether or not, because there's a dialogue and you can tease things out' [875].

The most common method used for assessing critical thinking is therefore through writing, which as just stated, encourages a more performative approach. This point was made clearly by Paul (E), who said that, 'given the sort of circumstances with the volume of students that we have to assess and so forth, it's the most realistic, I wouldn't say it's the best' [765], also adding 'there's a lot of different facets to it really, and that written element doesn't address all the potential areas of critical thinking that there are' [775]. Thereby acknowledging limitations in the transference or teaching and marking of critical thinking skills, and the limited options for assessment of the development of critical thinking.

There is one teaching-learning environment where the potential for individual discussions like this is are more possible, and that is in the latter stages of study and dissertations. As Debbie (L&C) notes, 'I have some wonderfully interesting

conversations with some of my dissertation students, and on occasion my personal tutees as well, but it needs small numbers' [450]. Other responses, such as, 'critical thinking does come out, particularly when we look at dissertations' (Paula, L&C: 560), and, 'you can see it clicking that they begin to understand what delving-in in a more critical way actually means in academic terms' (Barbara, L&C: 205). Christie (ES) also felt that the significance of the dissertations was 'obvious … because it is their independent piece of research' [395], relating it to issues of ownership and student agency. Finally, Gary (ES) pointed out that dissertations represent one-third of their final-year marks, so that is why they should be bringing out 'their most critical facets' [485], believing that there is a more strategic rationale behind this.

Dissertations do represent the final stage of most degree programmes, and therefore bring together most of what students have learnt, drawing on all of the academic capital that they have acquired over the course of their degree. There is also the prolonged mode of study of whole-year projects like dissertations, and the increased supervision and tutoring that students receive, often in areas that are relevant to academic's own research areas. Development in other areas will also become more evident in the students' final year of study, in their overall maturity and confidence, particularly in relation to understanding the academic expectations, and learning 'the tricks' [330], which is how Mike (M) described academic expectations. This final stage represents the coming together of their academic habitus. Through the combination of a detailed piece of written work and a sustained verbal dialogue, as well as the capital students are able to draw upon, and their studying habitus, it appears that dissertations offer perhaps one of the best environments for assessing critical thinking.

7.5 Implicit Curriculum

The final point to be considered in the evaluative rules is how implicit many of the points that have been made above are. This was something that was universally expressed across all discipline areas: how much, specifically in relation to critical thinking, goes unsaid, is implied in much of what happens; and how much students are expected to assimilate, learn and understand. There has been a great deal of discussion in this section in relation to the framing of teaching-learning interactions, and how that framing can result in either visible or invisible pedagogic models. Responses from the academics adds to this interpretation, and how many of the expectations regarding critical thinking are not made overtly to students.

Some participants were quite straight forward, such as Mary (L&C), when responding to a question on how she understood critical thinking, saying ‘they [students] don’t understand what it is they’re expected to do’ [185]. She went on to liken it to experiential learning, in that until you are there ‘you can’t prepare them for it’ [345], alluding to it being potentially intangible. To make it more tangible, Paul (E), thought that pointing critical thinking out in class discussions might help, specifically saying, ‘what we’ve been discussing here is critical thinking’ [665]. Barbara’s (L&C) view was, ‘I think some of the brighter students they just find a way of finding that out; I think for quite a big block in the middle actually it does appear a bit of a mystery’ [585]. The implicit nature of critical thinking was also mentioned by Chris (M), who added how this can impact students, and their preference for more visible pedagogies:

> ‘It’s finding more time for them to do it explicitly I think, because it is challenging, and they find it difficult, and it’s the uncertainty and they’d rather operate in certainties, so it’s an area they’re uncomfortable with’ [530].

This view is very similar to the points just made about assessments, and what should be strongly framed, visible and explicit, but according to Bernstein, leads to performative responses from students, and what should be weakly framed, invisible and implicit, but more likely to develop competency. The tension academics experience in this was highlighted by Helen (M), who said, ’I suspect a lot of us want to make things a bit more manageable for students to make it simpler’ [355], with Chris (M), also speaking of wanting to make it easier for students. This suggests that there is a great deal of empathy from the academics and they do want to help and support the students, but perhaps do not realise that in making things clearer and more explicit, they are potentially minimising the benefits to the students. Although Helen (M) did also discuss how she thought it is important to challenge students, rather than making things easier and clearer for them. This brings to the fore tension experienced by Helen, and possibly other participants, who on the one hand want to help students navigate their HE journey, but on the other hand want to see them challenged. This tension has been highlighted by McArthur, where she critiques the ‘trend towards excessive certainty and transparency’, and instead reminds us that ‘the knowledge within higher education should be difficult’ (2013: 13).

One discipline area that has received quite a bit of attention on the implicit or hidden curriculum is in Medical Education. Authors such as Robbe, strongly connect it with Bourdieu’s theories of capital and habitus (2014). Whilst other authors, such as Hill et al., frame the hidden curriculum in terms of the cultures,

beliefs and behaviours of specialty areas of medicine that medical students have to try and negotiate if they want to pursue those pathways (2014). This is similar to the experiences of other students, who have to come to terms with gaining academic capital in the disciplinary knowledge practices and pedagogic discourses relevant in their discipline areas, particularly in relation to concepts such as critical thinking. This is what McArthur refers to as helping students find their 'disciplinary voice' (2009: 119).

This final chapter of the analysis has raised a number of issues regarding critical thinking and the framing of teaching-learning interactions. There are many factors that influence these interactions, some of which clearly stem from distributive and recontextualising sources, that then go on to have a significant bearing at the evaluative level, thereby creating sites of struggle. These sites of struggle themselves often revolve around issues of structure and agency, where the structures of HE teaching-learning interactions are not always sympathetic to empowering its actors, the staff and students. Some struggles have been evident through the observations of practice and interviews, and in considering a range of teaching-learning interactions, all of which have their merits and limitations in relation to critical thinking.

In all of these contexts, what does seem to be apparent is that there is a consistent pattern in relation to the choices the academics and their programmes do or do not have. To opt for strongly framed and visible pedagogies, that are largely driven by neoliberal forces, and encourage performative curriculum models. Or, weakly framed, invisible approaches that lead to competency models. This will largely depend upon the type of critical

thinking that is truly being sought. What is also very apparent, is that regardless of the structures and approach adopted, it is often the academic them-self, through their teaching capital and habitus, that can make the biggest difference.

8.0 Conclusion

The focus of this research project, critical thinking, has been described as one of the defining concepts of HE (Barnett, 1997). Debates regarding how critical thinking should or should not be defined have rumbled on for a number of years (Moore, 2011b), unfortunately without revealing just how the concept is understood by academic staff (Johnston et al., 2011), and how that then translates into teaching-learning interactions (Davies, 2011).

The view that there may actually be multiple interpretations of this concept has gained ground over the last decade, with a number of studies exploring how critical thinking is understood in different disciplines (Moore, 2011b; Johnston et al., 2011; Jones, 2007). This study has not only made a strong contribution to the idea of there being different disciplinary understandings, by exploring four new discipline areas, but has also significantly furthered this in its own unique way. None of the previous studies included observations of teaching practice in their data capture, something that gave this study an original and distinctive edge. In exploring both the understanding of academic staff, and how this understanding then translates into their teaching practice, the study provides unique insight into where the concept of critical thinking currently stands in

relation to the disciplinary knowledge practices of the four discipline areas researched.

Exploring the dynamic relationship between understanding and practice in this way, required a philosophical positioning that would be sympathetic to both the structures of HE and its disciplinary knowledge practices, as well as the agency of its actors, the staff and students. Critical realism has provided an excellent platform throughout this study from which to do that. However, it is the theoretical framework that has been used to analyse and interpret the data that added yet more originality to this study. The combination of Bernstein's pedagogic device theory, particularly classification and framing, provided an excellent lens for exploring the relevant structures of HE; alongside, Bourdieu's theories of field, capital and habitus, which helped in understanding aspects of agency, and provided insight into the framing of the teaching-learning interactions, collectively served the purposes of the study very well. Although this theoretical combination has been employed in a couple of other studies (Crozier and Reay (2011); Reay, Crozier and Clayton (2010)), it has been demonstrated here that combined they have the potential to offer a great deal more in relation to exploring, and therefore planning, teaching-learning interactions in a range of other contexts.

There is value in the exploration of any topic if it is done in a deep and meaningful way. The intention of this study however, was not to just try and understand the concept under consideration, but to be able to move the field forward, and provide insight for curriculum planners in the future. This is not only in relation to the topic of critical thinking, as the key findings (which will be

highlighted shortly) can be transferred to other skills or elements of the curriculum. It is however, also in relation to developing the understanding of staff on the influences external-distributive, and internal-recontextualising structures can have on their teaching-learning interactions. As well as the potential offered by the theoretical framework employed (which has proven invaluable in tracing the influences of major distributive forces, down through the institution, departments, and individuals) in understanding and exploring the relationship between these and teaching-learning interactions. The strength of the theoretical framework has come through manipulating and testing the theories of Bernstein and Bourdieu, something that both of them wished for, rather than blindly applying them rigidly. In doing this, the opportunity has also been created to adapt the theories, making them more current, in what has become a very changeable field.

In relation to the research methods adopted, these enabled the voices of the participants to be heard first-hand regarding their understanding of critical thinking and the frustrations they often experienced as the result of the structures of HE, which suggests that the interviews were an effective approach in order to access this insight. To then supplement this data with observations from an interesting and informative array of teaching-learning interactions added further substance to the interview data, providing yet further means for interpretation and analysis. In this sense, the observations offered a form of ‘triangulation’ that enabled greater explanatory capacity (Cousin, 2009). In order to be more thorough and comprehensive it would have been good to have observed more, if not all, of the academic staff that were interviewed, as I feel that this provided a different and useful angle on their interpretation of critical

thinking. However, attempting data saturation in this, observing all the academic staff in each of their teaching environments, would have potentially increased the data to an unmanageable amount. At the very least I would have liked to have observed a wider range of teaching-learning interactions in both Medicine, other than the PBL sessions, and Environmental Science, other than the lectures, as I feel the sample I had only gave me a limited view of these disciplines.

The data collection methods that were employed provided more than enough data to answer the research questions, as well as offering much to take forward following this thesis. Perhaps a way of enhancing the data collected would have been to integrate more texts or documents, both official, such as handbooks and assignment briefs, and unofficial, in the form of student texts, as Moore (2011), Jones (2007; 2009) and (Johnston et al., 2011) did. This would have provided even more 'triangulation' of the data, between the interviews, observations, and textual documents, enriching the picture in each discipline area. Looking forward, setting up case studies that focus on individual disciplines in this way could offer a manageable method for developing an even more detailed insight into critical thinking in each discipline.

Unsurprisingly, there have also been a number of things that I have learnt about myself as a researcher. The first of which was my interviewing technique. I now realise what a challenge it is not to be too influential in the interviews and research process. In the first interviews, I slipped too easily into the mode of 'having a chat with a colleague about a topic we are both interested in', which, when listening back to the audio recordings, resulted in me screaming at myself

to be quiet - and listen! From that point I made a much more conscious effort to stay in the researcher mode.

A further revelation came through working with both the literature and research data; I had always thought myself an organised person, but this was something that was suitably challenged. Whilst I appreciate Crotty's view that social research is 'messy' (1998), good organisation in these areas, for me at least is paramount, if only for the time and energy it saves. In relation to the sorting of literature, and the sorting and coding of the data, there have been some, at times quite painful, lessons learned, and things that I would do differently. Overall however, I feel it has been a research approach that I have learnt a great deal from, and one that has also provided me with the data I needed to answer the research questions, which I will now go on to discuss.

8.1 Distribution of critical thinking

The first thing to acknowledge in relation to the analysis and interpretation of the data, starting from the broader distributive perspective, is that what universities and HE more widely are experiencing at the moment are profound, 'tectonic' changes, in their structures, cultures and policies (Bamber, 2018). These changes are experienced in different ways by institutions. Where there is similarity however, is in the driving forces behind the changes, which have a trickle-down effect to the teaching-learning interactions, often in quite significant fashion. The source of these driving forces are what Bernstein called the 'exigencies of the markets' (2000). No longer are the state and the universities, or the official and pedagogic recontextualising fields (ORF and PRF), the

dominant forces in HE. We therefore need to add to the pedagogic device a social recontextualising field, or SRF. The SRF represents the current form of capital that the 'markets' deem to be the most valuable, as such, the SRF is capable of representing a more dynamic field compared to the PRF and ORF alone.

There are a number of distributive forces that have had a clear impact on critical thinking in the disciplines at Southern University. The first does actually stem from the ORF, and this is the structures that are in place to plot the progress of students through the QAA and GMC frameworks. The notable thing here is that the GMC's approach of continuous, or spiral development by students, in relation to critical thinking, is much more akin to the understanding academics have of it. For the most part they felt that developing critical thinking is not a straight-forward and predictable process, as students respond to different processes and teaching-learning interactions in different ways, and that other life events or experiences are also influential in their development of more critical perspectives.

Whereas, the stepped approach preferred by the QAA, ascending a level at each year of study, suggests that students will develop, and make progress in their critical thinking in predictable ways. As has been shown in other parts of the analysis, critical thinking at university requires the accumulation of certain forms of capital, which can be discipline specific. This capital accumulation will vary greatly across the student body, with upbringing, educational background and the ability to recognise and realise the forms of capital all being hugely influential, all individual factors, none of which are easily mapped. Following such a structured approach to critical thinking results in it being addressed in a

very narrow way, with little room for interpretation and manoeuvre. Yet, according to the participants, it is in fact something that is not easily defined, with there being a number of different ways of understanding it.

Another implication of the QAA approach, is that once a student is evidencing the expectations for their level, will there be encouragement for them to go on and build on that further developing their thinking, something the spiral approach would continue to do, or will that level remain in place until the next step is reached, potentially encouraging a period of stasis? Once again this shows a contrast to the participants in this study, who spoke of their understanding as not being fixed but rather fluid and continuously evolving.

Specifically, in relation to participants understanding of critical thinking, it therefore appears to be at odds with the official versions of critical thinking, particularly for programmes that draw from the QAA framework. This incongruence, between personal and official understanding will be of consequence at the evaluative level, as the way academic staff talk about critical thinking, with a range of interpretations and fluidity, will be in tension with the fixed versions students come across in their assessments and evaluation. Something that will in-turn make it difficult for students to recognise and realise the relevant forms of capital.

As outlined in the analysis, there are other distributive forces that can impact on critical thinking directly or indirectly, stemming from the SRF, such as student satisfaction, employability and HEA accreditation. Each of these represent different markets that students, universities and their degrees have to appeal to.

Additionally, the various league tables create competition between the different actors and agents, from institutions down through disciplines and programmes, to the students themselves and their degrees. These neoliberal mechanisms are increasingly demanding on the time and energy of the academic staff, compromising their teaching time - something all participants spoke of as a significant challenge to their practice.

Even more critically, as McArthur highlights, competition and business principles are inconsistent with what are largely deemed the best approaches to teaching (2011). McArthur highlights that this is particularly so when learning is considered in terms of a social activity (2011), as is Brookfield's suggestion for critical thinking (2012). If this is so, then it seems that many of the current SRF distributive forces are going to be largely incompatible with the teaching-learning approaches that are widely considered to be the most effective in developing student's critical thinking, an incompatibility noted by Reay (2012). Whilst it is true that these mechanisms might help students make informed choices about where and what they study, through competition, it is debatable whether they also drive up quality and improve standards, and certainly it seems that they could actually be harmful in helping students develop one of the defining concepts of HE: critical thinking.

Perhaps this is the intention of the distributive forces, particularly from the SRF perspective, the cultural and social reproduction of neoliberal values that sees education only in the light of its economic value. Through the commodification of degrees for employability, and the increasingly instrumental approaches to teaching, official and narrow forms of critical thinking are increasingly seen as

the dominant form of capital, at the expense of the more socially understood versions spoken about by most of the participants, that are oriented more to issues of social justice and the enrichment of humanity. Through this process of reproduction, the dominant forces in positions of power and authority are more likely to go unquestioned, and the status-quo remain.

8.2 Recontextualising of critical thinking

In looking at the disciplinary knowledge practices that were highlighted as being favourable for developing critical thinking by participants, there was some consistency across the four discipline areas. What was more relevant however, and subsequently influential on their approaches to critical thinking, was how these practices were structured and framed in the curriculum. Whilst teaching-learning activities such as small-group work, seminars and PBL, as well as practice placements were all deemed effective in helping develop students critical thinking, there were organisational and structuring issues that implicated how effective these might actually be.

In reference to small-group work, there was quite a contrast across the four disciplines in how these were organised and structured. One of the critical organisational factors was the size of the groups that could be managed. The size of groups possible in the programmes will be a reflection of the student to staff ratios, which might be a factor of the classification of the programmes. If programmes are strongly classified, like Medicine, and are able to insulate themselves from external drivers and forces, then they will have a degree of control over this. If, however, they are weakly classified, with little insulation,

then they will have less control, and might have to succumb to more business-like models, where there are pressures to increase student numbers and reduce staffing resources: providing yet further evidence of neoliberal influences.
As mentioned in the analysis, what is interesting in Bernstein's pedagogic device, are the terms he uses, such as strong and weak, which suggest positions of dominance and subordination of the disciplines. There was a degree of evidence that supports this claim, in that Medicine is not only able to organise smaller groups compared to the other programmes, but also that these groups were able to be facilitated more regularly, which will be dependent upon the staff resources available, and timetabling issues. Thus, enabling small-group work to be run more effectively in that discipline, so that their students get the full benefit of these valuable social learning environments.

Another organising and structuring factor that seemed to influence students' engagement in the small-group environments, and therefore the effectiveness of these sessions, was assessment. This ranged from very structured and regular assessment with peer-evaluation in Medicine, to the allocation of marks automatically awarded just for attending the Law and Criminology seminars. Whilst there are recognised challenges in relation to group and peer evaluation, the approach taken in Medicine seemed to work very well and contribute towards the effectiveness of the sessions. However, in Law and Criminology there seemed to be some ambiguity amongst the staff about whether the seminars were formative or summative evaluations, and if summative, where and how the marks were allocated and recorded. This could have a direct consequence on student's engagement in the case of Law and Criminology.

Another factor in student engagement could also be attributed to the strong framing which was exercised by the academic staff that did not seem to encourage student contributions. For whatever reason, it appeared that the structuring around seminars in Law and Criminology was not providing students with the agency that enables these environments to be as effective as they were in the other disciplines, particularly in relation to the activities, such as class discussions and debates that encourage critical thinking.

There was one further notable recontextualising influence in all of the discipline areas that participants spoke of in a way that suggested it compromised them developing students critical thinking. This again related to the structuring and organisation of the curriculum and came in the form of the accreditation bodies. In professional degrees much of the curriculum is determined by these bodies, and a lot of the content they require to be addressed is packed into increasingly dense core modules. Many of the participants remarked upon how it was only in the other 'elective' modules where they got more freedom, and the opportunity to integrate activities that are better suited to developing critical thinking: such as debates, and students having to consider and defend their own positions on certain topics. On the other hand, core lectures were very much seen as a process of information transfer that they could not get away from.

This provides yet another example of the SRF influencing the teaching-learning interactions that affect critical thinking, in that the accreditation process standardises and regulates the content of the degrees, and in doing this, provides extra value to the degrees awarded, value that is recognised mainly through employment opportunities. The more that these bodies require to be

covered in the curriculum, results in there being less time available for some of the more time-consuming, but valuable activities that help develop critical thinking; providing yet more evidence of the damaging effect neoliberal imperatives can have on this process.

8.3 Evaluation of critical thinking

With most of the observational data being considered as teaching-learning interactions, along with the interview data, the evaluative section of analysis had a wealth of information to draw from. One of the main points to come from this data was that there were subtle differences in the way the academic staff and their disciplines understand critical thinking. Some of these differences evolved around what critical thinking was spoken of in relation to, or its purpose. For example, in Environmental Science it was largely spoken about in reference to interpreting and analysing information and data, whilst in Education it tended to be more about analysing arguments, and in Medicine it was spoken about in relation to professionalism and decision making.

The most significant differences, however, appeared to be between the personal understanding of academic staff and the official understandings from the respective frameworks, and this was universal across all four discipline areas. Similarly, participants generally spoke of the same teaching-learning activities as being beneficial for developing their student's critical thinking, which were questioning techniques, class discussions and debates, notably all more social activities. These activities were all able to be incorporated into a variety of teaching-learning environments, including lectures, seminars and other small-

group situations. In the observations however, there was a significant difference in how effectively they all worked, which appeared to be more about the individuals involved, both staff and students, rather than the activities themselves.

From the academic's perspective, the degree of framing, or control exercised by them appeared to be very influential in the levels of student engagement. For example, in situations where the academic staff exercised strong framing, in having a lot of control on the content and pacing of activities, students were observed to be less inclined to engage. However, when the academic let the students take some control, for instance in raising their own questions or guiding the discussions, they were visibly more engaged and responsive. It is interesting to note again how Bernstein's terminology of strong and weak would suggest that the former is superior to the latter, whereas the reality is that to cover a defined curriculum by guiding discussions and simultaneously maintaining engagement, takes a great deal more skill on behalf of the academic.

This becomes even more apparent when participants clearly outlined that the more social activities were preferred in relation to critical thinking - something that Brookfield strongly supports (2012). In order for any such activities to be genuinely social they have to be structured and facilitated in a way that provides students with the agency to also engage with them. This is highlighted by the use of questions. Just by asking or having pre-determined questions appear on a screen, does not automatically follow that students will engage and experience that agency. They might not understand some of the language or

terminology, so could need the questions rephrasing, or find it difficult to relate their understanding and experiences to that question, so drawing parallels or being encouraged to consider things from their perspective could also be required. All of this requires a subtle set of skills on the academic's behalf, which was reflected in the observations of participants' practice.

Whilst framing did appear to be influential on these activities, their effectiveness also seemed to hinge a great deal on the personal attributes of the academic staff, a reflection of their academic or teaching capital and habitus. The accumulation of capital and development of habitus in teaching-learning interactions are relevant from a number of perspectives. Firstly, at the disciplinary level where the expectations of both students and staff will be gradually understood and acquired. Although this study represents a small sample, it appeared from the observations that in general there were greater levels of student engagement in both Medicine and Education, which could be as a result of disciplinary expectations, regarding their roles in these environments.

Then there is the capital and habitus of the academics themselves, which as highlighted in chapter 7, is not necessarily in direct correlation to the duration of teaching experience. A handful of the academic staff observed in this study were able to elicit much better levels of engagement and contributions from the students, sometimes from the same group of students that other academic staff were observed with. Whilst it is difficult to pinpoint exactly what made these differences, in the observations their approach and style evidently worked more favourably. What seemed to be pivotal in the observations were the relationships that the staff tried to establish with the students and class as a

whole, particularly in trying to dampen power imbalances, creating an environment for shared understanding. Things like taking the time to encourage and respond to students' questions, and their flexibility in being able guide discussions and topics to include the student's perspectives, but also stay on track: all of which made their sessions appear as genuine social activities, which is going to be important in developing a more socially oriented understanding of critical thinking.

These teaching-learning conditions are clearly linked not only to the academics teaching capital, in their understanding of their students and the teaching-learning process, but also the lecturing or seminar habitus that they establish with the students, environments that are structured in a way that gives the students the agency they need to participate and contribute towards. This will also be a factor of the student's capital as well, as they become increasingly aware of the expectations of their discipline, the individual staff members, and that of HE more widely for them as students. This is something that is going to be very important and influential in their development of critical thinking, as they become increasingly aware of the need to question and challenge knowledge, which in itself requires confidence.

What was also apparent however, largely from the participant's comments, is that the accumulation of this capital for students is not predictable, and it will develop at different times and stages in their education, and in response to a range of different stimuli and experiences. This highlights another tension between the widely held understanding participants have of critical thinking, and

the official understanding, which is that it is structured and can be mapped against frameworks and criteria.

To summarise these points, whilst the type of teaching-learning activities incorporated into the curriculum are going to be influential in the development of student's critical thinking: exactly how effective these will be, will depend upon the capital accumulation of the staff and students, and the teaching habitus that is created. It is unfortunate to note however, that it is the more socially oriented activities, which are best suited for critical thinking, that require the most time and space in the curriculum. Similarly, students need time to develop their capital, and as Brookfield highlights, modelling of the behaviours they are expected to be working towards, as well as the opportunity to scaffold their own development progressively, rather than in significant leaps (2012). These are points that will be challenged by the increasingly dominant neoliberal cultures and structures that currently dominate HE.

This then leads us to the pivotal question of what sort of critical thinking it is that universities and HE more widely want to be reproducing? Is it a performative version students can only undertake under specific conditions, that is a reflection of strongly framed and visible teaching-learning activities, that themselves are often in response to the dominance of wider neoliberal priorities? Or, is it a version where students are able to demonstrate a greater degree of competence, that stems from weaker framing and a less-visible curriculum, but which requires more time and consideration in the organising and structuring of the curriculum? Or, perhaps it is not as simple a dichotomy as this; there may be reasons and situations that call for both, but if this is so, then

there needs to be clarity from the disciplines and their staff of what type of critical thinking, performative or competency, it is they are striving for.

8.4 Looking forward

This last point leads us on to where to go from here. As just mentioned, if critical thinking is still one of the defining concepts of HE, then there needs to be some clarity and consistency over what is meant by it: not necessarily from a broader definition perspective, but certainly from within the disciplines, and in relation to what it is students are expected to be working towards. There is a significant challenge in this however, as the analysis has outlined, in that the more we try to clarify it, and get closer to a functional definition, the more visible it becomes to students, and therefore risks a performative response from them. This is why the disciplines themselves need to determine how they understand critical thinking, what it looks like in their discipline, and then look into how their students should try to realise that. As Brookfield points out, there can be two elements to analysing critical thinking; the purpose of it, and the process of it (1997), and it is perhaps for the disciplines to decide, to what degree each of these are relevant.

There have been a number of points from this study that show great potential to take forward. The first of these is how useful the theoretical framework has proven in this process, and I believe that this need not only be in relation to critical thinking, or any other skill or attribute being addressed. It has shown what a useful lens it can be to explore the organising and structuring of many other disciplinary knowledge practices too. This is with particular respect to their

classification and framing, which I think provides academic staff with an excellent barometer for guiding the control they exercise, and what the response of students might be to this; as well as considering the teaching-learning environments that are established in relation to habitus, and the different forms of capital that are contributing to that habitus. The combination of the two theories are well-placed to illuminate the relationship of structure and agency in educational settings, and to then consider whether these are in complementary or contradictory relationships. Furthermore, there is flexibility within them both for them to be adapted and tested, as has been shown here, in order to remain current and be applied to a range of different contexts.

As such, two areas have been identified for further development following the completion of this process: a publication aimed at academic staff to highlight the useful application of both the theoretical framework and the methodological positioning of critical realism; and secondly, the development of a resource that can help inform and aid staff in their curriculum planning and the teaching-learning activities involved. This resource would be able to represent the variations in classification and framing, and the potential impact these have on student's responses, whether they be performative or competency based.

Through these outputs it is hoped that staff can be informed on both a local and potentially national scale, about the silent but significant impact neoliberal forces can, and are having on their students and practice if they are left unchecked. Such a resource will also outline the opportunities presented by alternative pedagogical approaches, and how, although they may sounding challenging forms of pedagogy, being disruptive, dangerous and critical, how

these can also act in sometimes subtle but nonetheless significant ways in the resistance against the dominant paradigm of neoliberalism. For, what is also apparent from the data is that the critical thinking that the participants generally ascribed to was one that holds true to principles of social justice and developing critically aware students, which is something that they must hold true to, resisting the dominant performative alternatives. This is something that I and my team, as learning developers, must continue to pursue and work towards in collaboration with our academic colleagues.

A further element to be included within any resource, although these ideas are still in development stages, will be the recognition of capital, capital that is drawn upon in the teaching-learning interactions aimed at developing critical thinking by the various agents, both staff and students. The data generated in this study clearly demonstrates the value participating staff place on their own background and growing up in how they developed their critical thinking. What has also been highlighted is the importance of developing relevant forms of capital for facilitating teaching-learning interactions, again aimed at fostering critical thinking. Capital is therefore something that must be both recognised and included in relation to the multiple habitus' involved when developing students critical thinking, regardless of how well this may or may not fit with the needs of neoliberal mechanisms, such as measurement and performativity.

In relation to developing this particular research approach any further, I see there being great value in conducting a more detailed analysis in specific disciplines, or even programmes, drawing on a wider range of data sources and artefacts, and including all relevant stakeholders in the discussions, potentially

including students in participatory approach as highlighted in studies undertaken by Gibson et al., (2017) and Seale et al., (2015). This way, both the students and staff of that discipline will be able to draw from and build upon a foundational understanding of critical thinking that aligns best with their discipline area.

Before drawing a close to this current piece of work, I would like to draw on one last final comment from one of the participants, Sharon (E) who encapsulated much of what I have felt is true, and what needs to be remembered, about critical thinking:

> ‘Yeah, I think it’s about, I mean my belief, I absolutely believe that the university should be the places where critical thinking happens almost above anything else. It should be the environment, a universal environment where ideas can be put forward and challenged and tested and revised and so on and so forth; that it’s not a seeking for the ultimate truth, it should be a dynamic setting where those things can be invited’ [320].

To close, I would like to ‘close the loop’ on my own understanding of critical thinking, and the research process. As mentioned in the background chapter, my understanding of critical thinking had largely stemmed from the approach taken and resources developed as a learning developer. This was a stance that I increasingly began to question, as, through the pursuit of a version of critical thinking, one with wide appeal across the University, I felt that it became too generic, encouraging tokenistic and superficial approaches. It was one that was useful to a great many students, but one that I also felt was ‘selling them short’ in this essential concept. However, being drawn to more socially motivated versions of this concept, that attempted to address issues of power, dominant

paradigms and assumptions, also seemed at odds with some of my practice – I questioned what version it would be that programmes would want me to be encouraging with their students?

Having now had in-depth discussions with a number of academics on this topic my confidence has been restored, as I see that many of them also hold on to an understanding of critical thinking similar to my own, informed by critical theories: even though these may often be put to the test and challenged in their teaching, and by the structures that surround them. This shared understanding of core principles, while the definitions and detail may vary to some degree, is something that will be immensely beneficial to my own practice moving forwards. Furthermore, through the discussions I have had it seems there is a great deal of mutual learning to be had from each other's practice, which, from a learning development perspective justifies the collaborative approach that my team always endeavours to follow when working with academic staff.

There are however, other, not so positive perspectives that have also been reinforced through this research process. Prior to this study I was starting to notice what I believed to be the influences of neoliberalism on my area of practice, the institution, and HE more widely. This awareness has now been hightened by speaking with the participants and hearing how they often feel compromised in their teaching, lacking the time they needed, and being burdened with increasing amounts of administration. I soon realised that they were experiencing the effects of neoliberalism, a greater emphasis on performativity and measurability, the commodification of education, and economic imperatives, to a much greater degree than I was, and that these effects were also more prevalent than I had thought.

Further personal worry also came about through developing my understanding and use of the theoretical framework, witnessing what lies at the core of both of the theories employed. In the case of Bernstein, his pedagogic device was generated as a model to describe pedagogic practices, ‘through which cultural reproduction-production takes place’ (2000: 3). Similarly, for Bourdieu, the purpose of his theories was to try and explain the unknown or complicit reproduction of regularities through the social action of agents (Bourdieu and Wacquant, 1992). The effectiveness of these theories in interpreting and explaining the data, has provided a lens through which I can now see in stark detail that reproduction is taking place, and unfortunately for HE it appears to be the reproduction of neoliberal imperatives. I hope that the findings from this study, and what follows from it, will provide others with insight into what may be done in an effort to resist and stem that reproduction, and encourgage questions of our practice that help expose the dangers of this reproductive process.

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Appendices

Appendix one - Research Project Information Sheet for Staff

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Appendix One

Research Project Information Sheet for Staff

Research Project: Exploring critical thinking across the disciplines: understanding and application

Information sheet for staff participants

I am undertaking this project as part of the Professional Doctorate in Education (EdD).

Aim:
To explore the degree to which the understanding, use and articulation of critical thinking varies across disciplines at Plymouth University.

Objectives:

- to explore how academic staff talk about and understand critical thinking, individually, within, and across disciplines
- to 'open up' the concept of critical thinking in HE, and celebrate its multiple interpretations and understanding
- to develop a deeper understanding of how it is conveyed to students, and the expectations placed upon them in disciplinary contexts
- to contribute to wider debates about the nature and purposes of critical thinking in HE

Methods:
An interpretivist theoretical perspective, underpinned by a constructivist understanding will be adopted. In that participant's knowledge and understanding of critical thinking will be developed through the human practices and interactions within their disciplinary worlds (Crotty, 2009). As such, their meanings will be further constructed through engagement and interpretation. It is through this process of interpreting social phenomena that insight is gained into the experiences and beliefs of individuals, which tends to be generated through qualitative data (Denscombe, 2014), these will include:

- Focus groups
- Semi-structured interviews
- Observations of practice

Intended outcomes:
This project is part of the Plymouth University Professional Doctorate in Education (EdD). The outcomes will be the completion of my thesis and appropriate associated academic publications and conference papers/presentations.
This study will also inform my own work and practice as Team Leader for Learning Development here at Plymouth University, particularly in how we support students and staff in developing critical thinking in their studies.
Dissemination:

I will seek to publish and disseminate the findings from my research in the form of a thesis, as well as journal articles and conference presentations relevant to teaching and learning in higher education. Additionally an overview of any findings, that will not identify any individual, will be generated for the participants, schools/programs that participate should they want them.

Participation – informed consent:

I am very grateful to practitioners who agree to participate in this research. I undertake to be open and honest with participants at all stages of the project. In any analysis or reporting of the data participants will allocated an alpha-numeric code rather than using their name, in order to specify but not identify each data source.

The information held about staff participants will be in the form of written notes and audio recordings. Written notes can be made available upon request, to participants for their inspection following any focus group, interview and observation. Details of how this will be done are given below.

Participation is voluntary and you have the right to withdraw, or withhold input on any specific point or issues, without prejudice before, during and after any focus group, interview, or observation, up to the point of data analysis, which will not take place for at least two weeks from the relevant activity. Following any request for the notes after an interview or observation, I will forward these to you and confirm that you have received these files. Please note that you will have two weeks from this date to make any amendments or withdraw any of your statements, after this date analysis will begin and it might not be possible to withdraw any contributions you have made. Due to the nature of focus groups and the recording of multiple voices it may not be possible to withdraw this data.

Participant recruitment

The first stage of recruitment for this research will be to purposefully sample four schools or disciplines that are likely to offer some variation in the research focus, such as science and business, or a professional program and a pure degree program. Once these have been identified I will contact the head of school or program to ask if it is ok to approach staff to see if they would like to participate, I do not expect the heads of school or program to play any role in the recruitment of participants. Following this I will email relevant academic staff form that school outlining the research aims and objectives, and asking for expressions of interest to participate.

Focus Groups

Participants of the focus groups will be provided with an information sheet outlining the project's aims and objectives, as well as an indication of the line of discussion as there will be no structured questions. Prior to the focus group I will ask participants to identify and forward any relevant text based resources that they use in their practice to articulate the understanding of critical thinking

to their students, such as program/module handbooks, aims and/or objectives, and assignment briefs. These will provide the initial points of discussion during the focus groups. Participants have the right to withdraw from the focus group at any point, or choose not to comment on any points of discussion, although it might not always be possible to identify and extract any comments they have already made.
Throughout the focus groups I will be making general notes, which will be anonymised, and taking audio recordings which will be stored as mp3 files on the password protected hard drive of a Plymouth University computer. Any notes can be made available to the participants involved in each specific focus group upon request, this will be done either by hand, post or email attachment. I will confirm receipt of the requested files by email with any participant and will then inform them that they have two weeks to review these. During this time participants can opt to comment upon your contribution, which will be added to the notes generated. Due to the conference nature of the audio recording it may not be possible to identify and extract specific individual statements. If you do not contact me within two weeks of your acknowledgement of receipt of the files to make any changes, your data will be included in the study. The consent form to participate in the focus group also stresses the need for confidentiality between participants and the discussions that take place.
A thematic content analysis will be conducted on the focus group data.
If you decide to withdraw from the project as specified above, or if at any time you wish to discuss any aspect of the research, or your participation in it, please email me **– deleted for confidentiality reasons**

Interviews
Interviewees will be provided with sample questions in advance. The interview may use notes from the focus group to act as a catalyst for discussion. In this case the notes will be provided to you in advance and you will have an opportunity to comment on these in the interview. As the interview is semi-structured some new questions and topics may emerge from the interview. You have the right withdraw from the interview, or not to answer any questions during the interview as you see fit. You may also withdraw your input to the interview for up to two weeks after the interview.
Throughout the interviews I will be taking notes as well as making audio recordings, which will be stored as mp3 files on the password protected hard drive of a Plymouth University computer. These audio recordings will be copied and transcribed for analysis purposes. A copy of any notes taken can be sent to participants involved in each specific interview if requested, this will be done either by hand, post or email attachment. I will check that you have received the file requested, and will then inform you that you have two weeks to review or comment on the data, which will be added to the notes. During this time you can opt to comment upon, add to, or withdraw your interview data from the project. If I do not hear from you within two weeks of your acknowledgement of receipt of the files, your data will be included in the study.

A thematic content analysis will be conducted on the interview data.
If you decide to withdraw from the project as specified above, or if at any time you wish to discuss any aspect of the research, or your participation in it, please email me at **– deleted for confidentiality reasons**

Observations of Practice
If you agree to observation(s) of your practice, I will observe, take written notes and an audio recording focussing on participants actions as a member of academic staff in a small or large group teaching activity, articulating the understanding of critical thinking. The purpose of the observations is to provide material to complement the data generated through the focus groups and interviews. Any students present will be given an explanation of the project aims and objectives and informed that my observation will be of the academic staff their actions and the discourse that is generated . Students will be asked if they agree to my being present. If any students or participants object I will withdraw and the observation will not take place. In this case I will make it clear that this will not have any negative consequences for students in relation to how they are treated or the assessment of their work.
Audio recordings will be stored as mp3 files on the password protected hard drive of a Plymouth University computer. These audio recordings will be copied and transcribed for analysis purposes. A copy of any notes taken can be sent to participants involved in each specific observation if requested, this can be done either by hand, post or email attachment. I will check that participants have received the requested file, and will then inform you that you have two weeks to review the data. During this time you can opt to comment upon, add to, or withdraw your data from the project. If I do not hear from you within two weeks of your acknowledgement of receipt of the recording data, your data will be included in the study**.**

Confidentiality and Security:
Any data generated from the focus groups, interviews or observations of practice including audio recordings, will be kept securely on a Plymouth University computer hard-drive for a period of 10 years after the completion of the project according to Plymouth University's Ethics guidelines and then destroyed. Staff participants will be referred to by alpha-numeric codes where appropriate and no participant will be identified by name. Participants will also be reminded to observe the confidentiality of the data generated through the various research processes, particularly the focus groups.
Any data generated will be analysed and reported on, in the form of a thesis and other publications, without identifying any individual that participates in the research.

Contact details:
Investigator:
Director of Studies:

Appendix Two

Interview Questionnaire

Sample Questions for Semi-Structured Interviews

The following questions are provided in advance of the interviews so that participants can consider their responses. Please feel free to answer - or ignore - these questions as you see fit. Your answers may be as brief or detailed as you wish. I would also be grateful for comments or suggestions on the wording and format of the questions themselves. If you would prefer to answer some or all of these questions in writing and submit them prior to the interview, we can then use your responses for a discussion. I will ask your permission to record your answers during the interview.

A) I'm assuming that, as a member of academic staff you are involved in undergraduate student teaching and learning; in that you undertake activities such as the development curricula, the delivery of lectures and workshops, seminar groups, tutoring, among any other learning environments relevant to your discipline or program. In this section, I'd like to find out about what your teaching/learning role involves:

1. What is your official title or role?

2. Are you a module lead, do you share this responsibility, or just contribute specific elements to modules?

3. Do you undertake teaching activities with undergraduate students? If so, please outline what these are?

4. How long have you been teaching in HE? Has this always been at Plymouth University?

5. What, if anything, do you find most rewarding about your teaching role?

6. What, if anything, do you find most challenging about your teaching role?

B) In this second part of the interview I want to ask some questions about your understanding of critical thinking, and its role in your discipline, student learning and higher education.

1. Can you outline what your understanding of critical thinking is, and its role in HE and/or student learning?

2. Where and how do you think you developed your understanding of critical thinking?

3. Are you familiar with or draw from any particular theories on critical thinking?

4. How relevant is critical thinking to your discipline?

5. How relevant is critical thinking to students studying in your discipline?

6. Do you feel there is a shared understanding of critical thinking in your discipline?

7. Where and how do you expect your students to evidence critical thinking?

8. Are there any particular stages or points in their program that students are expected to develop their critical thinking?

9. In your view are students provided with the necessary environments and resources to develop their critical thinking?

10. Can students be academically successful without critical thinking?

C) Finally, I'd like to ask about how you try and articulate or 'teach' this concept to your students.

1. Who is responsible for developing student's critical thinking?

2. How do you feel that is best done?

3. What tools, strategies or resources do you use to develop your student's critical thinking?

4. How do you feel it is best to assess student's critical thinking abilities?

Appendix Three

Notes Made During Observations

a) **Lecture in Law and Criminology**
b) **Lecture in Education**

(1) Lecture LAC (~45)

LAW1213

[redacted] 0900-1100 Fri lecture 06/5/16

4 hr lecture broken into two slots

- Contemporary legal issues
  'Current Legal Issues'
  'Marine A and Murder on the Battlefield'

0910 – looked at laws of war with Craig
- what did you cover?
  response - Hague + General convention
- what did we say about these?

'Court Martial System' - critiques of and inadequate investigations by MP
two issues - jurisdiction - Germany

MPs investigating MPs = Police investigating Police!

Terrorist or member of the Taliban

Technology played a major part in this.

Definition of murder - connected to this case

Hague Convention 1899 Article 1 definitions

'Make war in a civilised fashion'

'Is our Afgan going to come under article 1'

Article 2 - very leading
'military role'
Article 4
Article 5 - in camp - not observed
1949
Geneva convention - 'talking from slides'

0930 - any questions so far

Students note taking low level of engagement

interruption 'What's happening at the back'?
Armed Forces Act 2006

Personal story of childhood stationed ∴ under service law.
* long pauses

Reading from officer letter - 'should have brought more'?

Picture Welsh Guards (Beefeater) * 'are you going to argue with him' - I doubt it? *

0947 - Any more questions? - nothing has been questionable

* 0950 - Pause 5 min.
- 'I'm surprised you are not more talkative this is a contentious issue' - little option to do so.

20 of 80 left.

'The Afghan' Recap of what has been determined through various acts

'I will not sit on a CM as I'm a solicitor .. my father did - long pause

(2)

AL 06/05/16

Personal story experience - again!

'Any more questions'?

Sentencing + tariff 'In my opinion...'

Lee Rigby case - Islamists!

mitigating factors - 'if he...'

'whatever the sentence there was going to be controversy'

Q 'what do you think? Murder or not'?

Demonstration of 'correct' protocol!!!

'This is controversial - you must have an opinion'?

Similar cases SA 1890 ish. ← looked at is as a B+W issue, not what could have been defendable

↳ very detailed version - as a
↳ not really linked to story - Law.

* 'Telling a story' (war - her passion)

↓ great detail long pauses

Very little note-taking

One response from student - what do the rest of you think?

'Where do you draw the line'?

- can open the flood gates!

- Personal Opinion .....

Apealing again

Anyone got any more to add?

b)

(1) Lecture / Education

1600 - 1800

[redacted] observation Rolle 313 19/4/2016

History KS1 + EYFS (17)

To be able to identify topics + skills in NC.
To have subject knowledge
To make cross-curricular links

NOT just about assignment but broader requisit

Talk about SEN - challenging topic
rationale for slides (colour, font ...)
↳ scaffold + demonstrate

- "scaffold"

- Questioning group "what are the main issues of dyslexia"

'what is history?' — study of subject
— reality
(anyone disagree?)

TASK
- small group discussion
reminder of question
timed - kept on topic
feedback from groups → mind map on board

Get group to try and group responses

Connect topic to town - 'when one of you is sec. of state for ED...."

Connect it back to the curriculum

Past, present and future - language can be telling and important

Opportunity to feedback before moving on.

'Definition'

Task - list of history skills for pupils

'nudging' tables - 'You're a bit quiet on this table'

- feedback written on board
- probe some responses

connect with future parts of curriculum
appreciation of responses and breadth

TASK 'Difference between EY/KS1 and KS2?'

(engage w/ different groups
↳ relating it to their curriculum

General and individual questions

TASK 'what topics covered on Primary''
↳ individual thoughts not known

feedback on board
- open it to be challenged when justification

(2)

Introduction of some theory Piaget Bruner
(quote on screen)
↳ personal interpretation of collective interpretation
and application to curriculum/roles examples

Vygotsky – common quotes

* Recommend key texts and resources
- lesson plans available
EYF guidelines
Guidance Documents - read
'what do you think about it"
gets their interpretation
↳ change wording – Dilemma!

Discussion

Raised the challenges of teaching
rhetoric vs reality what's the ideal? 'formal learning'
problematise the reality of this
'ownership' of learning - teach how to make choices

relate conversations to placements

Handout - National Curriculum Pg 3

look for the skills mentioned - to teach
connect to previous feedback on board
highlight new and interesting bits 'trends'
identifying key words

Connect to specific part of curriculum
- bullet points of what you should be teaching

Again connect to previous feedback on board - highlight anomalies - discuss

'How would they organise the curriculum' (rhetorical)

More Viv talking 2nd half
first half their thinking

Raising issues of possible cross-curricular possibilities and limitations

Made connections to current (recent) debate (Gove) on Nat. Curric.

use reference book 'belonging' and other resources

setting of homework 'watch video'

Practical tips for resources 'phones'

TASK Key Question - how did is building - how do you know, some confusing ones
groups (photographs)
group activity - interpret artefact - timeline
↳ issues reflection with an
reflective teaching standards

Appendix Four

Example of Initial Coding - categories, sub-categories, codes, and sub-codes

Category	Sub-category	Code	Sub-code		
Teaching-learning	Frameworks	Levels	criteria		
			Blooms taxonomy		
		Models			
		Benchmarks			
	Curriculum	Design	Discussion & debate		
			Small group		
			Seminars		
			Lectures		
			Experiential		
			Assessments	Presentations	
				Marking	Feedback
				Writing	
				Research	
		Influences	Internal		
			External		
			Research		
	Teaching	Pressure			
		Time			
		Empowering			
Knowledge	Research	analysis			
		evaluation			
		evidence			
	Truth				
	theory:practice				
	creativity				
	Application				
Profession / practice	Graduateness				
	Attributes				
	Theory:practice				
	Employability				
	Negotiation				
	Judgement				
	Values				
	Reflexive				
	Role models				
Personal	Reflective	Self evaluation			
	Values	Social			
		Political			
		ideology			
	Background	Education			
		Family			
	Character	Confident			
		Curiosity			
		Drive			
		Autonomy			
		Decision making	Judgement		
	Perspectives	argument			
		position			
		academic voice			
		Preconceptions			
		Mind-set			

Appendix Five

Ethics Approval Letter

2 June 2015

CONFIDENTIAL
Joseph Allison
Team Leader for Learning Development (LSW)

Dear Joe

Application for Approval by Education Research Ethics Sub-committee

Reference Number: 14/15-104
Application Title: Critical thinking across the disciplines: understanding and application

I am pleased to inform you that the Education Research Ethics Sub-committee has granted approval to you to conduct this research.

Please note that this approval is for three years, after which you will be required to seek extension of existing approval.

Please note that should any MAJOR changes to your research design occur which effect the ethics of procedures involved you must inform the Committee. Please contact

Yours sincerely

Professor Linda la Velle
Chair, Education Research Ethics Sub-committee -
Faculty of Arts and Humanities

Appendix Six

Participant Consent Form – Staff

Research Project: Exploring critical thinking across the disciplines: understanding and application.

Participant Consent Form - staff

Permission
I have read and understand the information sheet and the conditions of this project. I have read and understand what you want me to do for this study, and my right to withdraw. I hereby voluntarily agree to participate in this project. I may withdraw my consent at any time during this phase of the project and before or during any of the data collection processes. I also acknowledge the requirement to honour the confidentiality of other participants taking part in the study and any comments they make.

I would like to participate in the following:	**Please tick ✓ and initial to indicate your consent**
Focus group (staff only)	
Semi-structured interview (staff only)	
Observation of practice (staff only)	

Name of Participant:

Signature:

Date:

Appendix Seven

Observation Consent Form – Students

Research Project: Exploring critical thinking across the disciplines: understanding and application.

Participant Consent Form - students

Permission

I have read and understand the information sheet and the conditions of this project. I have read and understand what you want me to do for this study, and my right to withdraw. I hereby voluntarily agree to participate in this project. I may withdraw my consent at any time during this phase of the project and before or during any of the data collection processes. I also acknowledge the requirement to honour the confidentiality of other participants taking part in the study and any comments they make.

I agree to the observation of teaching practice taking place.

Student signature	**Date**

Appendix Eight

Research Project Information Sheet for Students

Research Project: Exploring critical thinking across the disciplines: understanding and application.

Information sheet for student participants

I am undertaking a research project for the Professional Doctorate in Education (EdD)

Aim:

To explore the degree to which the understanding, use and articulation of critical thinking varies across disciplines at Plymouth University.

Objectives:

- to explore how academic staff talk about critical thinking, individually, within, and across disciplines
- to 'open up' the concept of critical thinking in HE, and celebrate its multiple interpretations and understanding
- to develop a deeper understanding of how it is conveyed to students, and the expectations placed upon them in disciplinary contexts
- to contribute to wider debates about the nature and purposes of critical thinking in HE

Methods:

An interpretivist theoretical perspective, underpinned by a constructivist understanding will be adopted. In that participant's knowledge and understanding of critical thinking will be developed through the human practices and interactions within their disciplinary worlds (Crotty, 2009). As such, their meanings will be further constructed through engagement and interpretation. It is through this process of interpreting social phenomena that insight is gained into the experiences and beliefs of individuals, which tends to be generated through qualitative data (Denscombe, 2014), these will include:

- Focus groups
- Semi-structured interviews
- Observations of practice

Intended outcomes:

This project is part of the Plymouth University Professional Doctorate in Education (EdD). The outcomes will be the completion of my thesis and appropriate associated academic publications and conference papers/presentations.

This study will also inform my own work and practice as Team Leader for Learning Development here at Plymouth University, particularly in how we support students and staff in developing critical thinking in their studies.

Dissemination:

I will seek to publish and disseminate the findings from my research in the form of a thesis, as well as journal articles and conference presentations relevant to teaching and learning in higher education. Additionally an overview of any findings, that will not identify any individual, will be generated for the participants, schools/programs that participate should they want them.

Participation – informed consent:

I am very grateful to students who agree to my observation of the teaching session they will be part of. The purpose of these observations is to gain insight into to how academic staff articulate the concept of critical thinking to their students. I undertake to be open and honest with participants at all stages of the project. Students will only be asked to be involved as participants in observations of practice. These observations will be of the academic staff, not of any individual student.

Observations of Practice
Participation is voluntary and students will be asked if they agree to my being present. If any students object I will withdraw and the observation will not take place. In this case I will make it clear that this will not have any negative consequences for you or other students in relation to how you are treated or the assessment of your work. All students present will be asked to sign a paper outlining their informed consent of my conducting the research.
Students may request a copy of any notes that are made during an observation and I will make them aware of this at the time of the observation. I will provide copies of the notes to these participants within one month of any observation. The notes will not contain information about any individual student participants. Once the observation has taken place your permission to use it in the study will be sought and thereafter it will not be possible to withdraw the data. If at any time you wish to discuss any aspect of the research, or your participation in it, please email me at

Confidentiality and Security:
Any data generated from the observations of practice will be kept securely on a Plymouth University password protected computer hard-drive for a period of 10 years after the completion of the project according to Plymouth University's Ethics guidelines and then destroyed. Staff participants will be referred to by alpha-numeric codes where appropriate and no participant will be identified by name.
Any data generated will be analysed and reported on, in the form of a thesis and other publications, without identifying any individual that participates in the research.

Contact details:

Investigator:

Appendix Nine

Research Presentations Associated to the Research Project

Allison, J. (2014) *Critical thinking in HE: achievements and prospects.* Education for Sustainable Development Conference, University of Plymouth, October 27th, 2014.

Allison, J. (2015) *Critical thinking across the disciplines: understanding and application – research proposal.* Postgraduate Conference, University of Plymouth, March 23rd, 2015.

Allison, J. (2016) *Critical thinking across the disciplines: initial findings and possible implications for curriculum design.* Vice-Chancellors Teaching and Learning Conference, University of Plymouth, 30th June, 2016.

Allison, J. (2017) *Research informed yes, but let us not forget what philosophy has to offer too.* Exploring Academic Skills Development in UK HEI's, Cardiff Metropolitan University, 29th April, 2017.

Allison, J. (2017) *Research informed yes, but let us not forget what philosophy has to offer too.* Pedagogic Research Institute and Observatory (PedRIO) Conference, University of Plymouth, 4th April, 2017.

Allison, J. (2018) *Critical thinking and the 'framing' of teaching-learning interactions.* Assosciation of Learning Development in Higher Education (ALDinHE) Annual Conference, University of Leicester, 29th March, 2018.

Allison, J. (2018) *Research informing the 'teaching' of critical thinking.* Vice-Chancellors Teaching and Learning Conference, University of Plymouth, 14th June, 2018.