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Evaluation of an innovative programme for training teachers
of children with learning and behavioural difficulties in New
Zealand

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The research reported in the article was conducted at the University of
Canterbury in New Zealand

Keywords: specialist teachers, learning and behaviour difficulties, competency based
training, blended learning

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Abstract

This article reports the views of recent graduates of a competency based, blended learning teacher education programme for specialist resource teachers of children with learning and behaviour difficulties in New Zealand. Identifying and developing the competencies needed by teachers in the field of special needs education is important in ensuring that these specialists are well prepared to meet the needs of students and schools. Participants completed an online questionnaire survey responding to two questions, the extent to which the 51 competencies addressed in the programme were important to their professional work, and the extent to which the programme had enabled them to develop these competencies. Results indicated that programme competencies were perceived by participants to be of high importance to their work in the field of learning and behaviour difficulties, and that they considered themselves to have been well enabled to develop these competencies. Based on these findings, implications for teacher educators are discussed, limitations of the research study are identified and recommendations for future research made.

Introduction

Training teachers for working with children with special educational needs (SEN) is internationally regarded as an important and challenging endeavor. In recent years training initiatives have placed more emphasis on specifying the competencies needed by such teachers and utilizing on-line learning in order to effectively prepare more teachers for this field. Ensuring that the competencies needed by specialist teachers are identified, validated and effectively taught in training programmes is regarded as the key to their effectiveness (Dingle et al. 2004; Rakap, et al. 2014). To this end, studies seeking the views of specialist teachers about the training programmes they have completed have an important role to play in shedding light on how such programmes might be improved (Conderman et al., 2013; Lombardi and Hunka 2001). With an increasing international trend toward inclusive education (Hornby 2014), and many teachers reporting not feeling well prepared for working with children with SEN in inclusive settings, the effectiveness of teacher training is currently an important focus for teacher educators (Smith and Tyler 2011).

Previous studies of the views of participants in teacher education programmes for SEN have found that many of them did not feel confident about their levels of competence for teaching students with SEN. Lombardi and Hunka (2001) investigated a five-year pre-service teacher education programme at West Virginia University in which participants were being prepared as general educators but also to teach students with SEN within inclusive classrooms. A questionnaire focusing on the specific competencies involved was developed to assess the extent to which students and staff perceived that these competencies were being addressed throughout the programme. Students were also asked to report whether or not they had actually acquired the skills related to these competencies. Nearing the end of the fourth year of the programme 25

percent of students reported feeling, "...neither competent nor confident to teach special needs students in inclusive settings" (Lombardi and Hunka 2001, 192).

A study reported by Benitez, Morningstar and Frey (2009) identified 46 competencies considered critical for special educators with responsibility for the transition of students with disabilities from high school to adult life. The study examined perceptions of 557 special educators from across 31 states in the USA about how well prepared they considered themselves to be in the 46 identified transition competencies. Mean ratings across all 46 competencies revealed that many teachers felt somewhat dissatisfied with their preparation and only somewhat prepared to deliver effective transition services to their students.

In another study, conducted by Conderman et al. (2013), 64 beginning special educators were surveyed about their preparation programme at a midwestern university. Participants were asked how well prepared and confident they felt with regard to 25 competencies using a 4 point Likert scale (1 = not prepared/not confident; 4 = very prepared/very confident). Mean preparation scores ranged from 2.47 to 3.85 while mean confidence scores ranged from 2.61 to 3.85, suggesting that all participants felt reasonably well prepared and confident, but that some felt much better prepared and confident than others.

In a climate in which teacher educators are under pressure to increase quality and lower costs, innovative e-learning programmes have the potential to provide training which focuses on the competencies needed by teachers of children with SEN (Garrison 2011). In fact, within a range of teacher education and professional development training contexts, delivery using an e-learning format has been found to be as effective as traditional approaches (Fishman et al.,2013; Kocoglu et al. 2011). Studies within the e-learning context that specifically consider the professional

development of teachers of students with SEN have also shown positive results (Rakap et al. 2014; Thompson et al., 2012). Building on these findings, attention has recently shifted away from solely online learning to highlighting the benefits of various forms of blended learning in teacher education programmes (Cheung and Hew 2011; Garrison 2011; Wong et al. 2014).

The current study aims to contribute knowledge regarding the competency development of teachers within the rapidly developing field of e-learning in higher education. It focuses on the development of competencies in programmes designed to provide advanced training for teachers of children with SEN within an inclusive system of education. Specifically, the study investigated a programme delivered using a blended learning, competency based approach by a team of academics from two New Zealand universities. The study examined perceptions of recent graduates of the programme with respect to two research questions:

1. To what extent did participants consider that programme competencies were important to their professional work?
2. To what extent did participants consider that the programme enabled them to develop the prescribed competencies?

Method

Participants

Of the 81 ex-students who successfully completed the programme, 42 graduates participated in the study, which represents a response rate of 52%. Most participants were 40 years of age or older with none being younger than 29 years of age, and two being older than 60. All participants had experience of teaching students with learning and behavioural difficulties, with 20 having between one and nine years experience, and 22 having ten or more years of experience. At the time of completion of the

survey, all participants worked within the primary school sector, with 26 also working in high schools and two also working in special schools or special units in mainstream schools.

Programme

The programme investigated was the Post Graduate Diploma in Specialist Teaching (Learning & Behaviour) (PGDipST:L&B). This programme was jointly taught by academic staff from two New Zealand universities, Massey and Canterbury, and funded by the New Zealand Ministry of Education in order to train specialist resource teachers throughout the country. The programme aimed to teach resource teachers of children with learning and behaviour difficulties to develop the competencies needed to work effectively with teachers, schools and children as agents of change, thereby improving student outcomes. At the core of the programme was a commitment to the seven key principles underpinning the work of these resource teachers: inclusive teaching; culturally responsive practice; an ecological approach to support; a collaborative and seamless model of service; strengths-based practice; reflective practice; and evidence-based practice (Ministry of Education. 2011). The programme used a blended learning, community of inquiry, and inter-professional practice approach (Bevan-Brown et al. 2010) to address 51 competencies over a period of two years of part-time study, with students typically teaching for four days per week and having one study day per week to work on the programme.

The PGDipST(L&B) programme was one strand of an overarching PGDipST programme that encompassed five other specialist strands. The other strands focused on autism, hearing impairment, vision impairment, complex needs and early intervention. Students in the PGDipST (L&B) were encouraged to learn with, from and about others across the six specialist strands of the PGDipST programme.. A

Moodle-based e-learning site was used as the learning platform for the PGDipST(L&B) programme. This platform provided for a number of applications that included, for example, video introductions, links to readings, quizzes, discussion forums, noticeboards, electronic media such as online video, plus provision for assignment submission and marking, with E-portfolios being used for some assignments.

Development of competencies for the PGDipST (L&B)

Extensive consultation with professionals and literature searches were conducted in order to identify those competencies of greatest importance to the work of specialist resource teachers of children with learning and behaviour difficulties in New Zealand. The consultation process brought together the knowledge and expertise of stakeholders in the field via a national survey. It also included the work of a specialist advisory group, a Māori reference group, international advisors, and the expertise of academics from the two New Zealand universities involved in teaching the programme. The result of this extensive process was that 51 competencies were identified and these were addressed in the four courses of the programme.

Courses of Post Graduate Diploma in Specialist Teaching (Learning & Behaviour)

The four courses which comprised the PGDipST (L&B) were: Theory and Foundations of Learning and Behaviour Diversity (L&B); Core Theory and Foundations of Specialist Teaching (Core); Evidence-Based Inter-professional Practice (EBIP); and, Practicum for Learning and Behaviour (Practicum).

The L&B course was completed in the first year of study and was the course specifically focused on the work of resource teachers of children with learning and behaviour difficulties. This course was an advanced study of theoretical and research-based foundations related to understanding, assessing and providing for learners who

have special needs in the area of learning and behaviour. L&B course content focused on ten competencies (see Appendix A), organized into six competency domain areas. These were concerned with the nature of learning and behaviour diversity, individual, small group, whole class and school wide evidence-based assessment and interventions, and effective resource teacher practice.

The Core course was compulsory for students in all of the six strands of the PGDipST programme. This course, also completed in the first year of study, was an advanced study of generic core theory relevant to professionals working in all strands of the programme. Core course content focused on 20 competencies (see Appendix B), divided into six competency domains: professional knowledge; assessment practice; evidence-based practice; inter-professional practice; cultural responsiveness; and reflective and ethical practice.

The EBIP course was completed in the second year of study and focused on an examination of evidence-based practices and professional practices of specialist teachers. This course was divided into three domains addressing eight competencies (see Appendix C). The first two domains, one on evidence-based practice and the second on inter-professional practice, were generic and completed by students in all six strands of the programme. The generic nature of these first two domains enabled students to work collaboratively across strands on a collaborative consultation and partnership project. In the third domain students applied what they had learned in the generic domains to their practice as learning and behaviour specialists.

The Practicum course was also completed in the second year of study and was situated in the professional practice of students and in their casework as resource teachers. Students were supported in this practicum by course tutors, mentors in the field of specialist teaching and peers who were also undertaking the programme.

Following reflection on their practice students planned learning activities to meet their learning needs and goals in line with indicators developed from the New Zealand Registered Teacher Criteria (New Zealand Teachers Council 2010). The Practicum course focused on 13 competencies (see Appendix D) comprising seven competency domains: professional, reflective and ethical practice; cultural responsiveness; professional knowledge and ongoing professional development; inter-professional practice; evidence-based assessment; evidence-based instruction and strategies; and case management.

Procedure

An online questionnaire survey was administered using Survey Monkey. Part one of the survey comprised ten demographic questions focusing on variables such as age, years of teaching experience and qualifications. Part two required participants to consider each of the competencies in the four courses of the programme and rate their responses to the following two questions on a five point Likert scale:

1. To what extent is this competency important to your professional work?
2. To what extent did the course enable you to develop this competency?

The two end points were labeled on the scale with 1 = minimally important/enabled and 5 = substantially important/enabled.

The software programme Statistical Package for the Social Sciences (SPSS) version 21 was used to analyze the data and measure internal consistency amongst the items in part two of the survey via Cronbach's alpha coefficient. The score reliability for the two questions that comprised this section of the survey was $\alpha = 0.965$ (importance) and $\alpha = 0.971$ (enablement). Guidelines suggest that these scores signify very high internal consistency with an alpha coefficient of 0.90 or greater considered to indicate a high level of reliability (Cohen, Manion and Morrison 2011).

Results

Importance Ratings across the Four Courses of the Programme

Across the four courses of the programme all competencies were highly rated for their importance to the professional work of participants. The course with the highest mean competency importance rating was the Practicum with 4.84 on the five-point scale.

The mean rating for competencies in the L&B course was 4.76. The courses with the lowest mean competency importance ratings were the Core (4.63) and EBIP (4.63) courses. Thus, there was a difference of only 0.21 between the highest and lowest mean competency importance ratings. The mean rating for the importance of competencies across the 51 competencies in the programme was 4.70 (see Table 1 below). It is clear from Table 1 that, in addition to the high mean ratings, there was also a narrow range, with the lowest overall rating being 4.26 on the five point scale, indicating that participants had rated the importance of all competencies very highly.

INSERT TABLE ONE ABOUT HERE

Enablement Ratings across the Four Courses of the Programme

Across the four courses of the programme, competencies were all highly rated for how well enabled to develop those competencies participants considered themselves to have been by completing the courses. The highest mean competency enablement rating of 4.21 on the five point scale was obtained for the Practicum course. The mean overall enablement rating for competencies in the both the Core and EBIP courses was 4.19. The course with the lowest mean competency enablement rating was the L&B course with 3.98. Thus, there was only a small difference of 0.23 between the mean overall ratings for the course with the highest and lowest mean competency

enablement ratings. The mean enablement rating of competencies across the 51 competencies in the programme was 4.15 (see Table 2 below). It is clear from Table 2 that, in addition to the high mean ratings, there was also a narrow range, with the lowest overall rating being 3.46 on the five point scale, indicating that participants had rated their enablement of all the competencies highly.

INSERT TABLE TWO ABOUT HERE

Relationships between Enablement, Programme and Demographic Variables

Results indicated that: the more important participants considered the programme competencies, the better enabled they considered they were to develop these competencies ($p < .001$). Also, the more participants viewed programme materials on the programme website, the better enabled they considered they were to develop programme competencies ($p < .01$).

Seven sets of demographic data were examined in order to consider the relationships between demographic variables, such as age and teaching experience, and the extent to which participants perceived that they were enabled to develop competencies by completing the L&B course. Results indicated that there were no statistically significant differences between perceived enablement levels and any of the demographic variables, suggesting that none of the demographic variables were factors in participants' perceptions of their enablement.

Discussion

Importance of Programme Competencies

A major finding from this study was that, in all four courses of the PGDipST(L&B), participants considered programme competencies to be of high importance to their professional work in the field of learning and behaviour difficulties. This finding reinforces the view that achieving close correspondence between competencies addressed in training programmes and the needs of professional working environments can be achieved by using careful identification and selection procedures within a competency-based approach to education (Herr et al. 1976; Murray 2009; Sullivan 1995). The finding highlights the importance of the process by which competencies are generated, as is emphasized by the seminal work of the Council for Exceptional Children (CEC 2008) that brought together the views of thousands of professionals in the field. Given the extensiveness of the consultation undertaken in developing competencies for the PGDipST(L&B) programme, it is useful to know that participants considered that the competencies selected were highly important to their work as resource teachers of children with learning and behavior difficulties.

Enablement of programme competencies

Another major finding from this study was that participants considered themselves to have been well enabled to develop competencies in all four courses of the programme. Further, there were only small differences between mean overall ratings for the four courses within the programme, with the Practicum course gaining a slightly higher mean competency enablement rating, and the L&B course a slightly lower mean competency enablement rating.

This finding is in line with that of Rakap et al. (2014), whose study reported on the perceptions of 33 special education teachers in the USA with regard to their in-

service training programme in the field of autism. Results of that study indicated that participants, who, similar to those in the current study, completed a programme comprising four web-based courses that were taught within two semesters over a one-year period, significantly increased their levels of competency in each of the six competency areas of the programme.

The results of the present study are, however, somewhat in contrast to those of the study by Lombardi and Hunka (2001), discussed earlier, in which the perception of students in relation to 28 special needs competencies were examined. Twenty-five percent of these students, who were coming to the end of their teacher-training programme indicated that they did not consider that they had developed either competence or confidence relevant to the 28 essential special needs competencies focused on in their programme. The contrast in results might be explained by the fact that, students in the Lombardi and Hunka (2001) study were undertaking an initial teacher training programme and had yet to undertake their internship year. In the case of participants in the current study, however, not only had they completed their training programme, but their work on the programme built on their initial teacher training and several years of experience as teachers. These factors may have accounted for participants in this current study feeling better enabled to develop competencies than those in the Lombardi and Hunka (2001) study.

Other relationships

That there were no relationships between any of the demographic variables, such as age and teaching experience, and perceived enablement levels, was surprising, given that evidence from similar research, about the influence of previous experience on learning, such as the findings of Benitez et al. (2009), indicated that higher scores on

professional experience variables were positively correlated with higher levels of satisfaction with training.

The positive correlation that was found between perceived importance and enablement could be predicted from Knowles, Holton and Swanson's (2015) views about adult learning, in which it is claimed that adults learn more when they consider what they are studying to be of greater importance to their life roles. The finding that the more participants viewed the programme website, the better enabled they considered that they were to develop programme competencies also supports the conclusions of previous writers on this issue (Dixon 2010; Garrison 2011).

Implications for Practice

The implications of the main findings of the study are that programme developers were successful in selecting the key competencies in the field of teaching students with learning and behavior difficulties within inclusive contexts. Programme developers were also successful in helping students feel well enabled to develop these competencies. To this effect, a range of specific implications have been identified that should be helpful to teacher educators seeking to develop similar training programmes.

First, participants reported that they had been well enabled to develop competencies considered relevant to their professional roles irrespective of differences in their ages, levels of academic qualification or years of special education or mainstream teaching experience. This finding indicates that such programmes can be successful in meeting the training needs of a wide range of teachers of children with SEN, which has international implications. For example, the applicability of a similar programme to countries within the Caribbean region, which typically have widely geographically and demographically diverse teaching forces, has been

proposed by the authors (Pilgrim and Hornby 2016).

Second, although participants perceived that all competencies in the programme were well enabled, more attention could be paid to competency areas that received lower ratings, in order to ensure that participants are equally enabled to develop competencies throughout the programme. For example, competences in this programme focusing on assessment and intervention typically received slightly lower ratings for enablement, suggesting that this was an aspect of the programme that could be improved. So the implication for teacher educators here is that gaining feedback from programme graduates about the specific competencies involved highlights aspects that need further development and thereby facilitates the ongoing improvement of programmes.

Third, central to government strategy for inclusive education was ensuring the effective training of specialist resource teachers in order to improve outcomes for groups of priority learners, particularly indigenous Māori students who typically underperform academically in New Zealand schools (Ministry of Education 1996). It is therefore an important finding that programme graduates considered that they were enabled to develop the competencies considered necessary for improving outcomes for these priority learners. The existence of educational disparities affecting indigenous students and other groups of disadvantaged students is one that many nations around the world continue to face (Bishop et al., 2014; Castagno and Brayboy, 2008). An international implication of this study is, therefore, that programmes such as this one can be used to address the needs of targeted groups of children across a range of education settings.

Limitations and future research

Eighty-one students successfully completed the PGDipST(L&B) but, despite the best efforts of the researcher, questionnaire data was only received from 42 of these ex-students. Although some authors suggest that researchers should be satisfied with a 50 per cent response rate for such surveys (Cohen et al 2011) it is possible that, with a response rate of only 52 per cent, the data gathered may not be representative of the views of the entire population of ex-students.

It must also be recognized that this study measured participants' perceptions of their enablement to develop competencies rather than measuring their actual levels of performance with regard to competencies. Gaining participants' perspectives provides useful information, however, attaining accurate measures of actual participant performance with regard to competencies would provide the most useful measure of programme effectiveness.

Future research should seek to investigate participant performance with regard to the development of competencies, and determine the extent to which the development of competencies in the training context enables specialist teachers to apply these competencies in their own practice. Research is also needed on the extent to which the development of competencies enhances the practice of classroom teachers at the schools in which they work, and improves outcomes for the students with special education needs who are the focus of their interventions.

Conclusion

The current study has shown that, once specialist teachers of students with learning and behavioural difficulties have completed their training and are working in schools, they are well placed to reflect on their preparation programme and analyze its

effectiveness in supporting them to develop the competencies necessary to fulfill their roles. The analysis of data gathered from the questionnaire survey carried out in this study offers an important opportunity for teacher educators to utilize the experience of these professionals in order to further develop and thereby improve their training programmes.

It is proposed that this innovative programme, which utilizes a blended learning, competency based approach, suggests a model for providing training for teachers of children with SEN in a wide range of education settings in both developed and developing countries throughout the world, particularly where populations are diverse both geographically and demographically.

The implementation of such programmes could well be an important factor in increasing the confidence of teachers in providing effectively for children with SEN in their classrooms, thereby enabling the success of the international trend towards inclusive education for children with SEN.

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Appendix A

Theory and Foundations of Learning and Behaviour Diversity course competencies

1. Demonstrate an understanding of the nature and extent of learning and behaviour difficulties and interventions to meet the needs of students who experience difficulties with learning and behaviour.
2. Demonstrate an understanding of Māori thinking and theorizing.
3. Demonstrate knowledge and skills in planning, adapting, implementing and critically evaluating ecologically valid, evidence-based, culturally appropriate *individual* assessments and interventions for students who experience difficulties with learning and behaviour.
4. Demonstrate knowledge and skills in planning, adapting, implementing and critically evaluating ecologically valid, evidence-based, culturally appropriate *small group* assessments and interventions for addressing learning and behaviour difficulties.
5. Demonstrate knowledge and skills in planning, adapting, implementing and critically evaluating ecologically valid, evidence-based, culturally appropriate *whole class* assessments and interventions for addressing learning and behaviour difficulties.
6. Demonstrate knowledge and skills in planning, adapting, implementing and critically evaluating ecologically valid, evidence-based, culturally appropriate *school wide* systems and interventions for addressing learning and behaviour difficulties.
7. Demonstrate understanding of inter-personal competencies needed for working effectively with parents, families, teachers, other school staff and professionals not based in schools.

8. Demonstrate an understanding of the concept of teacher learning and the knowledge and skills for assisting teachers and principals to create positive learning environments.
9. Demonstrate an understanding of the resource teacher role and its links to other learning and behaviour initiatives.
10. Demonstrate knowledge and skills in developing, delivering, and evaluating resource teacher operational processes.

Appendix B

Core Theory and Foundations of Specialist Teaching course competencies

1. Demonstrate knowledge and skills in becoming an ethical and reflective practitioner.
2. Demonstrate knowledge and skills in using the code of ethical practice
3. Critically discuss legislation, policy and curriculum documents
4. Demonstrate an understanding of the concept and role of culture.
5. Reflect on own cultural values, practices and beliefs.
6. Critique the influence of the majority culture on the New Zealand education system.
7. Demonstrate an understanding of the concepts of biculturalism and multiculturalism.
8. Critically review historical and current perspectives on special and inclusive education, disability and diversity.
9. Demonstrate knowledge of human development and learning theories.
10. Consult and collaborate on inter-professional implications of theories of learning and development.
11. Demonstrate knowledge of collaborative and consultative models of working and strengthening partnerships.
12. Share professional knowledge and skills to learn with, from and about specialist areas.
13. Reflect on and contribute to communities of learning and practice.

14. Demonstrate knowledge of evidence-based and effective teaching and learning practices.
15. Critically evaluate resources and intervention strategies.
16. Critically discuss and evaluate curriculum and programme adaptations and solution/strength-based interventions.
17. Demonstrate knowledge of assessment models and practices.
18. Critically evaluate assessment approaches and tools.
19. Discuss and compare assessments practices across specialist areas.
20. Consult, collaborate and reflect on IEP processes.

Appendix C

Evidence-Based Inter-professional Practice course competencies

1. Demonstrate knowledge and understanding of principles and practices of learning with from and about other specialist areas.
2. Critically discuss the values, skills and attitudes needed for inter-professional practice.
3. Collaborate on an inter-professional case study.
4. Critically discuss and apply Māori and multicultural concepts and practices across Specialist Teaching areas.
5. Critically reflect on issues relating to forming partnerships with professionals and stakeholders.
6. Understand and apply evidence-based frameworks relating to inclusion.
7. Demonstrate a commitment to sustainable practice
8. Identify and critically analyze evidence-based practices in the area of learning and behaviour including special and inclusive education.

Appendix D

Practicum for Learning and Behaviour course competencies

1. Demonstrate a commitment to promoting the well being of all children
2. Show leadership that contributes to effective teaching and learning.
3. Conceptualize plan and implement an appropriate learning programme
4. Promote a collaborative inclusive and supportive learning environment.
5. Demonstrate a commitment to bicultural partnership in New Zealand.
6. Respond effectively to the diverse language and cultural experiences, and the varied strengths, interests and needs of individuals and groups of children.
7. Work effectively with the bicultural context of New Zealand.
8. Demonstrate in practice, knowledge and understanding of how children learn.
9. Demonstrate a commitment to ongoing professional learning and development of personal professional practice.
10. Establish and maintain effective professional relationships focused on the learning and well being of children.
11. Gather, analyze and appropriately use, assessment information that has been gathered formally and informally.
12. Use critical inquiry and problem solving effectively in professional practice.
13. Maintain effective record keeping systems.