

**Do we have what it takes? An investigation into
New Zealand occupational therapists' readiness
to be self-directed learners.**

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Abstract

In 2005, the Occupational Therapy Board of New Zealand (OTBNZ) introduced the Continuing Competence Framework for Recertification (CCFR) which included the mandated requirement for occupational therapists to regularly maintain an online professional development portfolio as part of the evidence required to demonstrate ongoing competence to practice. In designing the process, the assumption made was that all occupational therapists would have the attributes for, and skills of, self-directed learning, however, the degree to which this assumption holds true is not known for this population, nor is it known whether readiness to be a self-directed learner influences occupational therapists' use of the CCFR as a professional development tool.

The aims of this study were to determine the extent to which occupational therapists are ready to be self-directed learners, the factors which influence readiness to be a self-directed learner, and whether or not there is a connection between occupational therapists' readiness to be a self-directed learner and their use of the CCFR as a professional development tool. Using a convergent parallel mixed methods design, data was collected from 173 participants via an online questionnaire, consisting of demographic and occupational questions and the Self-directed Learning Readiness Scale – Adjusted (M. J. Fisher, King, & Tague, 2001), and an in-depth interview with 16 participants based on their CCFR, analysed using Garrison's (1997) Self-directed Learning model.

Through triangulation of the qualitative and quantitative data analysed, the research question was answered in the affirmative, in that for the majority of participants, there did appear to be a connection between occupational therapists' use of the CCFR as a professional development tool and self-directed learning readiness. Whereas the results of this study indicated that the majority of participants in this study were ready to be self-directed learners, factors influencing the use of the CCFR included beliefs or attitudes to learning, the degree of metacognitive awareness of themselves as learners, and personal definitions of competence to practice, with experience in supervision of allied health students and occupational therapists, and years employed influencing self-directed learning readiness. The findings of this study have implications for occupational therapists, the Occupational Therapy Board of New Zealand, and academic institutions delivering occupational therapy programmes.

'The most important attitude that can be formed
is that of the desire to go on learning'.

(John Dewey, 1938)

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Contents

Abstract.....	ii
Acknowledgements.....	iv
List of Tables.....	ix
List of Figures.....	x
Commonly Used Abbreviations and Terms.....	xi
Chapter One: Introduction.....	- 4 -
1.1 Introduction.....	- 4 -
1.2 Legal and ethical context.....	- 5 -
1.2.1 Demonstrating ongoing competence to practice through the CCFR.....	- 7 -
1.3 Purpose and aims of the study.....	- 10 -
1.4 Justification for the study.....	- 11 -
1.5 Overview of the thesis chapters.....	- 14 -
Chapter Two: Literature Review.....	- 16 -
2.1 Introduction.....	- 16 -
2.2 Methodology for the literature review.....	- 17 -
2.3 Competence to practice.....	- 17 -
2.3.1 Maintaining competence to practice.....	- 20 -
2.4 Learning at, for, and through work.....	- 26 -
2.4.1 Major theoretical influences on learning at, for, and through work.....	- 28 -
2.4.2 Methods for learning at, for, and through work.....	- 35 -
2.5 Theories of self-directed learning.....	- 38 -
2.5.1 The process orientation models of self-directed learning.....	- 39 -
2.5.2 The personal orientation models of self-directed learning.....	- 41 -
2.5.3 Measurements of self-directed learning.....	- 48 -
2.5.4 Defining readiness to be a self-directed learner.....	- 52 -
2.6 Occupational therapists' readiness to be self-directed learners.....	- 53 -
2.6.1 Synthesis of research findings investigating occupational therapists' readiness to be self-directed learners.....	- 65 -
2.7 Research question.....	- 68 -
2.8 Summary of Chapter Two.....	- 68 -
Chapter Three: Methodology.....	- 71 -
3.1 Introduction.....	- 71 -
3.1.1 Influences of the dualistic paradigms on research design.....	- 72 -
3.2 Pragmatism as the underlying philosophy.....	- 73 -
3.2.1 Challenges to the use of pragmatism.....	- 76 -
3.3 Mixed Methods.....	- 78 -

3.3.1	Limitations of mixed methods design	- 79 -
3.4	Research questions.....	- 81 -
3.5	Data collection and analysis	- 83 -
3.5.1	Quantitative phase: Participant recruitment procedures.....	- 83 -
3.5.2	Quantitative phase: Development of online questionnaire	- 85 -
3.5.3	Quantitative phase: Processes used for data collection and analysis	- 90 -
3.5.4	Qualitative phase: Participant recruitment procedures.....	- 91 -
3.5.5	Qualitative phase: Data collection procedures	- 92 -
3.5.6	Qualitative phase: Interview analysis procedures	- 94 -
3.5.7	Integrating the qualitative and quantitative data	- 99 -
3.6	Ethical issues	- 100 -
3.7	Summary of Chapter Three.....	- 101 -
Chapter Four:	Results.....	- 103 -
4.1	Introduction.....	- 103 -
4.2	Description of quantitative phase participants.....	- 104 -
4.3	New Zealand occupational therapists' readiness to be self-directed learners.....	- 108 -
4.3.1	Analysis of factor structure of the SDLRS-A	- 108 -
4.3.2	Readiness to be a self-directed learner.....	- 112 -
4.3.3	Influencers of self-directed learning readiness.....	- 114 -
4.4	Learning at, for, and through work	- 121 -
4.5	Characteristics of interview participants.....	- 122 -
4.6	Dimension One: Self-Management (Task control).....	- 125 -
4.6.1	Learning need identification	- 125 -
4.6.2	Goal determination and documentation	- 128 -
4.6.3	Learning Strategies and Resources	- 134 -
4.6.4	Assessing achievement of learning goals.....	- 137 -
4.6.5	Comparison of high and low scorers' descriptions of what they do, why and how.....	- 141 -
4.6.6	Summary of Dimension One: Self-Management	- 144 -
4.7	Dimension Two: Self-Monitoring (Cognitive responsibility)	- 146 -
4.7.1	Integration of new learning with prior understanding.....	- 146 -
4.7.2	Rationale for selecting learning strategies	- 150 -
4.7.3	Comparison of high and low scorers' descriptions of what they do, why and how.....	- 162 -
4.7.4	Summary of Dimension Two: Self-Monitoring.....	- 164 -
4.8	Dimension Three: Motivation (Entering and Task).....	- 166 -
4.8.1	Entering and sustaining motivation – Influence of values	- 166 -
4.8.2	Entering and sustaining motivation – Influence of affective state	- 168 -

4.8.3	Entering and sustaining motivation – Contextual factors	- 170 -
4.8.4	Comparison of high and low scorers’ descriptions of motivational influencers	- 175 -
4.8.5	Summary of Dimension Three: Motivation	- 180 -
4.9	Summary of Chapter Four	- 182 -
Chapter Five:	Discussion	- 184 -
5.1	Introduction.....	- 184 -
5.2	Overview of significant findings	- 185 -
5.2.1	Readiness to be a self-directed learner.....	- 185 -
5.2.2	Factors found to influence self-directed learning readiness.....	- 192 -
5.3	Contributions of the study.....	- 203 -
5.4	Limitations of the study	- 207 -
5.5	Implications and recommendations	- 208 -
5.5.1	Implications of the findings for the OTBNZ.....	- 208 -
5.5.2	Implications of the findings for individual members of the profession	- 211 -
5.5.3	Implications of the findings for academic institutions	- 212 -
5.6	Recommendations for future research	- 214 -
5.7	Conclusion	- 216 -
References.....		- 220 -
Appendices.....		- 254 -

List of Tables

Table 1: Occupational Therapy Board of New Zealand competencies	- 6 -
Table 2: Measurements of readiness to be self-directed learners.....	- 49 -
Table 3: SDLRS statements modified to ensure relevance for occupational therapists	- 90 -
Table 4: Coding framework used for analysis of interview data.....	- 98 -
Table 5: Demographic characteristics as a percentage of the study sample.....	- 105 -
Table 6: Occupational characteristics as a percentage of the sample.....	- 106 -
Table 7: Experience in supervision of allied health students and/or occupational therapists	- 107 -
Table 8: Comparison of three strongest items factor loadings.....	- 111 -
Table 9: Range, mean and standard deviation of participants' scores on SDLRS-A subtests	- 114 -
Table 10: T-test results for gender and employment for SDLRS-A total and subtest scores.....	- 115 -
Table 11: Non-significant ANOVA statistics for SDLRS-A total and subtest scores	- 116 -
Table 12: Significant ANOVA statistics for SDLRS-A total and subtest scores.....	- 117 -
Table 13: Comparison of significantly different groups within each variable	- 118 -
Table 14: Demographic and occupational characteristics of participants interviewed	- 124 -

List of Figures

Figure 1: OTBNZ CCFR cycle of critical reflection.....	- 8 -
Figure 2. The ‘Personal Responsibility Orientation’ (PRO) model (Brockett & Hiemstra, 1991).-	43 -
Figure 3. Self-directed Learning (SDL) model (Garrison, 1997).....	- 44 -
Figure 4. Scree plot of the component analysis for the individual items.	- 109 -
Figure 5. Histogram illustrating frequency of total SDLRS-A scores across 173 participants....	- 113 -

Commonly Used Abbreviations and Terms

APC	Annual Practicing Certificate.
DHB	District Health Board – the main providers of health and disability services to populations within a defined geographical area.
CCFR	Continuing Competence Framework for Recertification.
CCFR - Self-assessment	A brief overview of performance against the competency, may include strengths and weaknesses, reflection on performance and what needs improving, giving an indication of where to next in their professional development (Occupational Therapy Board of New Zealand [OTBNZ], 2011).
CCFR –Objectives	Written as a SMART objective and based on results from CCFR self-assessment, should be developmental in nature and appropriate to level of experience and practice (OTBNZ, 2011).
CCFR – Activities	The steps or plan of action required to achieve an objective (OTBNZ, 2011).
CCFR – Critical reflection on outcome	In critically reflecting on the outcome the occupational therapist states what they did and what happened for each objective or activity, including consideration of whether a change of practice has occurred and the likely subsequent benefits for consumers or stakeholders (OTBNZ, 2011).
HPCA	Health Practitioners Competence Assurance Act (HPCAA, 2003).
OTBNZ	Occupational Therapy Board of New Zealand.
SMART objectives	Specific, measurable, attainable, resourced and time-limited.
Practicing occupational therapists	A term for occupational therapists registered with the OTBNZ register, holding an Annual Practicing Certificate. Entitled to be called and practice as an occupational therapist.
Registered occupational therapists	A term occupational therapists registered with the OTBNZ register, but not holding an Annual Practicing Certificate. Entitled to be called an occupational therapist, but not practice as one.
SDLRS	Self-Directed Learning Readiness Scale developed by Fisher, King and Tague (2001) for use with nursing students. Originally titled Self-directed Learning Readiness Scale for Nurse Educators (SDLRSNE).
SDLRS-A	Refers to the version of the Self-Directed Learning Readiness Scale adjusted for the purposes of this study.

FOREWORD

Occupational therapists are essentially pragmatists at heart (Hooper & Wood, 2002). Our domain of concern is the ‘doing’ of occupation, enabling others to ‘do’ what is important, essential or necessary. The influence of Dewey’s pragmatism is seen in our belief that in order to assist others to ‘do’, we firstly need to understand “people in the context of their environs, life histories and ways of acting in the world” (Hooper & Wood, 2002, p. 42). This belief not only underpins my practice as an occupational therapist and occupational therapy academic but is, I believe, also evident in the design and implementation of this study.

In the final stages of my study it became evident that I needed a foreword that illustrated how my reflections informed the actions I took, in order to acquire knowledge (Bietsa, 2010) of my professions readiness to be self-directed learners. I acknowledge that others’ reflections and therefore their actions may have been different from my own, and that one is not more right than the other. Rather, as proposed by Deweyan pragmatists, “it is through social transactions that we come to understand the existence of multiple subjective realities” (Tashakkori & Teddlie, 2003, p. 57) and in doing so, seek agreement through action. What follows in this foreword are my reflections that arose out of many social transactions, which exposed me to the multiple subjective realities expressed by my colleagues around the Continuing Competence Recertification Framework (CCFR). These differing realities were puzzling and my desire to better understand the origins of these became the driver for my exploration of occupational therapists’ ‘doing’ of the learning process (Law, 2010), especially in relation to their CCFR.

My interest in the ‘doing’ of the learning process arose from conversations I had with many occupational therapists since 2005, the year the Occupational Therapy Board of New Zealand (OTBNZ) introduced changes following the implementation of the Health Practitioners Competence Assurance Act (HPCAA, 2003). The Act required the responsible authority, that is, the OTBNZ, to implement a process that would ensure registered practitioners applying for their Annual Practicing Certificate (APC) had a mechanism for demonstrating their ongoing competence to practice. The mechanism chosen was the CCFR, an online portfolio that occupational therapists use to “reflect on and assess their competence in relation to the Competences for Registration as an occupational therapist” (Occupational Therapy Board of New Zealand [OTBNZ], 2013a, p. 2), with participation

mandated as “an essential part of the process for determining competence and fitness to practice” (OTBNZ, 2011, p. 13). Participation is defined as having a current objective and activity for each of the seven competencies based on the occupational therapist’s self-assessment, along with critical reflections of completed objectives and activities (OTBNZ, 2011). These elements or steps of self-assessment, defining of objectives, selecting activities and undertaking a critical reflection on the learning that has occurred, are the processes thought to be used by learners who are self-directed (Knowles, Holton, & Swanson, 2005), with self-directed learners preferring to assume responsibility for their learning (Brockett & Hiemstra, 1991), being confident in the knowledge of themselves as learners (Higgs, 1993). In incorporating these steps into the CCFR, it appears that the OTBNZ has assumed all occupational therapists have the attributes of, and skills for, self-directed learning.

Anecdotally, the self-directed learning process inherent in the CCFR has proven to be frustrating for occupational therapists. Given the diversity of practice areas, geographical locations, employers and even personal circumstances, I first wondered whether these factors were influential in explaining the challenges occupational therapists expressed with their CCFR. However, some individuals I spoke with disagreed, suggesting that their difficulties lay with the awkwardness of the technology used for the online CCFR, which initially led me to think that the underlying issue could be their computer literacy skills. Others complained that it was something they were ‘forced’ to do by the OTBNZ, which made me question their willingness to demonstrate their continued learning. Still others felt that the problem was a lack of resources and support from their employer, which made me wonder about their ownership of the process. These were just a few of the multiple realities expressed for a process that appeared to be logical and relatively straightforward to do, regardless of where we worked, who employed us, how much experience we had, or where we lived.

With continued discussion in the years since 2005, the reasons for the frustrations have remained much the same, and in reflecting on this I began to think that there may be another explanation than those given by my colleagues. The belief that there may be another explanation was further reinforced through my role as a CCFR supervisor, and as a CCFR third-party sign-off responsible for reviewing other occupational therapists’ online CCFR portfolios as part of attesting to their level of competence. In both roles I reviewed a number of CCFR portfolios, some well-organised and clearly demonstrating an affinity for,

and skills in, managing their learning, whereas the content of others suggested their owners were struggling in some way.

As I reflected on what I was hearing and seeing, another reason to those given by my colleagues was forming in my mind. Could it be that some of us are not the competent self-directed learners that the OTBNZ may possibly have assumed? Do some of us struggle because we lack the skills to manage our learning, or are we passive learners waiting to be 'taught', or do we just lack the ability to take control of our learning? In addition, are there any significant factors influencing our readiness for self-directed learning, such as where we live and work, who employs us, our gender or whether we have engaged with ongoing formal learning such as postgraduate study?

In order to propose an explanation different to that usually given by my colleagues, I realised that I first needed to establish whether there was any basis to my belief that some occupational therapists are not as ready to be self-directed learners as others. This needed to be ascertained before I could suggest that there was any connection between readiness to be a self-directed learner and use of the CCFR as a professional development tool. Thus, the "researchable idea in a content area of interest" (Teddlie & Tashakkori, 2009, p. 115) was formulated, with self-directed learning being the content area of interest and the researchable idea being whether or not degree of readiness to be a self-directed learner influences occupational therapists' use of the CCFR as a "practical living tool for professional development" (OTBNZ, 2011, p. 4).

Being a pragmatist researcher, my goal was not to seek the absolute truth, which does not exist according to Deweyan pragmatists (Bietsa, 2010; Tashakkori & Teddlie, 2003). Rather I started this thesis with a problematic situation, considering the best ways to gather and analyse information, in order to pose an alternative explanation for the consequences (Tashakkori & Teddlie, 2003). As I come to the end of this study, I believe that I do have the evidence to show that for some of my colleagues, their difficulties with the CCFR are in fact related to the degree to which they were ready to be self-directed learners. I believe that in this study, I have been able to demonstrate a connection between the action of readiness to be a self-directed learner and the consequence of the use of the CCFR as a professional development tool. However, acceptance of my tentative explanation (Bietsa, 2010) will ultimately depend on the occupational therapy community, being the ones best equipped to determine whether or not my explanation is in fact tenable and useful (Jackson, 2012).

CHAPTER ONE: INTRODUCTION

1.1 INTRODUCTION

The Health Practitioners Competence Assurance Act (HPCAA, 2003) was passed into law in 2003, providing a regulatory framework for health professions such as medicine, nursing and allied health practitioners. The purpose of the Act was to ensure that all New Zealanders accessing health-related services could expect to receive services from competent practitioners capable of applying their professional knowledge safely, effectively and with a high degree of skill (Health Professions Competence Assurance Act [HPCAA, 2003]). In order to meet this expectation, occupational therapists are expected to engage in ongoing learning, updating their theoretical knowledge and refining therapeutic skills (Allen, Oke, McKinstry, & Courtney, 2005; Murray & Lawry, 2011), using a process of self-directed learning to ensure lifelong competence (HPCAA, 2003).

The profession of occupational therapy is founded in the beliefs of the Moral Treatment and Arts and Crafts movements whose proponents argued for the health-giving properties of everyday occupations. With the return of servicemen from World War 1, the profession became formally recognised as having a role in assisting returned servicemen with casualties back into the workforce (Reed, Hocking & Smythe, 2013). From these small beginnings, the profession established itself across diverse practice areas in the health, education, justice and disability sector, with approximately 1925 occupational therapists applying for their Annual Practising Certificates during the 2012/13 practicing year (OTBNZ, 2013b) in New Zealand. With a broad scope of practice, occupational therapists are “concerned with promoting health and well-being through occupation with occupation, being the “everyday things that people do as individuals, in families and with communities to occupy time and bring meaning and purpose to life” (World Federation of Occupational Therapy, 2012, ¶ 2), Thus the practice of occupational therapy is complex, with preparation to become an occupational therapist requiring the individual to successfully complete a three year undergraduate degree and apply for registration with the Occupational Therapy Board of New Zealand.

In this first chapter, the context for this study of the connection between occupational therapists' use of the CCFR as a professional development tool and their self-directed learning readiness is outlined, commencing with the legal requirements and ethical obligations for occupational therapists to maintain their competence through ongoing learning. The role of the OTBNZ is introduced along with CCFR. Finally, the purpose, aims and justification for the study are presented, along with an outline of the remaining chapters.

1.2 LEGAL AND ETHICAL CONTEXT

The public has increasingly expressed the need to be assured of the competency of health professionals (McKinstry, Allen, Courtney, & Oke, 2008; Murray & Lawry, 2011; Zukas, 2012). Likewise, government funders and employers also require health professionals to provide high-quality, low-risk services for their patients or clients (Somerville, Wilding, & Bourne, 2007). These expectations are often enforced legally through the passing of law and/or are enshrined in professional bodies codes of ethics. In line with international trends (Canadian Association of Occupational Therapists, 2007; Health and Care Professions Council, n.d.; Occupational Therapy Board of Australia, 2012), the expectation of demonstrating ongoing competence to practice is both a legal requirement and an ethical obligation for New Zealand occupational therapists.

The legal requirement for health practitioners to demonstrate lifelong competence is enforced through the HPCAA (2003) which although passed in 2003, did not come fully into force until 2004. The Act has three requirements for practitioner competence being (a) the demonstration of ongoing competence to practice, (b) notification of any concerns about a practitioner's practice, and, (c) ensuring practitioners are mentally and physically fit to practice (OTBNZ, 2011). Although the Act is administered by the Ministry of Health, the primary responsibility and accountability functions are devolved to the responsible authorities, which for occupational therapists is the OTBNZ. The role of the OTBNZ is to safeguard public safety by "monitoring and ensuring the professional competence and fitness to practice of all registered practitioners" (OTBNZ, 2011, p. 9). Once registered, the OTBNZ expects that the occupational therapist will, as part of the yearly application for their Annual Practicing Certificate (APC), continue to demonstrate that they are fit and competent to practice. The OTBNZ has identified seven competencies (as outlined in Table 1), each with an outcome statement which summarises "what the OTBNZ expects as

entry-level competence for practice”, and performance criteria that “reflect the actions and behaviours that demonstrate competence” (OTBNZ, 2011, p. 9). Of particular relevance to this study, is the seventh competency ‘continuing professional development’ which is defined as the ability to “seek and use opportunities to continually develop professional knowledge and practice” (Occupational Therapy Board of New Zealand [OTBNZ], 2000, p. 3). Included in the performance criteria (refer to Appendix A for this competency are statements related to self-assessment and use of reflective practice to assist with goal setting, selecting resources, and gaining the skills and knowledge to ensure continuing competence, all notable skills of self-directed learners (Knowles, et al., 2005). It is clear from these descriptors that the OTBNZ expects practicing occupational therapists to have the attributes for, and skills of, self-directed learning.

Table 1

Occupational Therapy Board of New Zealand competencies

Competency No	Title of competency
1	Implementation of occupational therapy
2	Safe, ethical and legal practice
3	Culturally safe practice
4	Communication
5	Management of self and people
6	Management of environment and resource
7	Continuing professional development

Note. Refer to Appendix A for a detailed description of the OTBNZ competencies

These expectations are also an ethical obligation as outlined in the Code of Ethics for Occupational Therapists (Occupational Therapy Board of New Zealand [OTBNZ], 2004a). The Code of Ethics stipulates the relationship that the occupational therapist will have with recipients of occupational therapy services, with society and potential consumers, and with colleagues and the profession. Under the heading of ‘relationship with colleagues and the profession’ is the explicit obligation that occupational therapists will, under the maintenance of occupational therapy standards of practice, “be responsible for actively maintaining and developing their personal professional competence” (OTBNZ, 2004a, p. 5), a characteristic attributed to self-directed learners (Higgs, 1993).

Together, the Act and Code of Ethics articulate the agreed ‘social contract’ as described by Cruess (2006), with both the public and the profession having expectations of each other which need to be met. As with other health professions, the occupational therapy profession expects to have the right to be autonomous, to be able to self-regulate, and to be trusted to provide high quality services. On the other hand, the public expects to be able to access the altruistic services of the occupational therapist who has high moral standards, who is transparent, objective and accountable, and who is competent to practice (Aguilar, Stupans, Scutter, & King, 2013; Andersen, 2001; Cruess, 2006; Murray & Lawry, 2011). This reciprocal exchange of rights and obligations allows the health professions to be self-regulating, maintaining responsibility for the behaviour and actions of the members of that profession. Thus, in New Zealand, the OTBNZ is the self-regulating body that determines the scope of occupational therapy practice, decides who has the right to call themselves an occupational therapist, and ensures that all occupational therapists “registered with them are fully competent in the practice of the profession” (Ministry of Health - Manatū Hauora, 2011, ¶ 1)

1.2.1 Demonstrating ongoing competence to practice through the CCFR

To ensure occupational therapists are competent to practice, the OTBNZ developed the Continuing Competence Framework for Recertification (CCFR), an online portfolio tool that is mandatory for practicing occupational therapists to participate in regularly throughout the year. Described in earlier publications by the OTBNZ as a ‘high-trust’ model (Occupational Therapy Board of New Zealand [OTBNZ], 2004b), all practicing occupational therapists are required to use an ongoing cycle (as illustrated in Figure 1) of self-assessment, objective generation, activity selection and critical evaluation for each of the seven competencies (refer to Appendix B for a complete example of one competency from an occupational therapist’s CCFR). The objectives and activities set should be “appropriate to the individual practitioner’s years and level of experience, current role and practice context” (OTBNZ, 2011, p. 5), forming the basis for a personalised professional development plan.

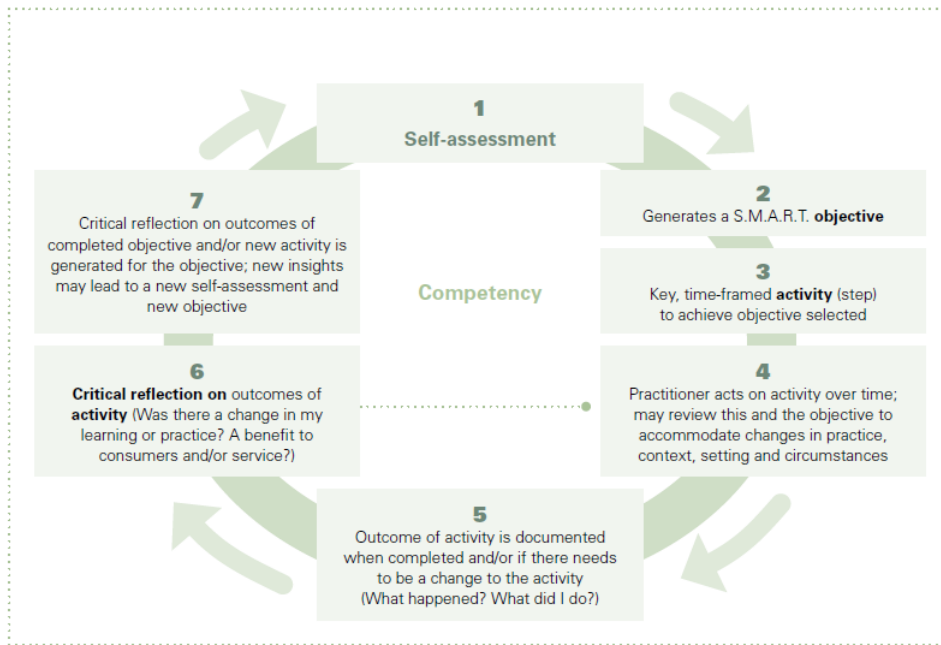


Figure 1: OTBNZ CCFR cycle of critical reflection (Occupational Therapy Board of New Zealand, 2011, p. 16)¹

The CCFR process was developed by several members of the profession under the direction of the OTBNZ (C. Hocking, personal communication, March 14, 2009). No literature was found to suggest that the process was formally trialled, however, according to the current Chief Executive of the OTBNZ (A. Charnock, personal communication, February 2, 2010), the board consulted with the profession about the proposed CCFR through a series of workshops in 2004. The requirement to participate in the CCFR commenced for all registered occupational therapists from January of 2005. Other than this early consultation prior to the implementation, the CCFR has yet to be formally reviewed or evaluated.

The principles that informed the design of the CCFR were:

- Accountability – the occupational therapist is accountable for demonstrating their competence to practice.
- Engagement – the occupational therapist is required to engage in the CCFR, with employers assisting through the provision of a range of learning activities.
- Protection – with the CCFR assuring the protection of the public.

¹ Permission to reproduce figure granted by OTBNZ (21 January, 2014).

- Partnership – between the profession and other professional bodies for the best interests of the public.
- Commitment – to continued competence which requires ongoing learning in order to adjust to changes in practice environments, societal change and consumer need.
- Adaptability – in order for each occupational therapist to be able to vary the learning opportunities based on their learning styles, learning needs, their previous experiences and the learning context.
- Monitoring and review – of the occupational therapist’s competence and fitness of practice by the OTBNZ to ensure the protection of public safety (OTBNZ, 2011).

Interestingly, the CCFR is not only a tool for practicing occupational therapists to demonstrate ongoing competence, but additionally the ‘evidence’ used by the OTBNZ in the regular reviews and audits of each occupational therapist’s competence. Thus, it serves a dual role; as a presentation portfolio (Tompkins & Paquette-Frenette, 2010) being a source of information for regular audit by the OTBNZ, to be assured that the tool is being used effectively by the occupational therapist to maintain and provide evidence of their competence; and a working portfolio (Tompkins & Paquette-Frenette) in which the occupational therapist plans, implements and reflects on their learning. These steps of planning, implementing and reflecting are in essence those used by self-directed learners (Knowles, et al., 2005), although this term is not used in any of the OTBNZ documents or website. It is not clear why this might be, except that perhaps the OTBNZ did not see a need to explicitly describe these processes of self-directed learning, given that specific statements are already outlined in the Code of Ethics and occupational therapy competencies referred to earlier in this chapter. Thus the OTBNZ may have assumed that all occupational therapists have entered the profession with the necessary attributes for, and skills of, self-directed learning (Higgs (1993; Knowles, et al., 2005), having gained these in their undergraduate pre-registration programme of study. However, this assumption may not be accurate for all practicing occupational therapists, nor has it been tested through any formalised programme of research, thus the need for this study.

1.3 PURPOSE AND AIMS OF THE STUDY

The purpose of this study is to investigate if there is any basis for the assumption that some occupational therapists may potentially find the CCFR process challenging or frustrating because they lack the attributes for, and the skills of, self-directed learning, and thus are not as ready to be the competent self-directed learners that has been assumed by the OTBNZ. If it is possible to assert that, for some occupational therapists, a connection between their use of the CCFR as a practical professional development tool and self-directed learning readiness does exist, then it could be assumed that those with higher degrees of readiness are more likely to use their CCFR effectively as a tool to support their ongoing development. In contrast, those who are less ready to be self-directed learners may not perceive the CCFR to be a tool to support their professional development, but rather a task (according to anecdotal evidence) that must be endured in order to gain their APC. If this is proven to be so, then acknowledging and developing their attributes for, or skills of, self-directed learning could assist those occupational therapists to utilise their CCFR as originally intended, that is, a professional development tool that enables the demonstration of ongoing competence to practice.

The aims of this study were to investigate:

1. the extent to which occupational therapists are ready to be self-directed learners;
2. the factors that may influence readiness to be a self-directed learner; and
3. whether or not there is a connection between occupational therapists' use of their CCFR as a professional development tool and self-directed learning readiness.

Although research questions are commonly stated in the introductory chapter of a thesis, in line with the mixed methods methodology selected for this study, the specific research questions were not completely formulated at the beginning of the study, rather they were re-examined and reframed as recommended by Teddlie and Tashakkori (2009) as the study progressed. The research questions are presented in Section 3.4 of Chapter Three.

1.4 JUSTIFICATION FOR THE STUDY

As outlined in the previous section, the primary driver for this study was the need to explore whether there was any basis for the assumption that challenges experienced by occupational therapists in relation to their CCFR might, at least for some of the profession, be related to their readiness to be a self-directed learner. Certainly, as is demonstrated in the literature review presented in Chapter Two, there is a paucity of research investigating the readiness of occupational therapists to be self-directed learners. To date, studies sourced of allied health professionals have tended to focus primarily on (a) the motivators to engagement, (b) the preferred learning strategies, and (c) the barriers or enablers to engagement. The aim of these studies is usually to determine, and sometimes to trial and evaluate solutions to the issues identified. Although the findings of these studies are important in understanding the external factors that influence engagement in learning, this is but one aspect to be considered, leaving gaps in the understandings of the interpersonal factors that may also influence engagement in ongoing learning.

The need to focus more on occupational therapists' learning has been highlighted by leaders in the profession such as Mary Law, who in her keynote address at the World Federation of Occupational Therapists Congress called for research about occupational therapists' "...'doing' of the learning process," (Law, 2010, p. 15). Similarly, Rivard Magnan (2010) recommended the need for occupational therapy researchers to gain a deeper understanding of the "psychological factors involved in the enactment of professional development behaviours" (p. 109), Strickland (2003) argued that further investigation of occupational therapists' cognitive and metacognitive strategies was needed to understand the influence of self-determination in relation to maintaining competence to practice, and Cusick, Convey, Novak, and McIntyre (2009) suggested that the outcomes of engagement in professional development would have greater workplace impact, if occupational therapists used the knowledge they gained through their reasoning to inform decisions made in relation to their professional development. Thus this study aims to contribute to this emerging field of research, by investigating whether or not, a connection exists between occupational therapists' use of the CCFR as a professional development tool and their self-directed learning readiness. In taking this focus, this study will not only add to the knowledge about how ready occupational therapists are to be self-directed learners, but also consider those factors which may be influential in developing the attributes for, and skills of, self-directed learning.

The need to better understand the connection between occupational therapists' use of the CCFR as a professional development tool and self-directed learning readiness is also very timely given the OTBNZ (2012a) findings from the recent audit of CCFR portfolios, along with the yearly increase in the number of complaints received by the board (OTBNZ, 2012b). Anecdotal evidence gathered from conversations with occupational therapists about the difficulties they experience with the CCFR is somewhat supported by the OTBNZ (2012a) audit of CCFR portfolios. In the 2012 audit of 54 occupational therapists, 13% required coaching in order to meet the expected standards and a further 39% were asked for additional evidence to be included in their CCFR. Whilst some of the errors may have been minor, and those of omission as opposed to a deficit in their ability to demonstrate ongoing competence, those that required coaching is a significant number. In addition, the OTBNZ (2012a) recently suggested that issues of omission or lack of understanding of the expectations continue to arise in subsequent audits. What is not known from these statistics is whether those who needed coaching did so, because they had not made themselves aware of the resources available (OTBNZ, 2012a), or because they lacked the attributes for, or skills in self-directed learning and thus are not as competent in self-directed learning as has been assumed.

The increasing number of complaints to the OTBNZ about individual occupational therapist's actions or behaviours is also worthy of consideration in relation to self-directed learning readiness. Since the introduction in 1996 of the New Zealand Code of Health and Disability Services Consumers' Rights (Health and Disability Commissioner, 1997) the commissioner has formally investigated one occupational therapist's practice, while four occupational therapists (one of whom was the subject of the formal complaint aforementioned) have been investigated by the Health Practitioners Disciplinary Tribunal for serious allegations of professional misconduct (New Zealand Practitioners Disciplinary Tribunal, 2013). Equally, the OTBNZ also receives notifications in relation to competence, conduct and health, the numbers of which are increasing yearly. In 2012 alone, the OTBNZ received 13 competence notifications (some which may have been initiated by the practitioner), of which one led to a competence review, along with seven conduct notifications with three referred to the New Zealand Practitioners Disciplinary Tribunal (OTBNZ, 2012b). Although these are only a few of the 2,264 occupational therapists holding APCs in 2012, the fact that the number of complaints continue to increase year by year should be of concern to the profession. In addition, given that only the most serious of

complaints come to the attention of these authorities, it is possible that there are more complaints not publicly recorded, as senior managers may choose to manage the complaint within the occupational therapist's employing organisation. Although guidelines (e.g., Health Regulatory Authorities of New Zealand/District Health Boards, 2010) for the notification of competency issues exist, researchers (e.g., L. Moore & McAuliffe, 2010) have suggested that health professionals may be reluctant to make official complaints about their peers, thus more instances of incompetence may exist than is formally documented and managed.

However, irrespective of the number of complaints, what is important to note is that for those formally investigated; the question of whether the occupational therapist had maintained their competence to practice was raised. The question raised is very important, as it may be that one or more occupational therapists whose practice was the subject of complaint, may have been challenged in the maintenance of their competence to practice for a number of reasons, notwithstanding the underlying possibility that they lacked the attributes for, and/or skills of, self-directed learning. Therefore the findings of this study may be useful for the profession to consider, especially for those occupational therapists whose professional competency has been challenged and found wanting, or where the audit process undertaken by the OBNZ indicates that the occupational therapist requires further coaching to meet the expected requirements.

Finally, the findings of this study may also be useful for the OTBNZ who are currently investigating the need to review the occupational therapy competencies for registration (J. Murphy, personal communication, February 25, 2013). In addition, the HPCA Act is under review by the Ministry of Health, with public comment requested on a number of statements related to ensuring no harm occurs to the individual and their family when accessing health and disability services. The OTBNZ response to the HPCA review includes the suggestion of the need to strengthen recertification programmes, including for example, to "improve CPD activity so it relates to client outcomes rather than individual professional aspirations" (Occupational Therapy Board of New Zealand [OTBNZ], 2012c, p. 10). The outcomes of either of these reviews may have implications for what is included in the OTBNZ occupational therapy competencies, and/or how occupational therapists will be required to demonstrate ongoing competence to practice. Thus the findings from this study may be very relevant given how much importance is placed on this key professional

competency, yet how little is actually known about occupational therapists' readiness to be a self-directed learner, or their use of the CCFR as a professional development tool.

1.5 OVERVIEW OF THE THESIS CHAPTERS

The final section of this introduction outlines the organisation of the thesis which consists of five chapters. The first, the introduction has provided the context in which this study is situated, the justification of the need for the study, along with the purpose and aims of the study.

Chapter Two consists of the review of the relevant literature, including an overview of competence and the need to demonstrate continuing competence to practice. This is followed by the connection between learning at, for, and through work and continuing competence, with an overview of the adult learning theories that have influenced the development of workplace learning theories. Definitions and models of self-directed learning are introduced, along with the findings of studies investigating the readiness of occupational therapists to be self-directed learners. The last section of this chapter reviews the factors that influence engagement in learning at, for, and through work. The chapter concludes with the overarching research question.

Chapter Three commences with the methodology of mixed methods selected for this study. Pragmatist researchers can choose from many options as long as they can demonstrate the “workability of [the] different lines of action” (Morgan, 2007, p. 66) used to arrive at the warranted assertibility (Johnson & Onwuegbuzie, 2004). In this chapter, the workable solutions arrived at are presented, starting with the philosophical underpinnings of the research method followed by the rationale for the choice of mixed methods and finishing with a detailed overview of the study design.

Chapter Four presents the results of the quantitative and qualitative analysis for this convergent parallel mixed methods study. Although the data was collected at different points, the analysis overlapped somewhat. Thus the chapter commences with the presentation of the results from the analysis of the quantitative data, followed by the results from the analysis of the qualitative data. Findings from the quantitative analysis are also integrated throughout the qualitative data section.

The final chapter, Chapter Five, commences with an overview of the significant findings and the relationship between these and previous research findings. Factors found

to be influential are discussed, and the unique contributions of this study to the understanding of occupational therapists' self-directed learning readiness are presented. This chapter concludes with the implications of the findings for the OTBNZ, the occupational therapy profession and the academic undergraduate programmes, along with recommendations for future research. The conclusion to the thesis is presented at the end of Chapter Five.

CHAPTER TWO: LITERATURE REVIEW

2.1 INTRODUCTION

As described in the Foreword and Chapter One, one of the key precipitants for this study on self-directed learning readiness was the introduction of the CCFR, and the resulting challenges experienced by occupational therapists. The CCFR was designed by the OTBNZ (2011) to be the ‘practical living tool for professional development’ (p. 4), enabling occupational therapists to demonstrate their ongoing competence to practice. Successful use of the CCFR tool requires the occupational therapist to be committed to ensuring their continuing competency through ongoing learning. In addition, it seems that based on the expectation that occupational therapists have the attributes for, and skills of, self-directed learning, the OTBNZ designed the CCFR to be adaptable, allowing occupational therapists no matter where they worked or lived, to create learning experiences according to their needs, learning styles and the learning context. However, as described in the Foreword, one reason for occupational therapists’ challenges with the CCFR could be related to their readiness to be self-directed learners.

Prior to planning the study, it was important to first explore the conceptual and empirical literature in order to determine what was already known. The results of reviewing the literature are presented in this chapter in four main sections. The first section provides an overview of competence to practice, why occupational therapists need to maintain their competence to practice, and how ongoing competence to practice is assessed. The second section explores learning, in for and through the workplace including the key informing theorists for the development of workplace learning theories, and methods through which learning is thought to occur. Given the expectations of occupational therapists to be competent self-directed learners, the third section focuses on definitions and theories of self-directed learning and ways of measuring self-directed learning. The literature review concludes with the fourth section, which discusses what is currently known about the occupational therapists’ readiness to be self-directed learners, concluding with the overarching research question for the study.

2.2 METHODOLOGY FOR THE LITERATURE REVIEW

Current literature was searched for using the CINAHL (Cumulative Index of Nursing and Allied Health Literature), ProQuest 5000, ERIC Education Resources Information Center (via OvidSP) and the Cochrane Library databases using the following keywords: occupational ther*, occupational ther* education (continuing) professional development, continuing education (credit), (used to denote professional post-entry level education in some databases), professional competence, self-directed learning and allied health professionals. In addition, a Google Scholar Alert was set throughout the duration of this study for the key words of continuing education, professional development, self-directed learning and occupational therapy. Research investigating the readiness of occupational therapy students to be self-directed learners was also considered. Inclusion criteria were research-based peer-reviewed publications; with occupational therapists as the only participants, or one of a number of AHPs; published in the last 15 years. In addition, publications that were conceptual in nature were reviewed and used where relevant, along with doctoral dissertations.

Given that the occupational therapy literature tends to only touch on educational theory, usually in relation to either the education of occupational therapy students or to the education of clients, literature from other disciplines was also reviewed. Initially generic texts on adult learning were sourced which led to further investigation of theorists commonly cited in the generic adult literature, and finally to workplace or work-based learning, which is predominantly the domain of human resource development. Similarly, generic literature on self-directed learning was sourced, which led to further investigation of models of self-directed learning and instruments of measurement.

2.3 COMPETENCE TO PRACTICE

Being judged as competent, or described as having competence to practice signifies that the occupational therapist has reached a particular level having the “requisite or adequate ability or qualities” (Competent, 2013). Competence to practice is a social status (Alsop, 2001) that is usually conferred at the time the occupational therapist is awarded their entry-to-practice academic qualification (Alsop, 2013; Rodger, Clark, Banks, O'Brien, & Martinez, 2009). The bestowing of the qualification marks the transition from student status to competent practitioner, giving the right to practice the profession (Alsop, 2001;

Gray et al., 2012), with the acknowledgement that learning will continue throughout the practitioner's professional career (Lysaght & Altschuld, 2000; Strickland, 2003). Although the term is used widely, a number of authors (e.g., Hadfield, Murdoch, Smithers, Vaiolenti, & Patterson, 2007; Illeris, 2012a; McKinstry et al., 2008; Rodger et al., 2009) have noted the challenges of defining competence, suggesting that it is multifaceted, multifactorial and dynamic.

Competence has been simply defined as “what a person is able to do or achieve” (Illeris, 2011, p. 41), often in relation to standards of the professional body (Moyers, 2009; Rodger et al., 2009). Thus in the HPCA Act (2003), competence is described as the standards the health professional is required to meet when they are practicing within their scope of practice. Scopes of practice are defined as being “1 or more of such health services that the practitioner is, under an authorisation granted under section 21, permitted to perform, subject to any conditions for the time being imposed by the responsible authority” (HPCAA, 2003, p 12). However, Rodger et al. (2009) argue that competence for health practitioners is “more than the mere execution of a circumscribed set of specific, technical skills” (p. 373), as does Courtney and Farnworth (2003) who state that the ability to use occupational therapy theory to inform clinical reasoning is linked to the competence of the practitioners.

The OTBNZ has adopted this broader perspective, defining competence as “the ability to do something consistently, to a required standard [covering] four major components: knowledge, skills, judgment and diligence” (OTBNZ, 2011, p. 4). Knowledge is described as the body of information used to understand and conceptualise; skill as being the ability to apply knowledge in practice; judgment as knowing when to apply what skills in which circumstances, and diligence as attending to knowledge, skills and judgment as applied to various professional activities (OTBNZ, 2011). Within diligence the OTBNZ includes the honest evaluation of skills, and the seeking of additional training where appropriate (Occupational Therapy Board of New Zealand [OTBNZ], 2003). Rodger et al. (2009) further expand on the notion of diligence as being the ability of the practitioner to regulate their practice, which Alsop (2001) defines as the “ability to think critically and make informed professional judgments” (p. 127).

One definition that appears to encompass the differing ways of defining competence is that by Jorgensen (1999, as cited in Illeris, 2011)². According to Jorgensen competence refers to:

a person's being qualified in a broader sense. It is not merely that a person masters a professional area, but also that the person can apply this professional knowledge – and more than that, apply it in relation to the requirements inherent in a situation which, in addition, may be uncertain and unpredictable. Thus competence also includes the person's assessments and attitudes, and ability to draw on a considerable part of his/her personal qualifications (p. 41).

Inherent in Jorgenson's definition is the notion that the level of competence reached in order to be initially awarded the professional qualification, is in fact not the end point, but rather the first step towards continuing learning. Thus competence is ongoing and ever-evolving (Alsop, 2001), as the individual responds to "changes in the scientific base of a field, situational demands, and ones' level of experience" (Lysaght & Altschuld, 2000). Interestingly, the OTBNZ also refers throughout their documentation to competence as being ongoing, although this is not defined as such.

Moyers (2009) uses the term continuing competence, where continuing refers to a focus on lifelong learning, similar to Alsop's (2001) description of maintaining competence through continual learning and McKinstry et al.'s (2008) definition which emphasises "ongoing openness to lifelong learning, involving participation in continuing professional development and reflective practice" (p. 2). According to the European Commission (2006), lifelong learning is undertaken "...with the aim of improving knowledge, skills and competence, within a personal, civic, social and/or employment-related perspective" (§ 3). Similarly, Courtney and Farnworth's (2003) description also incorporates lifelong learning, but in addition they emphasise that professional competence "implies self-directed internally driven, accountability [by the individual] to the standards and values of the profession" (p. 235), which Youngstrom (1998) and Eraut (2004) describe as the subjective aspect of motivations, values and personal attitudes.

Based on the literature cited, it would seem that occupational therapists who maintain their ongoing competence to practice, are in effect lifelong learners who as

² Secondary citation used as original source as (Jorgensen, P.S., (1999). *Hvad er Kompetence?* [What is competence], *Uddannelse*, 9, 4-13.) was not published in English.

Leicester (2012) states, engage in an internally driven, self-motivated, ongoing process of professional development informed by both the standards and values of the profession (Courtney & Farnworth, 2003) and the individual's personal attitudes and values (Youngstrom, 1998). In addition, most authors agree that competence can be thought of as a moving target (Alsop, 2001; Eraut, 2004; Lysaght & Altschuld, 2000), with levels of competence altering as the individual moves through cycles of consolidation and expansion of their knowledge, skills and attitudes required for effective performance.

2.3.1 Maintaining competence to practice

Inherent in all of the definitions provided in the previous section is the notion that competence to practice is a dynamic concept, “a multifaceted quality that is woven throughout a person's practice” (Youngstrom, 1998, p. 717), requiring the individual to be responsible for “being aware of practice demands, and for considering their own professional development needs in relation to these demands” (Cohn, Schell, & Crepeau, 2010, p. 142). Thus as Alsop (2001) suggested, “with qualification and professional status comes the associated responsibility of ensuring continuing competence to practice in a changing world” (p. 126). Aside from the increasing demands by the public to be assured of the competence of health professionals, there are a number of reasons why occupational therapists need to ensure that they continue to maintain their competence to practice. These include the ever-changing healthcare environment, the speed at which knowledge is evolving, or the transition from one role or position to another which necessitates reconsideration of competence in relation to the new environment.

Ensuring professional currency of knowledge and skills is challenging, in part due to the explosion of professional knowledge (Courtney & Farnworth, 2003; Donen, 1999; Moyers, 2009; Youngstrom, 1998) and the speed at which it becomes obsolete, currently estimated at between 2 and 5 years for professions such as nursing (Alsop, 2001; Lysaght & Altschuld, 2000; Ryan, 2003; Tassone & Heck, 1997) or 10 to 12 years for psychologists (S. Bradley, Drapeau, & DeStefano, 2012). While there are no figures given for the occupational therapy profession, there is general consensus in the literature that obsolescence occurs because professional knowledge becomes outdated unless “the individual actively pursues and/or contributes to the knowledge base over time” (Lysaght & Altschuld, 2000, p. 95). It has been suggested that those health professionals who do not continue to update their knowledge and skills may be at risk of practicing outside their

scope of practice, leading to practice errors which may result in poor outcomes for the individual accessing the service (Alsop, 2001; Bannigan, 2000; S. Bradley et al., 2012; Moyers, 2009), and/or failure to meet employer expectations (Alsop, 2001; Cusick, Convey, et al., 2009).

Although Courtney and Farnworth (2003) cite research suggesting a connection exists between staying up to date clinically and theoretically, with continuing to be competent to practice, there appears to be little empirical research to illustrate the impact on services offered by those occupational therapists who have failed to maintain currency. Rather, it appears to be an agreed upon assumption. Compared with nursing where there has been some research, for example, the survey on the perceived incompetence of critical nurses by others (Alspach, 2009), no such studies were found in the occupational therapy literature, although incompetence leading to practice errors has been alluded to, usually in qualitative research studies. For example, in a qualitative study designed to articulate occupational therapists' professional values, Aguilar, Stupans, Scutter, and King (2012) found that participants identified the need to update their knowledge and skills, seeing it as their responsibility to do so, with one participant stating that this was a hallmark of a 'good' occupational therapist. In a similar study (Courtney, 2005), participating occupational therapists identified that professional excellence, which they saw as being more than competent, was demonstrated by those who understood their professional limitations, using ongoing learning to ensure currency of knowledge and skills along with reflection on experience. This finding was also identified in an earlier study of occupational therapists in private practice (Courtney & Farnworth, 2003). When asked for their definitions of professional competence, the private practice occupational therapists often gave examples of incompetent practice that they had observed or encountered, suggesting that incompetence may have occurred related to lack of engagement in training or continuing education, or to a lack of awareness of incompetence related to personality or attitudinal issues. In other words, the incompetent therapist may have lacked the ability to self-monitor their performance (Bannigan, 2000; Epstein, Siegel, & Silberman, 2008; Regehr & Mylopoulos, 2008), failing to stay updated with recent advances in the knowledge or practices of the profession (Bannigan, 2000; Cusick, Convey, et al., 2009).

Another reason for the need for occupational therapists to continue to maintain their competence is the ever-changing healthcare environment, along with increasing diversification of services into areas of practice that have not previously employed

occupational therapists (Courtney & Farnworth, 2003; Somerville et al., 2007). These changes demand that occupational therapists continue to develop and further refine their knowledge and skills, in order to provide the most effective service with the best outcomes for the recipients of the service (Townsend, Sheffield, Stadnyk, & Beagan, 2006). An example of the impact of the changing healthcare environment is illustrated in the study of the professional development needs of occupational therapists in emergency departments (Cusick, Johnson, & Bissett, 2010), being a relatively new practice area for the profession. In completing a self-report survey, occupational therapists employed in Australian public hospital emergency departments identified their lack of knowledge and skills to work in this new area of practice, despite the fact that many were purposely recruited into the role based on their experience and clinical expertise (Cusick, Johnson, & Bissett, 2009). Although considered competent in their previous roles, in changing to this new practice area, occupational therapists identified knowledge and skills gaps which they needed to address as they transitioned to working in a different environment. Youngstrom (1998) suggested that the process of identifying knowledge and skills gaps is based on “self-evaluation, reflection, and identification of new skills and experience” (p. 719), or in other words, using the skills of self-directed learning, in order to identify learning needs.

Not only is the healthcare environment ever-changing, but the occupational therapist can also be required by their employer to undertake new tasks or projects, or equally can be challenged by the complexities of a new client in their existing employment. Each of these may require the occupational therapist to expand or update their knowledge in order to ensure the service offered is effective in meeting the client’s needs (Moyers, 2009; Youngstrom, 1998). Alsop (2001) also suggested that with any changes to the context of practice, the occupational therapist may become less competent unless they have “taken steps to maintain competence in the changing social situation” (p. 127).

In reviewing the empirical research and theoretical articles on maintaining competence to practice, there appears to be a strong belief that competence is something that is initially achieved, but given the factors identified in this section, is also cyclical and continuous (Hocking & Rigby, 2002; Somerville et al., 2007), with the occupational therapist needing to engage in lifelong learning throughout their professional career. Given this is the case; the next question to consider is how ongoing competence to practice is assessed.

2.3.1.1 Assessment of continuing competence to practice

Although there is a lack of empirical evidence to support the assumed relationship between competence or incompetence, and occupational therapists' delivery of quality services, researchers have investigated ways of assessing competency. The findings of a recent literature review suggested that there are a range of ways for assessing competence (Hadfield et al., 2007) with Lysaght and Altschuld (2000) suggesting four levels at which assessment can occur: the practitioner, the consumer, the employer and regulatory agencies.

At the level of the practitioner, ways of assessing can include self-assessment (Galbraith, Hawkins, & Holmboe, 2008; Hocking & Rigby, 2002; Lysaght & Altschuld, 2000; Somerville et al., 2007) or portfolios (Alsop, 2001; Cross, Liles, Conduit, & Price, 2004; Hadfield et al., 2007), which often include self-assessment as a component. A portfolio is a "collection of evidence, usually in written form, of both the products and processes of learning" (McMullan et al., 2003, p. 288), that can be used to attest to personal and professional development over time, and are believed to be a valuable tool as they provide a structure enabling accountability and responsibility for one's own learning (McMullan et al., 2003). Portfolios can enable the user to gain insight into the development of their "practice knowledge and capabilities" (L. J. Moore, 2006, p. 27), and in relation to maintaining competence can assist the user to "integrate knowledge [with] day-to-day practice" (Tompkins & Paquette-Frenette, 2010, p. 58) through active reflection (Hadfield et al., 2007; M. Kelly, 2010). In perceiving the value of portfolios as a mechanism for demonstrating ongoing competence to practice, a number of occupational therapy regulatory bodies (e.g., Health and Care Professions Council, 2012; Occupational Therapy Board of Australia, 2013; OTBNZ, 2011), have adopted portfolios as a mandatory requirement. However, concerns have been raised about using the portfolio for the dual purpose of learning and assessment of competence (Hadfield et al., 2007; Tompkins & Paquette-Frenette, 2010) which is thought to limit the use of portfolios. In addition, in their review of 15 Canadian health regulatory colleges (including occupational therapy) and based on the evidence, Tompkins and Paquette-Frenette (2010) questioned health professionals' ability to manage the process of self-directed learning usually implicitly or explicitly required in a portfolio, that is, self-diagnosis, determining learning plan and activities, and self-evaluation. Thus, Tompkins and Paquette-Frenette (2010) cautioned against holding an assumption that all adult learners are capable of self-directed learning,

stating that regulatory authorities need to provide direct support, especially in the self-diagnosis of learning needs.

Another type of assessment identified in many theoretical articles is self-assessment, yet concerns about health professionals' abilities to accurately self-assess has been raised by Epstein et al. (2008), Eva and Regehr (2008) and Galbraith et al. (2008) with strong recommendations made that individuals should validate their self-assessment against external feedback gained, for example, through a peer review process. In one study, occupational therapists who worked alone, such as in private practice, acknowledged that a lack of opportunity to gain input from their peers could impact on their perceived level of competence, as there was less scrutiny or input from peers compared to working in larger teams (Courtney & Farnworth, 2003).

At the second level of assessment, Lysaght and Altschuld (2000) suggest that the client or patient can, to a certain extent, make some judgments about professional competence. This might include the client's perception about the competence of the occupational therapist to offer the service they need, or seeking feedback from personal contacts or public sources about an occupational therapist's competence. Courtney and Farnworth (2003) suggested that increased requests for services could imply that others see a certain occupational therapist as competent; however, this assumption has not been thoroughly investigated. Only one study was found in which clients (N = 2,881) were asked via a written survey whether they would recommend their occupational therapist to another, with 97.4% answering in the affirmative (Violato, Worsfold, & Polgar, 2009). However, the clients were not randomly selected from the caseloads but rather invited by their occupational therapist to complete the survey, potentially leading to a biased report with the occupational therapist selecting clients for which outcomes of intervention had been successful.

At the third level, the competency of the occupational therapist can be judged by their colleagues in practice or employers against set external standards or competencies. This can be informally through the day-to-day interactions, or more formally through processes such as case presentations or other formal peer reviews (Lysaght & Altschuld, 2000). For example, Salvatori, Simonavicius, Moore, Rimmer, and Patterson (2008) developed a formal peer review process where one therapist reviewed another using the Chart-Stimulated Recall Measure. One of the weaknesses of this study was that the occupational therapists being audited did not complete their own review first to allow for

validation of their perception of their competence by the peer reviewer, although it was noted in the feedback process that participants (the number not disclosed) found the process valuable in order to facilitate self-assessment. Similarly, Violato et al. (2009) piloted the use of multisource feedback (self, co-worker and client) as an assessment system to be used as a method to validate self-assessment as well as to identify those who would benefit from a further competency assessment. Their process included the occupational therapist soliciting feedback, through the use of a standard questionnaire, from 12 co-workers and 15 clients. Interestingly, the occupational therapists (N = 238) in this study tended to rate themselves lower on the questionnaire than either their co-workers or their clients, although whether this difference was significant or not was not presented in the findings. The authors suggested that the multisource feedback system could meet the identified aims of validation of self-assessment, although they acknowledged that it was not known whether the feedback provided was used by the occupational therapists for altering or improving their practice.

According to Lysaght and Altschuld (2000), the fourth level is where assessment is carried out by regulatory agencies or authorities, either reactively where gross incompetency may be investigated, or proactively in the case of reapplying for a license or certificate to practice. Methods of assessment at this level may include certification examinations (Hocking & Rigby, 2002), a mandatory requirement to complete a certain amount of continuing education (Occupational Therapy Board of Australia, 2012), or as in the case of the OTBNZ, the use of an online portfolio documenting a learning process, and the outcomes of the planned learning. Certification examinations are generally used at the point of entry-to-practice, such as those wanting to practice occupational therapy in the United States of America need to undertake an occupational therapy certification examination (National Board for Certification in Occupational Therapy, 2009).

The frequently used regulatory authority requirement to complete a certain amount of continuing education appears to be based on the assumption that attendance at an educational event equates with the practitioner keeping up to date with the latest theories or practice skills. The validity of this requirement has been challenged given that there is no guarantee that the health professional has selected a course relevant to their current level of competency (Regehr & Mylopoulos, 2008), that they have actively participated in the learning experience (Lysaght & Altschuld, 2000), or that they have applied the new learning to their workplace (McWilliam, 2007; O'Brien et al., 2001; Regehr & Mylopoulos,

2008). Lysaght, Altschuld, Grant, and Henderson (2001) questioned the value of mandating the level of participation given their findings from a survey of occupational therapists across the states of Texas and Maryland with mandated continuing education, compared with the non-mandated state of Idaho. While the difference in levels of learning activities did not significantly differ across the three states, an interesting finding was that the Idaho occupational therapists completed more learning activities than did their peers who were mandated to do so, raising questions about other motivating influencers.

Whilst there are a number of ways to assess ongoing competence, there is no agreement as to which would be most appropriate to use, with Lysaght and Altschuld (2000) arguing that there is lack of valid and reliable ways to measure competency. This is perhaps not surprising given that the literature sourced (e.g., Hadfield et al., 2007; Illeris, 2012a; McKinstry et al., 2008; Rodger et al., 2009) suggested that competence is challenging to define given its dynamic and multidimensional nature. Therefore, as pointed out by Wilkinson (2013) in reviewing nursing competency assessments, it is unlikely that one tool will comprehensively address all aspects of competency. In addition, there is some confusion as noted by Tompkins and Paquette-Frenette (2010) and Hadfield et al. (2007) as to whether a tool used for assessment can also be used as the tool to support learning. Most learning tools listed in the literature, for example, peer review, self-assessment, portfolios, and attendance at continuing education events also can also be viewed as assessment tools when used formally to measure performance against a standard or competency.

Irrespective of what tools are used, the common belief held is that learning is integral (Alsop, 2001) with researchers arguing that currency of knowledge and skill, acquired through ongoing learning is a key feature of the development and maintenance of competence to practice (Alsop, 2013; Courtney, 2005; Lysaght & Altschuld, 2000; McKinstry et al., 2008). In the second section of this chapter, the ways in which learning is theoretically thought to occur in, for and through work (Evans, Guile, & Harris, 2011) is examined along with methods for learning.

2.4 LEARNING AT, FOR, AND THROUGH WORK

Even though Cairns and Malloch (2011) suggest that everyone knows what is meant by the term learning, definitions do differ according to the philosophical stance of the definer. Learning is defined simply in the Merriam-Webster dictionary as “the act or

experience of one that learns” or “the knowledge or skill acquired by instruction or study” (Learning, 2013, p. 1). Jarvis (2009) has suggested moving on from this behaviourist view of learning, proposing that learning includes a combination of processes over the lifetime, where the

whole person...experiences social situations, the content of which is then transformed cognitively, emotively or practically (or through any combination) and integrated into the individual person’s biography resulting in a continually changing (or more experienced) person (p. 25).

In Jarvis’ definition the whole person incorporates the body, referring to genetic as well as physical and biological, and the mind which includes knowledge, skills, attitudes, values, emotions, meaning, beliefs and senses. As Jarvis defined, learning is ongoing and thus lifelong, occurring in the physical, interpersonal, intra-personal, spiritual and virtual places that are of significance to the individual. Experiences that occur in these places are made sense of and integrated, leading to some type of change in the person. Thus learning is the “outcome of enabled active intentional interactional engagement in experience and thinking” (Cairns & Malloch, 2011, p. 9) occurring in a number of places.

Having defined learning, it is also important to define workplace learning. Although workplaces can vary from an individual’s home office through to a large organisation, and work itself can be defined as paid or voluntary, virtual or in a physical location (Fenwick, 2008), work has been defined by Cairns and Malloch (2011) as an intentional purposive act which may or may not be remunerated, engaged in by the individual and requiring the application of effort towards a productive outcome. Workplace learning is defined as “expanding human possibilities for flexible and creative action in contexts of work” (Fenwick, 2008, p. 19), with Fenwick arguing that learning in the workplace is a process “often *embedded* in everyday practices, action and conversation”. Both Billett (2012) and Evans et al. (2011) maintain that learning at, for, and through work is one of the many elements of the learning dimension, with the outcomes and processes of learning being no different from those in other settings. However, Billett (2012) does suggest that learning at, for, and through work may be mediated in different ways than in other settings, for example, formal education, due to the particular contributions that paid employment and the qualities of the occupations and the setting make to the learning experience. With this in mind, it is not surprising that theories of adult learning have been adjusted for the unique environment of the workplace.

2.4.1 Major theoretical influences on learning at, for, and through work

According to Hager (2011), understandings of workplace learning has been influenced by the psychological, socio-cultural and postmodern theories. Each is discussed in the next sections including how each theory has been applied to learning at, for, and through work. Where relevant, examples of how these theories may have influenced or shaped occupational therapy research or practices are also given.

2.4.1.1 Psychological theories of learning

Merriam, Caffarella, and Baumgartner (2007) suggest that the psychological theorists most influential in workplace learning were the behaviourists such as Thorndike (1874-1949) and Skinner (1904-1990), and cognitive psychologists such as Piaget (1896-1980) and Bruner (1915 -). The greatest influence of the behavioural theorists was the acknowledgement that all learning could only be understood in relation to what was observable, with the environment shaping behaviour (Merriam et al., 2007). In adopting this theory for workplace learning, proponents developed specific competencies, or observable behaviours, that an individual could be trained on, with the trainer determining the appropriate stimuli and schedules of reinforcement (Hager, 2011; Merriam et al., 2007). Learning was deemed to have occurred when the individual could demonstrate the required behaviours (Merriam et al., 2007).

Hager (2011) suggests that the influence of the behaviourists diminished with the recognition that not all aspects of work could be codified into behaviours, and along with the increasing complexity of the workplace, the acknowledgement that learning at work was required in order to gain proficiency. However, Merriam et al. (2007) suggests that traces of behaviourism are still evident in the adult education field today, especially in the use of behavioural objectives in educational sessions. These traces are also evident in the ways in which occupational therapy competencies have been written as illustrated in a recent review (Rodger et al., 2009), where countries such as Singapore, Hong Kong and Sweden framed competencies as observable behaviours. Rodger and her colleagues (2009) categorised these as technical-prescriptive, being the descriptions of how the occupational therapist is expected to perform. Interestingly, the New Zealand occupational therapy competencies were suggested by Rodger and her colleagues to fall into an enabling framework, where the competencies allude to a “more complex relationship between client

characteristics, practitioner and profession development and practice setting” that together determine what is considered competent practice (p. 377).

With the diminishing influence of the behaviourists, the cognitive theories of learning became more influential, with emphasis on the terms of thinking, understanding and reflection previously excluded by the behaviourists for being unobservable behaviours (Hager, 2011). Accordingly, the cognitive theorists shifted the emphasis from the environment to focusing more on the internal processes used by the learner (Merriam et al., 2007) to make sense of their experiences. Piaget (1986 – 1980), for example, used the concepts of assimilation and accommodation to describe the processes by which new learning is compared with previous learning (Illeris, 2012b), and Bruner (1915 –) emphasised learning through discovery in order to “reconstruct additional new insights” (Merriam et al., 2007, p. 286). The influence of the cognitive theorists in the development of understandings of learning in the workplace is evident in Kolb’s Learning Cycle (Kolb & Kolb, 2005), Schön’s (1987) ‘reflective practitioner’ and Marsick, Watkins, Callahan, and Volpe’s (2009) informal and incidental learning.

Kolb noted that all learning was experiential (Illeris, 2012b) following a spiralling process of relearning, whereby “knowledge is created through the transformation of experience” (Kolb & Kolb, 2005, p. 194) with new experiences assimilated into existing understandings, and existing understandings accommodated to the new experiences. According to Kolb and Kolb (2005), the learner touches all four parts of the learning spiral, “experiencing, reflecting, thinking and acting” (p. 194), as they move through a learning experience. The focus on reflection has also been highlighted by Schön who described the learning that occurred as the practitioner reflected (or pondered on) episodes in their practice in which they noticed, saw or felt and either consciously or unconsciously responded to, through adjusting their practice (Hager, 2011). Schön (1995) described this as reflection-in-action where the practitioner’s actions are interrupted by an unanticipated happening, which causes the consideration not only of what has led to the event, but an adjustment of practice in the here and now. Schön also described the process of reflection-on-action, where the practitioner reflects back on a surprising event, considering what did or did not work and what learning can occur for the next time the event occurs, thus Schön challenged the ways in which individuals learned to practice, introducing a new way of understanding how learning occurs through practice.

Marsick and Watkins (2001) in drawing from theorists such as Schön and Aygris (1923 – 2013), and Mezirow (1927 –), theorised workplace learning as occurring by the means of reflective thought that arises from, and through, experiences. These authors introduced the concepts of informal learning and incidental learning along with learning by doing, accidental learning, self-managed learning and organisational learning (Watkins & Marsick, 1992). Watkins and Marsick (1992) proposed that informal learning is non-routine, experience-based, and tacit, in other words any learning that occurs outside of formally structured, classroom-based activities, whereas incidental learning is almost semi-conscious occurring through activities such as interactions with colleagues, a trial and error experiment, or the completion of a task (Marsick et al., 2009).

As with the behavioural theories, the influences of the cognitive theories that aim to explain the “internal mental processes that are under the learner’s control” (Merriam et al., 2007, p. 287) are still evident in the adult education field, especially the focus on learning from an experience through reflection. This notion is clearly identifiable in the regulatory authorities’ mandated processes that occupational therapists are required to complete in order to demonstrate their ongoing competence to practice; with the OTBNZ (2011) processed used in the CCFR being one such example. The step of self-assessment is an example of reflection-on-action, whereas the critical reflection that is required to be completed under the heading outcomes of learning, asks the practitioner to reflect on and document whether a change in practice has occurred as a result of the learning experience. Interestingly, although Marsick and Watkin’s model of informal and incidental learning was first proposed in 1990 (Marsick et al., 2009), the CCFR process does not include the opportunity to consider incidental learning, except perhaps where a collegial interaction leads to the practitioner gaining insight into a knowledge or skill gap, which they then chose to address through their self-assessment.

In summary, although psychological theories have influenced workplace learning theories, Hager (2011) notes that these theories do not address all aspects of workplace learning given that the focus is very much on the learner, with learning being the ‘thing’ to be acquired, almost irrespective of the context for which it is needed. Equally, Marsick, Watkins, Callahan, and Volpe (2006) in reviewing their theory of informal and incidental learning noted that one of its weaknesses was that not only did their model focus only on individual learning within the workplace context, but that the role of context in the learning was ignored.

2.4.1.2 Socio-cultural theories of learning

The emphasis of socio-cultural theories of learning is on the “process located in the framework of participation, rather than something in an individual mind” (Hager, 2011, p. 26), with Hager suggesting that the socio-cultural theorists most influential in workplace learning included Dewey (1959 – 1952) and Vygotsky (1980 – 1934). According to Merriam et al. (2007), Dewey argued that learning occurs through experience, with the learner connecting what they have learned from the past with the current experience and future possibilities. Learning is considered to be a “cooperative and collaborative activity centered upon experiential, creative responses...[with the learner] interdependent with the environment” (Olssen, 2012, p. 384). Thus from Dewey’s perspective, learning is situational and interconnected with the environment. Similarly, Vygotsky posited that learning is “socially mediated through a culture’s symbols and language, which are constructed in interaction with others in the culture” (Merriam et al., 2007, p. 292) with learning guided by expert partners (Billett, 2012).

The influence of the socio-cultural theorists on the development of understandings of learning in the workplace is seen in the work of Lave and Wenger (Wenger, McDermott, & Snyder, 2002), Eraut (2004) and Billett (2011). Lave and Wenger proposed that ‘communities of practice’ are created when people with similar interests, sets of problems or concerns “deepen their knowledge and expertise in this area by interacting on an ongoing basis” (Wenger, McDermott, & Snyder, 2002, p. 4), with learning situated within the community rather than one individual. Thus the situation not only influences the learning but is actually part of the learning (Illeris, 2012b). The way in which the situation influences the learning is illustrated by Lave and Wenger when they describe the process a novice learner takes when they join the community. Described as legitimate peripheral participation, the novice learner learns how to “function appropriately in a particular social, cultural and physical environment” (p.24), learning as “they participate in everyday activity within a community [alongside their more expert partners], with the tools at hand and in the moment’s activity” (Fenwick, 2008, p. 20).

One of the challenges to Lave and Wenger’s theory is that the individual is largely silent in relation to the strong focus on community (Hager, 2011), an issue that is addressed by Eraut (2004). Eraut argues that to fully understand learning from experience in the workplace, both the individual and social perspectives are important. The individual perspective enables the exploration of the “differences in what and how people learn and

differences in how they interpret what they learn” (p. 265) and the social perspective focuses on “the social construction of knowledge and of contexts for learning, and...the wide range of cultural practices and products that provide knowledge resources for learning” (p. 265). In concentrating on individual and social perspectives, Eraut aims to integrate the contributions of both psychological and socio-cultural theories in order to understand workplace learning.

Billet is a more recent theorist interested in articulating the interdependence between the worker and the workplace. Billett (2011) argued that learning is grounded in the individual’s perception and construction of knowledge based on what is afforded to them in the workplace. Affordances are defined as the opportunities provided by the workplace for “individuals to engage in and be supported in learning in the workplace” (Billett, 2001, p. 213), however, Billett (2012) also argued that individuals are selective, choosing what, how or even whether they will engage, in part based on their personal development histories. These histories evolve over time through the “everyday processes of thinking and acting” (Billett, 2012, p. 231) shaping the individual’s interests, ways of knowing and their knowledge domains, being the ultimate drivers of their intentionality to engage with learning experiences.

The influence of the socio-cultural theories to understanding workplace learning has been the emphasis on collective learning situated within the work context, whilst also acknowledging the interdependence between the context and the individual (Hager, 2011). Workplace learning theorists have drawn on the socio-cultural theories in order to understand what is needed in order to provide quality learning in the workplace (Eraut, 2004), considering aspects such as communities of practice and situated learning (Merriam et al., 2007). These theories have informed the design of recent research studies by New Zealand occupational therapy researchers. For example, in creating a community of practice, Reed and Hocking (2013) aimed to assist senior occupational therapists, with responsibility for the supervision and management of junior staff, to disseminate new concepts about the scope and delivery of occupational therapy services, and similarly, Wilding and Whiteford (2009) implemented a similar project with occupational therapists in one acute inpatient hospital setting in Australia. Others such as Forsyth, Melton, and Summerfield Mann (2005) used the concept of the ‘expert partner’, whereby occupational therapists in a service developed their evidence-based skills passing on their newly acquired skills to their colleagues. Each of these studies used a group process with goals

for the group rather than for an individual. Interestingly, despite adaptability being one of the informing principles of the CCFR (OTBNZ, 2011) enabling the occupational therapist to select the learning opportunity based on their learning needs and the learning context, the actual process is individually based, rather than group based, and thus may not be sufficiently flexible for occupational therapists who choose to learn in this way.

Just as the psychological theories could not fully explain workplace learning, neither have the socio-cultural theories addressed all aspects of learning at, for, and through work, although according to Hager (2011) these theories certainly expanded the understandings of learning. One of the challenges to the socio-cultural theorists by the newest theorists, the postmodernists, has been the notion that workplace learning can be structured in such a way as to ensure quality learning. The stance of the postmodernists as explained by Hager (2011) is that learning cannot be predicted as hoped by the socio-culturalists, rather learning emerges “from its context in unanticipated and unpredictable ways” (p. 27).

2.4.1.3 Postmodernist theories of learning

Key post-modernist theories identified by Fenwick (2008) and Hager (2011) include those of complexity theory and cultural-historical activity theory. Fenwick (2008) explains that cultural-historical activity theorists consider the activities of the system as shaped by the ‘object’ being the “central problem space at which action is directed” (p. 20). The central problem space is the challenge requiring the balancing of conflicting needs or beliefs which can be examined through the system’s culture and its history, that is, why things are and how they came to be. Learning occurs, according to Fenwick (2008), as both the individual and the collective question the contradictions and their consequences, which causes the “object to expand and shift as individuals’ understandings expand and shift” (p.20) aiming for resolution of the ‘object’.

Similarly, complexity theory has been used to explain learning with the emphasis being on “an increasing capacity for acting in flexible, constructive and innovative ways appropriate to the challenges of ever-changing circumstances” (Hager, 2011, p. 28). Although this perspective seems similar to that of the socio-cultural theorists, both Hager (2011) and Fenwick (2008) point out that complexity theorists believe that there is no such thing as predictability. As maintained by Fenwick, “the core concept is emergence: knowledge, phenomena, events, and actors are mutually dependent, mutually constitutive,

and actually emerge together” (p. 21). Thus complexity theorists focus on the relationships that bind the people, their experiences, the tools they use and the activities they do. Although still emergent, the influence of postmodernist theories is beginning to appear in the CPD literature. An example is that by Boud and Hager (2012) who call for the need to debate the meanings of CPD, what it is for and how it is conceptualised, arguing for a move from the language of ‘acquiring or transfer of learning’ from the expert to the novice, which focuses only on individuals and individual learning, to the notions of ‘participating, constructing and becoming’ located in the practices of professionals. These authors call for the need for further research which explores actually how professionals learn, how the environments they work in influence their learning and what practices they actually engage in, in relation to their learning.

In summary, it is not yet clear how postmodernist theories will shape research about workplace learning, and in turn influence research about the occupational therapists’ learning at, for, and through work.

2.4.1.4 Influence of learning theories in occupational therapy literature

In relation to occupational therapy literature, the influence of the psychological theories is evident firstly in how some regulatory authorities frame the professional competencies, being the observable behaviours occupational therapists are expected to demonstrate; and secondly in the processes required to demonstrate ongoing competence to practice, where the occupational therapist is expected to develop specific measurable outcomes in order to demonstrate achievement of their learning. Intertwined with this focus on the individual and their ability to demonstrate observable behaviours, is the influence of the cognitive theories, with some regulatory authorities such as the OTBNZ requiring that the occupational therapist present evidence of reflections on their learning to demonstrate their ongoing competence to practice. Thus the processes used by the OTBNZ are individually-centered (Eraut, 2004) and more aligned with the behaviourist and cognitive theories rather than socially-centred.

In exploring ways of ensuring more effective learning at, for, and through the workplace, occupational therapy researchers are increasingly drawing from the socio-cultural theorists to investigate for example, the value of establishing communities of practice to assist occupational therapists to transfer theoretical knowledge into practice knowledge for use in their everyday practice (Reed & Hocking, 2013; Wilding, Curtin, &

Whiteford, 2012). Interestingly, the focus of both of these studies is more on the outcomes of learning from engaging in a community of practice; rather than the learning process itself, and therefore as argued by Confessore (1997), the opportunity to better understand how to enhance the learning processes undertaken by the members of the community is potentially lost. The need to better understand the learning processes of health professionals continues to be raised by workplace learning researchers such as Fenwick (2008) who argued for research that “traces what people actually do and think in everyday work activity” (p.25). Similarly, in the profession of occupational therapy, Law (2010) also called for more research about occupational therapists’ “...‘doing’ of the learning process,” (p. 15). Law believes that if occupational therapists better understand the doing of learning, this knowledge could be used to ensure the effective “integration of the learning process into the creation, transfer and use of knowledge in our discipline” (p. 15).

Having identified the major theoretical influences for workplace learning, and how these have influenced occupational therapy literature, it is also important to outline what is known about how professionals learning at, for, and through work. In the health professions these methods are collectively described as continuing education or professional development, and these are defined and discussed in the next part of this second section of the chapter.

2.4.2 Methods for learning at, for, and through work

It has been argued that participation in professional development or professional education is one way that occupational therapists demonstrate their competence to practice (Allen et al., 2005; McKinstry et al., 2008; Murray & Lawry, 2011; OTBNZ, 2011). As with ongoing competence or continuing competence to practice, the word ‘continuing’ (i.e., continuing professional development) is used in this context to reflect that the learning is ongoing (Amerih, 2013; Fox, 2013) throughout the professional life of the practitioner. Fox described this as the practitioner “learning new or better ways of fulfilling professional roles...correct[ing] errors, expand[ing] or adjust[ing] performance, and introduc[ing] new or reformed practices and perspectives on practices” (¶ 4). Although at times used interchangeably, distinction between the terms continuing professional education (CPE) and continuing professional development (CPD) has been made.

Closely aligned with the behaviourist theories of learning, the term CPE is often used to describe short educational sessions or in-services aimed at developing practical

skills and/or knowledge, often delivered by experts (G. S. Fisher, 2001; French & Dowds, 2008) using didactic means (Sargeant et al., 2011). However, others (Amerih, 2013; Fox, 2013; Jarvis, 2012a) suggested that CPE can encompass all types of educational activities including in-service or on-the-job training, along with formally organised programmes such as conferences, workshops, lectures or short courses delivered face to face or online via the internet or videoconferencing. In contrast, Day (1999) argued that CPE should not only include the formally planned-for learning experiences but also the everyday unplanned-for learning experiences that occur serendipitously as described by cognitive theorists such as Marsick et al. (2009). Thus CPE is used to describe the types of internal or external learning opportunities (Jarvis, 2012a) that can be categorised as formal or intentional learning (Alsop, 2013; Leberman, McDonald, & Doyle, 2006; Long & Emery, 2000), or non-intentional or incidental learning (Marsick et al., 2009) occurring through trial and error, or through interactions with colleagues and clients (Day & Sachs, 2004; Kelchtermans, 2007; Marsick et al., 2006). Irrespective of the type of learning experience, the focus is usually on “introducing, updating, or modifying the way the profession is practiced in the work setting” (Fox, 2013, ¶ 1) by the individual, with the purpose being “the planned and systematic attempt to introduce, review or alter the competencies and thereby the professional performance of professionals” (Fox, 2013, p. ¶ 1).

In comparison, definitions of CPD appear to draw more from the cognitive theories of learning. CPD has been described as a self-directed, planned-for critically reflective process with the individual taking responsibility for managing cycles of practice evaluation and learning need identification, using active or experiential learning methods to achieve their learning goals (Alsop, 2013; Cusick & McCluskey, 2000; French & Dowds, 2008). Although most definitions of CPD focus on processes or types of learning experiences, Alsop (2000, 2013) suggested the expected outcomes of engagement should also be included, defining CPD as the “process of the ongoing-education and development of health care professions, from initial qualifying education and for the duration of professional life, in order to maintain competence to practice and increase professional proficiency and expertise” (p. 1). Moyers’ (2009) stance is similar, although she emphasised that professional development is more of a personal career development process, with the occupational therapist determining the learning they need to undertake in order to be able to competently perform future roles.

Although definitions of CPE and CPD definitely overlap, in considering most definitions it seems that CPD which is more often used to describe the processes of learning is a broader definition than that of CPE. With a focus on processes and outcomes, CPD encompasses CPE, which is predominantly used to refer to the types of learning experiences offered or chosen. However, irrespective of the overlap in definitions, it is believed that the outcome of engaging in CPD through CPE is professional learning, which Wei, Darling-Hammond, Andree, Richardson, and Orphanos (2009) defined as being the “product of both externally-provided and job-embedded activities that increase [the occupational therapists’] knowledge and change their [occupational therapy practice]” (p. 1), or leads to changes in behaviour or attitudes (Wittstrom, 2012). For the purposes of this study, a broader definition of professional development by Day (1999) was selected.

[It] consists of all natural learning experiences and those conscious and planned activities which are intended to be of direct or indirect benefit to the individual, [or] group...It is the process by which alone and with others, ...[professionals] review, renew...and by which they acquire and develop critically the knowledge, skills and emotional intelligence essential to good professional thinking, planning and practice...[with service users] through each phase of their...[professional] lives (p. 4).

Irrespective of the wording of the definition, one point commonly made is that those engaging in CPD should be or are capable self-directed learners, evaluating their competence to practice against their own internal as well as external standards, selecting appropriate methods of learning from in and outside of the workplace to address knowledge, skill or attitudinal gaps in order to ensure effective outcomes for users of the service.

In addition, some authors (e.g., Allen et al., 2005; Alsop, 2013; Youngstrom, 1998) argue that not only is CPD engagement needed in order to stay competent to practice, but learning how to manage one’s learning is thought to be competency in, and of, itself. Alsop (2013) suggests that someone who is competent to learn has a positive attitude to learning and is able to use their initiative to learn. They are open to seizing learning opportunities and “working with new ideas and concepts to improve professional performance” (p. 51). Thus, the competent learner is skilful in reflecting on and evaluating their performance, they accept and respond to feedback and know how to use learning resources effectively. In other words, the competent learner is a self-directed learner. In the third section of this

chapter, theories of self-directed learning are introduced along with different ways of determining self-directed learning and readiness to be a self-directed learner.

2.5 THEORIES OF SELF-DIRECTED LEARNING

Theorising the learning of adults has been a challenge since the emergence of adult education as a professional field almost a century ago (Ellinger, 2004), with Merriam (2001) suggesting that the knowledge of adult learning comprises “a mosaic of theories, models, sets of principles, and explanations” (p. 3) which is evolving as illustrated in the previous section of this chapter. Ellinger (2004) suggested that self-directed learning (SDL) is one piece of the adult learning mosaic, with the impetus for research stemming from Houle’s seminal work “*Inquiring Mind*” published in 1961. Houle (1961, as cited in Hiemstra, 2003) introduced the notion of the learning-oriented adult, identifying three categories of adult learners; those who participated in learning in order to achieve their end goal, those who participated for the social aspect, and the third group that most resembled the self-directed learner, being those “who perceive of learning as an end in itself” (¶ 8).

As explained by Hiemstra (2003), Houle’s early work on what was to become known as self-directed learning was expanded on by a number of theorists and researchers such as Tough (1971), Knowles (1975), Brookfield (1984), Brockett (1985), Candy (1991) and Straka (2000) to name but a few. Undeniably, the field of self-directed learning has become one of the “most productive areas of research in adult education” (Owen, 2002, p. 1). Given the degree of productivity, it is not surprising that numerous terms for self-directed learning (Straka, 1999) including for example, “self-teaching, self-planned learning, independent adult learning, self-initiated learning” (Owen, 2002, p. 2) exist. Despite the difference in terms used, there appears to be some common ground, with Brockett and Hiemstra (1991) suggesting that self-directed learning is both a personal attribute and a process undertaken by the individual. This concept is further expanded by Mann and Gelula (2003) who stated that self-directed learning implies “personal growth and achievement of a desired level...acceptance of personal responsibility for one’s learning, personal autonomy and individual choice” (p. 123), whereas the process of self-directed learning is “the ability to organise learning and instruction wherein the tasks of learning are predominantly in the learner’s control” (p. 123).

Research that has been undertaken to explore the personal attributes or processes used by self-directed learners has tended to align with one of three approaches (Popović, 2012). Perhaps influenced in part by the behaviourist theories of learning, researchers first aimed to understand the processes self-directed learners used alone, or in conjunction with others to learn (Merriam, 1996; Popović, 2012; Taylor, 2006), which Brockett and Hiemstra (1991) categorised as the ‘process orientation models’. The second approach, influenced by the cognitive theorists, aimed to conceptualise self-directed learning according to the personal attributes or predispositions of the learner (Song & Hill, 2007; Taylor, 2006), which Brockett and Hiemstra (1991) categorised as the ‘personal orientation models’. Finally, the third and latest approach used by researchers aiming to understand how to foster learner autonomy in the formal educational setting, is referred to by Taylor (2006), as the product or outcome of self-directed learning. As the intent of this study is aimed at investigating occupational therapists’ self-directed learning readiness, rather than the investigating a process designed to develop the attributes for, or skills of, self-directed learning, the focus in the literature review is placed on the first two approaches. The next sections introduce examples of the process and personal orientation models.

2.5.1 The process orientation models of self-directed learning

As one of the earliest process orientation theorists (Merriam, 2001; Popović, 2012), Knowles (1975) described self-directed learning as being the “process in which individuals take the initiative, with or without the help of others, in diagnosing their learning needs, formulating learning goals, identifying human and material resources for learning, choosing and implementing appropriate learning strategies, and evaluating learning outcomes” (p. 18). Knowles work was primarily theoretical, whereas Tough, an early researcher in the field, used a sociological lens to provide a comprehensive description of self-directed learners in the informal adult learning context (Merriam, 2001; Pilling-Cormick & Garrison, 2007). After interviewing 66 people about their learning projects (Ellinger, 2004), Tough identified 13 steps in the learning process including determining learning needs, identifying what was needed for the learning, where learning would occur and when, what the intermediate targets would be, and the pace of learning. Tough’s learners were also able to estimate levels of knowledge or skill, detect hindrances to learning, thus engineering the best learning environments, and found time to learn, ensuring their motivation levels stayed high (Merriam et al., 2007). Tough’s processes overlapped with those of Knowles who included climate setting, identifying learning

needs, establishing learning goals, identifying the resources required, choosing appropriate learning strategies and evaluating the learning outcomes (Ellinger, 2004).

Inherent in Tough and Knowles' descriptors is an assumption that there is an element of preplanning for the learning. However, this assumption has been challenged. For example, Spear and Mocker (1984) interviewed 78 previously low educationally achieving participants who described little evidence of preplanning for their learning projects. Instead, Spear and Mocker (1984) spoke of the 'organising circumstance' suggesting that a change in circumstance triggered the need for learning, with learners then "select[ing] a course [of action] from limited alternatives which occur fortuitously within their environment and which structures their learning projects" (p.4). These limited alternatives were visualised by Spear and Mocker (1984) as a typology, being either a single event with anticipated or unanticipated learning, or a series of events with related or unrelated learning. Similarly, Candy (1991) also challenged the Knowles' and Tough's linear processes, suggesting that in focusing on the management of the learning processes, researchers "lost sight of the interdependent and social determined nature of much adult learning" (p.42) raised by the socio-cultural theorists. Interestingly, the idea that self-directed learning was a social activity was present in Tough's early thinking. In preparing to undertake his study, Tough described being surprised when "people told their story in terms of other people and how they helped" (Donaghy, 2003, p. ¶ 7), thus alerting him to the notion that self-directed learning was not the isolated and individual act that it appeared to be.

Candy (1991) also challenged the notion proposed by Knowles that all individuals psychologically reach adulthood when they perceive themselves to be self-directing, suggesting that some adults are in fact other-directed "pursuing lives in which self-directed behaviours are noticeably absent" (p. 93). However, according to Merriam (2001), Knowles later revised his opinion suggesting that a continuum did exist between pedagogy and andragogy, depending on the needs and circumstances of the learner. Finally, challenges to Knowles' thinking were raised as his early writings did little to acknowledge the shaping of the individual by their culture and society, which to a certain extent defines how the learning experience is perceived (Hager, 2011; Merriam, 2001). As the field of self-directed learning continued to develop, attention turned to identifying the dispositions or personal orientations of the learner, with the question asked: do learners need particular attributes in order to be successful self-directed learners?

2.5.2 The personal orientation models of self-directed learning

In describing the processes self-directed learners used to manage their learning, researchers also explored how learners' personal orientations or dispositions influenced their ability to be self-directed learners. Brockett and Hiemstra (1991) described these personal orientations, thought to be stable personality constructs (Oddi, 1986), as the characteristics that "predispose one toward accepting responsibility for one's thoughts and actions as a learner" (Brockett & Hiemstra, 1991, ¶ 41). Oddi (1986), a nursing researcher, has been one of the few to investigate personality characteristics, particularly in relation to health professionals. The Oddi Continuing Learning Inventory (Oddi, 1986) was designed to measure overlapping clusters thought to be the "essential personality dimensions of self-directed continuing learners" (p. 98) which were conceived on a continuum from low to high. Based on the literature, Oddi derived a list of attributes of self-directed learners, which were refined into three overlapping clusters of dimensions as follows:

- Proactive/Reactive Drive, referring to the learner's initiation and persistence to learn in the absence of external reinforcement.
- Cognitive Openness/Defensiveness, referring to the learner's openness to change.
- Commitment/Apathy to Learning, referring to those learners who enjoy learning, are continuous learners, and who respond positively to engaging in a range of learning activities (Oddi, 1986, 1988).

Although a number of studies have been published using Oddi's inventory (e.g., Geoghan, 2012; Shinkareva & Benson, 2007), including investigations of the reliability and validity (Harvey, Rothman, & Frecker, 2006), Oddi did not appear to further develop this list of characteristics into a conceptual model. Candy (1991) was critical of the inventory, challenging the assumptions inherent in the scale that it is possible to generalise competence as a learner between different contexts, and that readiness to be self-directed learner is a personal attribute that exists irrespective of the context, a point also made by the socio-cultural theorists. Garrison (1997) too challenged whether the inventory was actually measuring personality factors. What Oddi (1986) described as personality factors, Garrison deemed were more likely to be motivational dispositions, meaning that the cognitive and metacognitive processes that appear to be important in self-directed learning were ignored in the inventory. Finally, questions have been raised about the psychometric properties of the tool with factor analyses not always supportive of the tools theoretical

constructs (Bath & Smith, 2009; Harvey et al., 2006; Oddi, Ellis, & Altman Roberson, 1990).

Somewhat different to Oddi's approach, which was to focus only on the personal attributes, other models have been developed aiming to demonstrate how the learning processes and learner personality characteristics contribute to the outcome of self-direction in learning. Two such models are Brockett and Hiemstra's (1991) Personal Responsibility Orientation (PRO), and Garrison's (1997) Self-directed Learning Model, each having slightly different emphases on the environmental, cognitive and social variables that are thought to be influential (Pilling-Cormick & Garrison, 2007). Both models also aimed to address the concerns that although the sociological (independent task management) and pedagogical (application in educational contexts) dimensions of self-directed learning were addressed in the older models, the psychological or cognitive dimension had generally been ignored (Hiemstra, 1994).

2.5.2.1 Personal Responsibility Orientation (PRO) model

Aiming to incorporate the cognitive with the sociological and pedagogical dimensions that existed in other models, Brockett and Hiemstra developed the PRO model which they believed "recognize[d] both the differences and similarities between self-directed learning as an instructional method and learner self-direction as a personality characteristic" (Hiemstra, 1994, ¶ 28). As illustrated in Figure 2, Brockett and Hiemstra stated that learner self-direction encompassed the personal characteristics such as learning styles and self-concept that enabled a learner to take responsibility for their learning. Self-directed learning was seen by these authors as the external teaching-learning transaction focused on the external factors of assessing, securing, implementing and evaluating learning. In this model, optimal conditions for self-direction in learning occur when there is a match between the learner's willingness to accept primary responsibility for their learning and the external characteristics of the teaching-learning transaction (Stockdale & Brockett, 2011). The last component of the PRO model is illustrated by the circle that encompasses all components, acknowledging that learning cannot be separated from the social context in which it occurs (Guglielmino, Long, & Hiemstra, 2004).

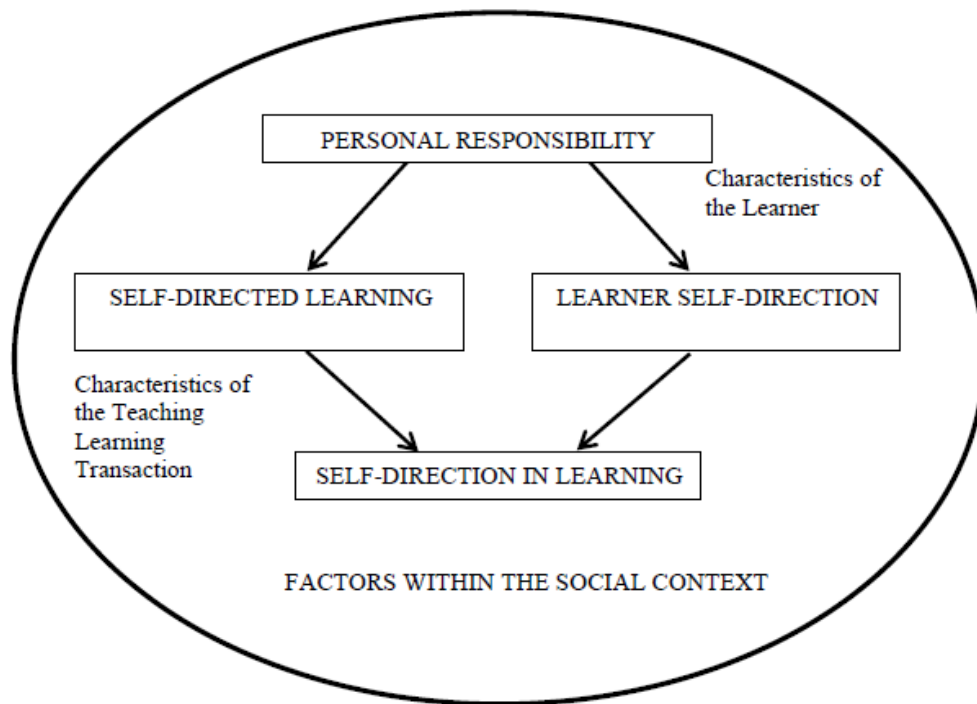


Figure 2. The ‘Personal Responsibility Orientation’ (PRO) model (Brockett & Hiemstra, 1991)³

There has been some criticism of the PRO model, being essentially that the cognitive and metacognitive, or psychological characteristics of self-directed learners are not specifically addressed (Garrison, 1997), with Flannery (1993) also suggesting that sociological issues such as the influence of group interactions on individuals’ learning, or cultural issues such as the relationship between an individual’s culture and their way of learning has not received adequate attention. Song and Hill (2007) have also challenged the description of the social context, which Brockett and Hiemstra defined only as being different types of physical institutions, pointing out that learning environments have changed markedly in the time since the model was first published. This was also the conclusion of Banz (2009) who, in a phenomenological study of adult visitors to a museum, found that one of the weakest components of the PRO model was its conceptualisation of the social context. Another concern is that the PRO model has not been adequately empirically validated (Ellinger, 2004). However, this concern may be addressed with the recent development by Stockdale and Brockett (2011) of the self-rated Personal Responsibility Orientation to Self-Direction in Learning Scale (PRO-SDLS)

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measuring initiative, control, motivation and self-efficacy. In addition although not yet published, Brockett and Hiemstra (2010) have proposed a new version called the Person Process Context (PPC) model, which is likely, according to the authors, to include aspects of the environmental and socio-political climate.

2.5.2.2 *Self-directed Learning (SDL) model*

Informed by a collaborative constructivist perspective, Garrison’s (1997) model is one of the more recently developed models of self-directed learning cited in the literature. In developing his model, Garrison drew predominantly from the cognitive theorists with their emphasis on the internal processes used by the learner to make sense of their experiences, but was also influenced by the sociocultural theorists’ perspectives. Having reviewed previous models of self-directed learning, Garrison (1997) aimed to provide a more comprehensive description of the learning behaviours of self-directed learners, through addressing the motivation, self-monitoring and self-management dimensions as shown in Figure 3. Motivation is considered to be the lynchpin in this model given its “mediating effect on both task management and cognitive monitoring” (Garrison, 1997, p. 21).

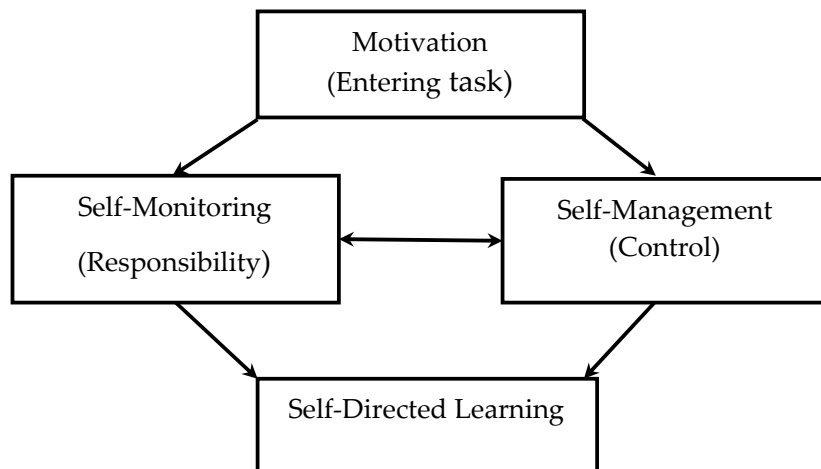


Figure 3. Self-directed Learning (SDL) model (Garrison, 1997)⁴

In Garrison’s (1997) model, Self-Management encompasses the “external activities associated with the learning process” (p. 22), including goal implementation and learning resource management, to ensure the desired outcomes are achieved. Garrison emphasised

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that the process of managing learning is not autonomous or isolated, rather in the educational context, students enter into a collaborative transaction with the facilitators. This collaborative transaction is dependent on the ability of facilitator and learner to balance factors such as ‘proficiency’, being the abilities and skills of the facilitator and learner to manage the learning process; ‘resources’ being what is available in the educational setting; and ‘interdependence’, that is, the norms or standards of the educational institution balanced against learner choice. Thus in this model, self-management is collaborative with the self-managing learner being in control of their learning within the constraints of learning resources and institutional expectations, but with the facilitator providing direction or aid to ensure a successful learning experience (Pettijohn Powell, 2005).

The second dimension, Self-Monitoring, addresses “monitoring the repertoire of learning strategies as well as an awareness of and an ability to think about our thinking” (Garrison, 1997, p. 24). Inherent in this statement are two different aspects of metacognition. The first is the actual monitoring of the learning process, reviewing the outcome of the learning and determining whether appropriate learning strategies have been used to ensure learning outcomes can be met. The second relates to the student’s ability to determine what is required in the learning task, for example, to find new information, or to reconceptualise their previous understandings, or to create new meaning through discussions or actions. Students who engage in this level of thinking about their thinking take responsibility for constructing “meaning through collaborative confirmation” (Garrison, 1997, p. 24). The self-monitoring student is skilled at determining what they need to learn, what will be involved in the learning process and the best learning strategies to use, having ways to assess their learning (i.e., using internal feedback), and effectively using external feedback to judge the accuracy of their internal assessment. Thus the student “self-monitor[s] learning cognitively and metacognitively” (Garrison, 1997, p. 25).

The third dimension is Motivation, being the mediator between the Self-Management and Self-Monitoring dimensions. Garrison (1992) defined the focus of this dimension as being the “initiation and maintenance of effort toward learning and the achievement of cognitive goals” (p. 26). Motivation is important in two phases of the learning process, firstly at the point of deciding to participate, described as entering motivation and then during the learning which Garrison (1997) terms task motivation. Where entering motivation is high, learners commit to their learning goals, and persist in

the learning even if the learning experience is challenging. According to Garrison (1997), the level of entering motivation is higher when the learner perceives that the learning goals are relevant to their learning needs, focused on areas that are important to them, and are achievable. The learner's affect or attitude about themselves also influences motivation, especially where the learner is not confident about their ability to learn the content, or they anticipate the learning experience will be stressful or in some way anxiety provoking. Garrison also noted that individual's feelings about their goals and the impending learning experience are influenced by the degree to which they anticipate having control over the learning experience, determining whether "students will become self-directed and persist in their learning tasks" (Garrison, 1997, p. 28). Along with entering motivation, Garrison (1997) also emphasised task motivation, being the "maintenance of intention during the learning process" (p. 28). Task motivation can be influenced by external factors or conditions and internal states, with Garrison stating that although "extrinsic motivation may well complement and enhance intrinsic motivation, externally imposed tasks and criteria can also reduce willingness to assume responsibility for learning" (p. 29). Garrison stated the importance of fostering intrinsic motivation in the learners believing it leads to continuous and responsible learning.

It is unfortunate that Garrison (1997) did not continue with the development and testing of his model, as the descriptors have not been fully developed into constructs that can easily be identified and therefore measured. Only two attempts (Abd-El-Fattah, 2010; Esposito, 2012) to validate Garrison's (1997) model were located in the literature. Abd-El-Fattah (2010) developed the Self-Directed Learning Aptitude Scale (SDLAS) to measure student's aptitude, administering this to 119 Egyptian undergraduate education students, aged 18 – 21 years. The measures taken to examine the reliability and validity of the scale were reported in some depth including the process of scale development, the steps taken to determine the number of factors, using exploratory factor analysis. Having demonstrated internal high levels of internal consistency, and that the three factors cumulatively explained 55% of the total variance, a percentage deemed acceptable in humanities research (Williams, Onsmann & Brown, 2010), the author, through the use of mediation and path modelling analyses, confirmed that all three dimensions were inter-related. Furthermore, Motivation was found in this sample of young undergraduate non-western students to mediate between Self-Management and Self-Monitoring as proposed by Garrison (1997). In addition, the score of the Self-Management subtest was found to

significantly predict academic achievement over two semesters. However, as pointed out by Abd-El-Fattah (2010), although the findings from this study suggested that the constructs of Garrison's (1997) model can be applied in the non-Western context, as the scale was developed in a non-western tertiary level context the findings may not be generalisable to all populations with further research required.

Following on from Abd-El-Fattah (2010), and with a much smaller sample ($n = 81$) Esposito (2012) used the SDLAS to examine a number of relationships thought to be influential in American nurses self-directed continuing learning behaviours. Using the Pearson product moment correlation matrix, Esposito also demonstrated statistically significant relationships between Garrison's (1997) dimensions of Self-Monitoring, Self-Management and Motivation. The findings of this study suggest that it is possible to apply Garrison's Self-directed Learning model to differing populations. However, both of these studies consisted of smaller samples, and therefore ongoing research is required in order to investigate whether the theoretical constructs can be supported.

While these two recent studies do support the perceived credibility of Garrison's (1997) model, which is also widely cited in a number of adult education books and journal articles (e.g., Batra, Jasso, & Stevens, 2012, April; Huynh et al., 2009; Merriam et al., 2007; Pilling-Cormick, 1999), there have been surprisingly few challenges. Song and Hill (2007) noted that although Garrison (1997) referred to the learner context, this was at a superficial level and more implicitly inferred than explicitly described. Another criticism of the model is that the labels of teacher and student are constantly used throughout the one article published by Garrison (1997) suggesting that despite situating the model within the field of study and practice of adult education, Garrison's model is focused towards the formal learning environment. However, others such as Batra et al. (2012, April) and (Young, 2013) have argued for the relevance of its application in adult learning due to its comprehensive nature and potential to apply to a range of adult populations. Further testing of the model would support the appropriateness of these claims.

Along with the development of models of self-directed learning came the development and testing of measurements of self-directed learning. The purpose of these measurements was not only to test the constructs of a particular self-directed learning theory, but to create reliable and valid self-report scales that could provide the individual with insight into themselves as self-directed learners. Equally, the aim of such scales was for educators, who could use the findings from their students to adjust the learning

experience in order to more effectively meet the need of the learner. The most commonly used scales for research studies are introduced in the next section.

2.5.3 Measurements of self-directed learning

Although scholars have discussed self-directed learning since the 1960's, the first instrument designed to measure readiness to be a self-directed learner was only published in 1978 (Guglielmino et al., 2004), with one to two instruments published in each of the following decades as illustrated in Table 2. Although often cited alongside other measurements, the Self-Directed Learning Perception Scale (SDLPS) (Pilling-Cormick, 1996) does not appear to have attracted the attention of researchers, and thus validation of the scale is somewhat lacking. Oddi's Continuing Learning Inventory (OCLI) (Oddi, 1986) has attracted more interest, but with conflicting findings across a number of studies about the underlying dimensions of the scale (e.g., Harvey et al., 2006; Kungu, Kinyanjui, & Machtmes, 2011; Oddi, 1986; Oddi et al., 1990), few nursing or allied health researchers appear to have opted to use this scale, although it has been used in some doctoral studies (e.g., Reeder, 1993; Svedberg, 2010). In addition, the OCLI is limited to the attributes of self-directed learning (Litzinger, Wise, & Ha Lee, 2005), whereas the others also address the skills of self-directed learning. Of the five instruments listed in Table 2, it is the Self-Directed Learning Readiness Scale (SDLRS) (Guglielmino & Associates LLC, 2012) and the Self-directed Learning Readiness Scale for Nursing Education (SDLRSNE) (M. J. Fisher et al., 2001) that are consistently used in self-directed learning research.

Table 2

Measurements of readiness to be self-directed learners

Author(s)	Description of Instrument	Informing Model	Normative data
Self-Directed Learning Readiness Scale (SDLRS) Alternative name Learning Preference Assessment (LPA) (Guglielmino et al., 2004).	Published in 1978 as part of doctoral studies. A 58 item self-report inventory designed to measure the “attitudes, skills and characteristics that comprise an individual’s current level of readiness to manage his or her own learning” (“What is the Self-Directed Learning Readiness Scale”, n.d.).	No model identified, items in scale modelled on descriptors of highly self-directed learners defined through the use of a three-round Delphi survey by expert panel.	Initially normed on 307 Georgians and Virginians in the United States and Canada. Revised version normed on 3,151 people in United States and Canada.
Oddi’s Continuing Learning Inventory (OCLI) (Oddi, 1986).	Published in 1986 as part of doctoral studies. A 24 item self-report inventory designed to identify motivational, affective and cognitive attributes of self-directed learners (Oddi, 1986) .	No model identified. Constructs informed by expert and graduate student panel and literature review.	Normed on 271 nursing, law and adult education graduate students from one university.
Self-directed Learning Perception Scale (SDLPS) (Pilling-Cormick, 1996).	Piloted as part of doctoral studies in 1996. A 58-item self-report inventory designed to measure 5 factors including functioning of the school and course, physical aspects of a school and classroom, and the climate for building relationships.	Self-Directed Learning Process Model (Pilling-Cormick, 1996).	Piloted on 52 adult students enrolled in an upgrading course for teachers of English as a second language.
Self-directed Learning Readiness Scale for Nursing Education (SLDRSNE - shortened to SDLRS) (M. J. Fisher et al., 2001).	Published in 2001, the SDLRS is a 40 item self-report scale designed to measure readiness for self-directed learning in nursing students. The scale consists of three constructs, Self-Management, Desire for Learning and Self-Control.	No model identified, items in scale modelled on literature review, followed by expert panel review using Delphi technique.	Normed on 201 Year 1 – 4 Australian nursing students attending one university.

Author(s)	Description of Instrument	Informing Model	Normative data
Personal Responsibility Orientation to Self-Direction in Learning Scale (PRO-SDLS) (Stockdale & Brockett, 2011).	Piloted as part of doctoral studies (Stockdale, 2003), published in 2011. A 25 item self-report designed to measure the behaviours/ personal characteristics required of college students. The scale consists of four constructs – Control and Motivation (Teaching-Learning Transaction), and Initiative and Self-efficacy (Learner Characteristic).	Personal Responsibility Orientation Model (Hiemstra, 1994). Final version of scale also included expert panel review to reduce number of items from 35-25.	Normed on 518 undergraduate university students enrolled in one course at one university.

Perhaps because it was the first to be published, the quantitative instrument most utilised in self-directed learning research appears to be Guglielmino’s SDLRS (Guglielmino & Associates LLC, 2012), despite concerns about its psychometric properties (M. J. Fisher et al., 2001; Merriam et al., 2007). These concerns included the lack of an underpinning theory to explain the relationship between attitudes such as learning being a tool for life, or personal characteristics such as curiosity and self-directed learning readiness, as well as the belief that the use of reverse-coded items (17 of the total 58 items) is thought to weaken the internal consistency reliability of the test score (Hoban, Lawson, Mazmanian, Best, & Seibel, 2005). The relevance of the items to different cultural groups has also been raised (Straka, 1995), and concerns noted regarding the fact that no revisions have been made since its development (Chou, 2012; Stockdale, 2003). However, Guglielmino (Guglielmino & Associates LLC, 2012) has argued for the general usability of the instrument citing its translation into 19 languages, and use in research studies across 40 countries. Certainly, the SDLRS has been used in a number of nursing, medical and allied health preregistration research studies (e.g., Kell & Van Deursen, 2002; Malta, Dimeo, & Carey, 2010; Shaikh, 2013) with Brockett and Hiemstra (1991) supporting its use, albeit with the level of discretion considered for the use of any standardised assessment.

The second instrument, which has seen increasing use over the last 12 years in nursing, medical and allied health professional research, is the SDLRSNE (M. J. Fisher et al., 2001). The instrument, now commonly referred to as the Self-directed Learning Readiness Scale (SDLRS), has been used in studies of self-directed learning across nursing, medical and allied health students and allied health professionals (e.g., Bridges, Bierema, & Valentine, 2007; Chakravarthi & Vijayan, 2010; Kocaman, Dicle, & Ugur,

2009; Newman, 2004), and has been translated into two languages (Avdal, 2012, ; Yuan, Williams, Fang, & Pang, 2012). Despite increasing use in the research, there has surprisingly been little criticism of the instrument, although the issues raised by Hoban et al. (2005) in regard to Guglielmino's SDLRS (Guglielmino & Associates LLC, 2012) regarding the lack of a theoretical underpinning and the use of reverse-coded items equally applies to M. J. Fisher et al.'s (2001) instrument. Finally as with Oddi's Continuing Learning Inventory (Oddi, 1986), there are conflicting findings regarding the underlying dimensions of the scale, with M. J. Fisher and King (2010) unable to replicate the factor structure of their first study (M. J. Fisher et al., 2001), and Hendry and Ginns (2009) also finding a different number of factors. As this was the instrument used in this current study to measure readiness for self-directed learning, an in-depth analysis of the psychometric properties, and its use in allied health student and professional research can be found in Section 3.5.2.1.

The latest instrument to be published is the Personal Responsibility Orientation to Self-Direction in Learning Scale (PRO-SDL) (Stockdale & Brockett, 2011) and unlike M. J. Fisher et al.'s (2001) and Guglielmino's (Guglielmino & Associates LLC, 2012) instruments, the PRO-SDL does have a theoretical underpinning being the Personal Responsibility Orientation Model (Hiemstra, 1994). The instrument appears to have been used primarily in doctoral research, for example, the relationships between self-directed learning and technology use for new entrants to the workplace (Holt, 2011), first generation science and technology college students (Hall, 2011) and information literacy among adult learners (Conner, 2012). The instrument has also been used in studies investigating self-directed learning and students' computer programming skills (Boyer, Langevin, & Gaspar, 2008; Gaspar, Langevin, Boyer, & Armitage, 2009) and has been translated into Chinese for use with engineering students (Chou, 2012). As might be expected with any new instrument, the reliability and validity for use across different populations is still being established, and although both Conner (2012) and Holt (2011) were able to demonstrate acceptable levels of internal consistency across all four factors, Hall (2011) was unable to demonstrate acceptable levels for one of the four factors. Apart from the original authors' factor analysis, only one study was found by Chou (2012) which investigated the stability of items within factors, although it is not clear whether an exploratory or confirmatory factor analysis was undertaken. As with M. J. Fisher et al.'s (2001) and Guglielmino's (Guglielmino & Associates LLC, 2012) instruments, the PRO-

SDLRS also shares the weakness identified by Hoban et al. (2005) of having 11 of the 25 items reverse-coded. Finally, no studies were found where the PRO-SDLRS had been used for allied health practitioners or students.

In reviewing these instruments it is interesting to note that almost all have been developed independently of a specific model of self-directed learning, the two exceptions being that of Stockdale and Brockett (2011) and Pilling-Cormick (1996), whereas, Guglielmino et al. (2004) and M. J. Fisher et al. (2001), along with Oddi (1986) used expert panels to determine the instrument items which were validated through ongoing research. Most of the instruments were designed by educators for use with tertiary level students, and with the exception of the OCLI (Oddi, 1986) which was designed for the context of continuing education, most instruments were developed for the formal education sector, with normative data based on samples of tertiary students. All of the measurements reviewed were self-rating using a Likert-type scale, with cut-off scores for determining self-directed learning usually based on the mean score of the original sample used to pilot the scale. Finally, whereas Litzinger et al. (2005) in citing from the Commissioned Reviews of 250 Psychological Tests published in 2000, states that Guglielmino's SDLRS "can be used with acceptable confidence to provide an accurate measurement of readiness for self-directed learning" (p. 216), both M. J. Fisher and King (2010) and Harvey et al. (2006) in relation to the OCLI (Oddi, 1986) state that further testing is warranted to strengthen the reliability and validity of these two instruments. It is also clear that further testing is required for the PRO-SDLS (Stockdale & Brockett, 2011).

Having introduced and discussed various theories of self-directed learning, along with a number of the instruments used to measure readiness to be a self-directed learner, the last part of this third section of the chapter outlines the definitions of self-directed learning selected for the purposes of this study.

2.5.4 Defining readiness to be a self-directed learner

In summary, self-directed learning is a construct or behaviour that can be considered from both the perspective of the attributes of self-directed learners, and the skills required to manage the process of self-directed learning. According to Higgs (1993) a "highly competent self-directed learner is a learner who is capable of exhibiting the following characteristics:

- a readiness for autonomous learning,

- [holding] the attitudes of responsibility and self-reliance,
- purposive independent and interdependent action in relation to the learning task,...
- effective use of learning and cognitive strategies (including metacognition and critical reflection), and,
- [having a] state of mind which involves self-awareness and self-evaluation”
(p. 6).

Overlapping with the identified attributes for self-directed learning, are the skills required to be a self-directed learner. These include the ability of the individual to organise their learning, being able to accurately self-assess in order to determine their learning needs, identify learning goals, select from a range of resources and methods and to evaluate the learning that has occurred (Knowles et al., 2005). And finally, readiness to be a self-directed learner is a term used to encompass a readiness to engage in self-directed learning (Hoban et al., 2005) described by Guglielmino (1997) as a combination of beliefs and expectations of oneself as a learner, of the value of learning, and the skills to manage the learning process.

2.6 OCCUPATIONAL THERAPISTS’ READINESS TO BE SELF-DIRECTED LEARNERS

Given the emphasis on occupational therapists’ need to ensure currency of knowledge and skills by actively engaging in ongoing learning, it is somewhat surprising that there is actually very little research exploring occupational therapists’ self-directed learning readiness, although that of pre-registration students has been the subject of some investigation. For example, there is only one study (Malta et al., 2010) that demonstrated a statistically significant difference in the SDLRS scores of occupational therapy and physiotherapy pre-registration masters students (Guglielmino & Associates LLC, 2012) between their first and last year of study, suggesting that these students had continued to develop in their ability to be self-directed learners. Whether this change in score was due to an improvement in the attributes for, or skills of being self-directed learner was not determined, nor whether the change occurred due to ongoing learner maturation or the type of educational strategies used to promote self-directed learning. Other studies have tended to focus on one aspect of self-directed learning, for example, Dunn and Musolino (2011)

investigated the validity of a specific scale for measuring the ability of students to reflect on learning experiences, whereas others (e.g., Cooper, MacMillan, Beck, & Paterson, 2009) have focused on evaluating specific types of learning experiences to determine whether or not these contribute to students' ability to further develop their capacity to be self-directed learners.

With such a paucity of empirical research on the readiness of either occupational therapists or occupational therapy students to be self-directed learners, a number of questions arise. Firstly, do occupational therapists recognise the need for professional currency? Secondly, if they recognise the need, do they have the skills and attributes required to be a self-directed learner? Thirdly, in which ways, or with what methods do occupational therapists prefer to learn? Finally, what might be the factors that influence occupational therapists' engagement in learning at, for, and through work? Each of these questions is discussed in turn in the following sections, first with reference to the New Zealand literature and secondly to the international literature. This distinction is drawn in part related to the different expectations of regulatory authorities internationally, for example, some Canadian provinces have no requirement to demonstrate ongoing competence to practice (e.g., College of Occupational Therapists of British Columbia, n.d.); whereas the United States and United Kingdom does (Health and Care Professions, 2012; National Board for Certification in Occupational Therapy, 2009), as well as to illustrate the lack of New Zealand research.

One of the drivers for learning has to be the acknowledgement by the occupational therapist that there is a need to continue learning in order to stay professionally current. Although this issue was first raised by Hocking and Rigby (2002) prior to the introduction of the HPCA in 2003, there has been little New Zealand-based research exploring whether or not occupational therapists perceive the need to continue learning in order to maintain competence to practice. However, international researchers have investigated occupational therapists' perspectives of the need for ongoing learning. For example, Murray and Lawry (2011) used focus group methods to determine Australian occupational therapists' perceptions of professional currency. Seventeen participants across four focus groups discussed what they perceived as important; with seeking opportunities to further their skills and broaden their knowledge being a key aspect for maintaining professional currency. The value the occupational therapy profession places on engaging in ongoing learning is also evident in a slightly larger Australian study by Aguilar and her colleagues

(2012). In a two stage process, the researchers first interviewed 15 experienced occupational therapists, generating a list of professional practice values and behaviours that included the importance of both updating knowledge and skills and reflecting on skill limitations. In the second stage, Aguilar et al. (2013) used the Delphi technique via online survey, to gain consensus from 68 occupational therapists of the essential professional values. Ranged first and fourth in a list of the top 15 professional behaviours were two behaviours related to self-directed learning, being “continually striving to improve knowledge skills and competence” and “reflects on and improves their own practice” gaining 89% and 76% agreement respectively (Aguilar et al., 2013, p. 9). The first statement reflects an attribute of a self-directed learner, the second a skill in managing the self-directed learning process.

Reviews of allied health literature such as that undertaken by Tassone and Heck (1997) suggested that improving or expanding professional knowledge is a primary motivator for participation in continuing education, and similarly, Albertan occupational therapists (N = 276) completing a postal survey overwhelmingly ranked increasing skills and knowledge as the primary reason for engaging in continuing education, followed by maintaining clinical competence (Pui, Liu, & Warren, 2005). King, Currie, et al. (2008) also touched on this when investigating the development of expertise of 71 Ontarian paediatric rehabilitation therapists (including occupational therapists). These authors found that “the day to day attitude of striving to be one’s best...clearly differentiated the expert therapists from the novices” (p.117) where striving was not related to years of experience, but appeared to be a personal attitude by the therapists who were highly motivated to further develop their knowledge and skills in order to enhance their competence. Similarly, seven of the ten interviewees in Lysaght et al.’s (2001) study also identified the main motivator for engaging in learning was an awareness that they lacked the skills or knowledge needed in a particular area of their occupational therapy practice.

In comparison, the motivator to fill specific knowledge or skills gaps through engaging in professional development was less apparent in the survey of British occupational therapists (White, 2005) undertaken following the introduction of a minimum standard of one professional development half-day per month (Ilot & White, 2001). More occupational therapists in this survey primarily considered the time allocated as being of benefit to themselves (87%), rather than for the service (82%) or even the service user (78%). This finding is interesting when compared to the previous studies cited where

participants emphasised the importance of remaining professionally current in order to enhance their competence, and thus service delivery to the client. However, differences may also be evident due to the types of questions asked in surveys compared with those asked as part of semi-structured interviews, where the therapists have the opportunity to further explain their reasons for engaging in ongoing learning.

Given that there is some international evidence to suggest that occupational therapists do recognise and value the need for professional currency, the next question is: Do occupational therapists have the attributes for, and skills of, self-directed learning to enable professional currency. Although there is no specific research as to the readiness of New Zealand occupational therapists to be self-directed learners, two very recent studies exploring competence to practice provided some insight into how New Zealand graduates' rate their readiness to be self-directed learners. The first study utilised online surveys with Australian (N = 178) and New Zealand (N = 53) new graduates in their first year of practice (Gray et al., 2012), whereas Nayar, Gray, and Blijlevens' (2013) follow-up mixed methods study included an online survey completed by 454 registered occupational therapists, and five focus groups consisting of managers, educators and occupational therapists. Participants in Gray et al.'s (2012) study self-rated against their respective countries entry level standards or competencies for registration. In relation to self-directed learning, the Australian new graduates felt very competent to adjust their practice based on self-evaluation, whereas New Zealand graduates did not rank themselves as highly, suggesting a lower level of readiness to be self-directed learners. However, this was not the perspective of the participants in Nayar et al.'s (2013) later study where the competency 'Continuing Professional Development' was rated as one of the strongest competencies in the online survey, and focus group participants commented on graduates' positive attitudes towards engaging in ongoing learning along with their ability to self-evaluate and critically reflect on their performance. Between these two studies, there are some inconsistencies between how New Zealand new graduates rate themselves compared with the academics who have taught the students, and those who work alongside or manage the graduates, suggesting the need for further research on perceived and actual levels of competency related to professional development.

Only one international study was found where the researchers, using a postal survey, specifically asked Albertan occupational therapists (N = 276) about the usefulness of a number of learning methods including self-directed learning or self-study. Of the 276

therapists completing this survey 42.6% perceived self-directed learning as somewhat useful. The reasons why they did not find self-directed learning more useful were not ascertained; however, one reason might be related to occupational therapists' confidence or feelings of self-efficacy. In exploring self-efficacy for lifelong learning using a postal survey completed by Kentuckian occupational therapists (N = 254), physiotherapists (N = 395) and speech language therapists (N = 277), Herold, Bennett, and Costello (2005) found that only two-thirds of the participants felt confident to identify their learning needs, find ways of meeting these, and to become a lifelong learner. However, as this was a collated score, difficulties with one or more aspects of self-directed learning, as well as any differences between the three professional groups may have been masked. Similarly, White (2005) also used a postal survey, finding that British occupational therapists lacked "knowledge and skills for getting started on CPD" (p. 199), and likewise Australian occupational therapists interviewed described feeling confident in their ability to do what they needed to, but experienced difficulties in knowing where to start (Murray & Lawry, 2011). While the therapists in these two studies had some degree of confidence in their ability to identify learning needs through some type of self-evaluation, Reid and McKay (2001) found otherwise in their questionnaire completed by 67 British occupational therapists. In this study, although most demonstrated a positive attitude towards self-evaluation and 88% could list a range of internal and external strategies they used to evaluate their fieldwork educator skills, only 57% could demonstrate a full understanding of the concept of self-evaluation.

As noted earlier, one of the key skills required of a self-directed learner is the ability to use reflection throughout the learning process from self-assessment through goal-setting, to reflecting on the implementation of new learning into practice. How reflection might support the implementation of new learning is poorly researched, with only two specific studies found. The first is that of Rappolt and Tassone's (2002) interviews of 24 occupational therapists and physiotherapists who struggled to describe how they implemented new knowledge gained through a range of learning experiences, into their practice. Similarly, Lowe, Rappolt, Jaglal, and Macdonald (2007) investigated the role of reflection in implementing new knowledge gained through continuing education. Through in-depth interviews with ten occupational therapists, the researchers identified that participants used reflection in order to (a) challenge their usual practices, (b) to match their learning needs against what the continuing education course might offer, and (c) to reflect

on the relevance of the new learning for their current or anticipated future work. Some interviewees also used reflection to monitor changes they made to their practice as a result of integrating the new learning. Given the perceived value of reflection it is not surprising that Cusick, Convey, et al. (2009) suggested that occupational therapists would benefit from applying the reflective skills developed as part of their clinical reasoning, to their reasoning about their professional development decisions.

With such paucity of national and international research on self-directed learning readiness, it is not yet possible to conclusively state that occupational therapists are as ready to be self-directed learners as is assumed by the regulatory authorities. Therefore, given that occupational therapists seem to recognise and value the need for professional currency, even though the extent to which occupational therapists are ready to be self-directed learners is still uncertain, the next question to be answered is this: Is more known about the methods by which occupational therapists learn at, for and through work?

There is also very little research on New Zealand occupational therapists' preferred learning methods apart from the results of one online survey undertaken by the New Zealand Association of Occupational Therapists which investigated the barriers to engaging in a range of learning methods including use of one-to-one consultation/coaching/observation, attendance at workshops or short courses, conference attendance and experiences of online learning (Schnell, Penman, Reed, Henry, & Molloy, 2007). The identified barriers are discussed later in this section, but of interest was that only 62% of the 242 respondents were interested in the possibility of engaging in one-to-one learning with a more experienced peer, with some of the responses suggesting some confusion between this learning method and accessing professional supervision. The authors also noted that almost all participants preferred to have learning opportunities that were delivered face to face rather than via any form of technology. The only other New Zealand-based study investigating learning methods is that of Reed and Hocking (2013) who used collaborative action research methodology, including six senior New Zealand occupational therapists as co-researchers. These co-researchers identified the key learning methods they used to update their colleagues' knowledge about one occupational therapy conceptual model. Strategies used included regular discussion groups, formal in-service education sessions, 'journal club' forums, case studies for groups, as well as individual sessions such as one-to-one supervision. Even though the co-researchers were able to articulate the benefits of these varying strategies from their different perspectives as

influenced by their different work contexts, how beneficial these were for the colleagues of the six therapists was not reported.

In comparison, learning methods preference is a topic that has attracted the interest of international occupational therapy researchers. For example, learning methods preference has been explored in three postal surveys, one of British paediatric occupational therapists (G. Kelly, 2003), one of Albertan occupational therapists (Pui et al., 2005) and the third of occupational therapists working in three American states (Lysaght et al., 2001), with similar findings reported across all three studies. The British occupational therapists' (N = 500) most popular learning strategies were study days (91%), membership of special interest groups (90%) and conferences (70%) (G. Kelly, 2005), whereas the Albertans (N = 262) found conferences/presentations/seminars/workshops to be the most useful (51%), followed by self-directed study (15%), and internet-based courses (11%). Similarly, the Americans (N = 129) from the states of Idaho, Maryland and Texas more frequently used workshops, seminars or conferences (98%), reading (97%), on-site in-services (95%), or independent self-reflection (94%) (Lysaght et al., 2001). As with the New Zealand survey (Schnell et al., 2007), consultation with an more experienced colleague or mentor was less frequently selected (89%) by the Americans, and surprisingly was not listed for selection by Kelly (2005) or Pui et al. (2005), thus limiting the participants' choices. What is of most interest in Lysaght et al.'s (2001) study is the difference between what occupational therapists stated they most frequently used, compared with what they believed was actually most beneficial for maintaining their competence. For example, while 97% of the sample read, 95% attended on-site in-services and 89% consulted a peer or mentor, only 30% found consultation and 17% found reading and attending in-services beneficial. The only area of strong agreement between what was used and what was found to be beneficial was attending workshops, seminars or conferences with 98% undertaking this learning activity, and 79% finding the experience beneficial. Thus Lysaght et al.'s (2001) study highlighted that differences may exist between what is used, compared with what occupational therapists may prefer to use, in order to maintain their competence.

International researchers have focused not only on what occupational therapists do or would prefer to do, but also have aimed to identify the types of learning methods that are perceived to have the greatest impact on learning and/or practice. Using a postal survey, Andersen (2001) asked Florida OTs (N = 391) which types of formal learning methods (e.g., programmes of between 3 hours and 2 days or presenting continuing

education sessions) and informal learning methods (e.g., student supervision, mentoring, observing skilled practitioners, reading or on-the-job training) impacted most on their ability to learn and to apply this new learning to the workplace, in order to achieve better health consumer outcomes. There was some overlap between the findings of Andersen's (2001) study and that of Kelly (2005), Pui et al., (2005) and Lysaght, et al., (2001) in that there was a trend for Andersen's (2001) occupational therapists to perceive that formal learning of one or more days in length (such as conferences or workshops) had more impact than the informal learning activities. However, for these participants informal learning activities were thought to be as effective, if not more effective, than short mandatory programmes of less than eight hours. Similarly, in Sweetland and Craik's (2001) postal survey, 76% of the occupational therapists (N = 161) stated that they learnt more from their colleagues than from formal educational sessions. Supporting this finding is the outcomes of the interviews of 24 Canadian occupational and physiotherapists, where although many of the participants chose workshops or courses to access new knowledge, almost three-quarters stated that discussions with peers was their first point of contact for accessing knowledge (Rappolt & Tassone, 2002). Likewise, the ten OT new graduates in McKinstry's (2005) study described the value they placed on learning gained through their everyday interactions with others, such as observing or talking with more experienced team members or in structured supervision, and Rappolt and Tassone (2002) found that occupational and physiotherapy interviewees chose structured workshops or practice sessions with colleagues as being more beneficial for confidently applying new knowledge.

Although there are some differences across studies cited, the most commonly selected and preferred learning methods by occupational therapists is the more formal conferences/workshops and seminars, with some therapists showing preference for more informal activities such as learning through discussion with colleagues, reading, mentoring or being menteed, or observing a more experienced colleague. The reasons why occupational therapists select certain methods of learning over others is less clear, although for therapists living in more isolated areas, choice can be limited simply due to geographical or financial barriers (Curran, Fleet, & Kirby, 2006) meaning that the occupational therapists utilise more informal activities (Mills & Millsted, 2002), even if these were not their preferred option for learning.

Several of the studies cited did explore the reasons why occupational therapists may choose certain learning methods. For example, in the survey completed by New Zealand

occupational therapists (Schnell et al., 2007), workshops or short courses were more likely to be selected if they looked to be well facilitated, provided opportunities for sharing of knowledge and experience, and were relevant to practice. Likewise, the respondents were more likely to select conferences where they could interact with their peers, attend sessions with topics relevant to their own practice, and to be challenged by keynote speakers, a finding also reported by G. Kelly (2005) from his survey of paediatric occupational therapists, Rappolt and Tassone's (2002) interviewees, and Lysaght et al.'s (2001) interviewees. In addition, Lysaght et al.'s interviewees valued interaction with colleagues, perhaps in the same ways that Craik and Rappolt's (2006) interviewees (N = 11) described the learning gained through having to explain and defend their theories of practice to students. In addition, as noted by Rappolt and Tassone's (2002) interviewees, accessing a peer was thought to be a faster way of accessing the information that may be needed, usually from colleagues in practice. Recent studies such as those by Wilding et al. (2012) and Reed and Hocking (2013) have demonstrated the value of learning from peers through the creation of communities of practice focused on increasing knowledge of conceptual models of occupational therapy. Likewise, occupational therapists in Hoffmann, Desh and Verrall's (2011) mixed methods study described the value of learning with others, as they discussed ideas and received feedback on their thinking. For these participants, learning from others was one of the major benefits of engaging with a virtual community of practice. Finally, very few studies have investigated the value of learning that occurs through interactions with clients, with the exception of those interviewed in Lysaght et al.'s (2001) study who described how working with new clients enhanced their competency, and similarly, King et al., (2008) who identified that working with clients with complex needs was one of the main factors thought to influence the development of expertise.

Based on the findings of the studies sourced, it would appear that occupational therapists on the whole prefer a range of learning methods from the more formal conferences, workshops and seminars, through to the informal such as discussion with peers, supervision or mentoring of students and solitary activities such as reading and reflection. Learning methods that provide opportunities for discussion with others are valued, and peers are often selected as the first source to access for learning given that information can be sourced easily and quickly. However, less is known about whether variables such as the type of workplace (hospital or community), years of experience, or

level of qualification impacts on the choice of learning method, and researchers have tended to focus more on the types of learning methods selected, rather than what occupational therapists might prefer to use to best meet their learning needs.

Having determined that occupational therapists do recognise and value the need to stay professionally current; that readiness to be self-directed learners is not yet conclusively determined; but that occupational therapists do use a range of formal and informal learning methods, the final question to be answered is: Are there any factors that are influential in occupational therapists engagement in learning at, for, and through work? In reviewing the literature three factors appear to be key, being the support of the workplace, followed by financial and geographical factors.

As noted earlier, only one study has been published investigating the factors influencing New Zealand occupational therapists engagement in learning at, for, and through work (Schnell et al., 2007). For some who completed the survey, key barriers to engaging in learning opportunities related not so much to lack of opportunity, but rather having the time to engage in the learning opportunities offered, as well as the financial costs of travel and accommodation in order to attend an event such as a conference or seminar held in another town. In this case additional costs were also incurred by the occupational therapists, for example, additional cost of child care or needing to organise cover for family commitments. Others identified a lack of learning opportunities, such as courses not being offered on topics that were of interest to them or would meet their learning needs. Interestingly, little comments were made about lack of employer support, except in relation to support for postgraduate study; however, the design of the survey may have precluded this type of comment.

In contrast to the New Zealand survey, international research has tended to support the importance of the workplace in enabling engagement in professional learning. Cusick, Convey, et al. (2009) explored the impact of workplace support through the use of a case study of an Australian organisation. In their analysis of the organisations documentation and 16 employee interviews, professional development was given a high priority, being demonstrated through common institutional policies and supported by a mandated training program and a “clear commitment by staff through position descriptions, supervision delegation and regular appraisal” (p. 236). The outcome of this structure was good staff retention, with the organisation able to meet required levels of regulatory and standard compliance. Likewise, in studying the same organisation, Novak and McIntyre (2010) also

demonstrated the value of targeting change at both the level of the employee and the workplace. Using a pre-post single-group design across a three year period, 88 experienced allied health practitioners (including occupational therapists) were recruited from 16 Australian sites. These practitioners completed a one day workshop on evidence-based practice followed by individual coaching over 18 months. At the same time, workplace changes were made including policy changes, ensuring sufficient physical resources to support practitioner learning, education for clinical seniors to develop leadership and coaching skills, altering of job descriptions to make expectations of evidence-based practice explicit, and mentoring by frontline senior staff. Senior staff were supported with dedicated work time and financial remuneration was given for those practitioners meeting specific evidence-based practice competencies. With such strong organisational support it is perhaps not surprising that outcomes of the change included significantly different scores on a standardised measure of evidence-based practice knowledge, as well as an increase in critically appraised topic publications. In both of the studies the value of making changes at the organisational as well as individual level appeared to support consolidation of new learning and ultimately behavioural change.

The findings of Novak and McIntyre's (2010) study are supported by Townsend et al. (2006) who also showed that lack of policy support by an employer does impact on the employee's learning at, for, and through work. Using institutional ethnography methodology (interviews, focus groups and policy review, n = 28) of Nova Scotian occupational therapists, Townsend et al. (2006) found that where there is an absence of explicit workplace policy and thus support, occupational therapists struggle to have their learning needs met. Similarly, allied health professionals reported higher degrees of satisfaction (Rappolt, Mitra, & Murphy, 2002) where there was regular review and planning of ongoing learning either as part of, or separate to performance appraisals, and also where managers are active in their own learning (Welch & Dawson, 2006). In these situations workplace policy and practices are explicit, enabling the effective management of learning at, for, and through work (Lysaght et al., 2001).

However, both Cusick, Convey, et al. (2009) and King (2009) argue that although a supportive employer is essential, equally the employee must be prepared to take responsibility for their professional development. However, this expectation can lead to tension between the employer and employee, with the individual placing more importance on their personal career needs which may not align with employer expectations (Nolan,

Owen, Curran, & Venables, 2000; Townsend et al., 2006). Conversely, employers may focus on short-term skill development at the expense of an individual's investment in their professional lifelong learning. Challenging this tension, King (2009) states that "organizations often consider therapists to be personally responsible for their own development; therapists often desire more supportive work environments. Both are essential" (p. 195) with French (2006) recommending that employer and employee should collaborate together, mutually agreeing and determining ways of meeting learning goals. In doing so, this may avoid some of the haphazard or opportunistic planning of ongoing learning that can otherwise occur when there is no connection between appraisal and professional development needs (Haywood, Pain, Ryan, & Adams, 2012).

Related to workplace support is the impact of financial factors on the engagement of occupational therapists in learning at, for, and through work. Few occupational therapy specific studies have investigated the impact of financial factors, although Lysaght et al. (2001) found a positive correlation between support (including financial) for learning and increased participation in learning, whereas Townsend et al.'s (2006) interviewees identified the lack of financial incentives as demotivators. Likewise, in Curran et al.'s (2006) survey, representatives from Canadian health professional education programmes, provisional professional associations, licensing and professional regulatory authorities and rural health care professionals (N = 237) identified costs of professional development, along with no financial support, and no remuneration for time taken to attend courses on a non-work day, as some of the greatest barriers to accessing ongoing learning for the professions they represented. Several studies have noted that this can be a greater issue for females who preferred courses at certain times of the year to minimise costs of childcare as well as loss of earnings, or to minimise impact of absence on the workplace (Murray & Lawry, 2011), or on the family (Townsend et al., 2006).

Related to workplace support, and often cited as a barrier for participating in learning is geographical barriers, especially for rural practitioners. The impact of geography was the major perceived barrier in Curran et al.'s (2006) online survey with 84% of the participants selecting this option. This finding is supported by Murray and Lawry's (2011) interviewees who felt that both attendance costs and travel distances were barriers that influenced their ability to stay current. Interestingly, geographical barriers were also cited in Pui et al.'s (2005) study, for participants who lived in major cities as well as rural areas. Pui et al. suggests that this may be due to the fact that occupational

therapy is a diverse population, which may mean that occupational therapists living in a major city may still have to travel to another city in order to access the learning they desire.

Based on the findings of the international studies cited in this section, the key enabler to supporting occupational therapists' ongoing learning is the support of the workplace. It appears that if the workplace is supportive, then the effect of the other barriers identified may be minimised or eliminated, thus enabling occupational therapists to maintain their competence to practice through ongoing learning. These findings appear to contradict that of the one New Zealand study (Schnell, et al., 2007) cited, although this difference may also be due to design of the survey, rather than an actual difference between New Zealand occupational therapists and their international colleagues.

2.6.1 Synthesis of research findings investigating occupational therapists' readiness to be self-directed learners

In reviewing the literature on occupational therapists' readiness to be self-directed learners, it appears that occupational therapists do recognise and value the need to stay professionally current. However, how ready they are to be the self-directed learners they need to be, in order to stay professionally current is less clear. To date occupational therapy research has focused on certain aspects of self-directed learning, such as what motivates occupational therapists to engage in ongoing learning, determining not only the types of learning strategies preferred by occupational therapists, but trialling and evaluating different ways of organising the learning experiences. In considering these aspects, researchers have also investigated the barriers and enablers of learning, searching for the most effective ways to overcome these in order to meet the desired outcome; that of a profession motivated to ensuring its competence through engagement in ongoing learning, the outcomes of which will ultimately benefit those who access occupational therapy services.

In taking these different but related foci, attention has predominantly been given more to continuing professional education. As such, most of the research sourced focused on the methods of learning used in order to "alter the professional performance of professionals" (Fox, 2013, p. ¶ 1), considering those aspects of self-directed learning which relate more to the task management focus of the 'process orientation models of self-directed learning', such as selection and use of learning methods to address planned learning needs. Although not always explicitly defined, the philosophical underpinnings of

these studies align more with the psychological theories of learning, focusing on the effectiveness of various learning methods to bring about the desired change in the learner. Therefore, although many of the studies are situated by the researchers from what they state is a continuing professional development perspective; the actual focus appears to be towards continuing professional education.

As defined earlier in this chapter, continuing professional development is used to describe the processes of learning, being a planned-for critically reflective process that the individual assumes responsibility for because they have a positive attitude to learning, and the skills to evaluate and reflect not only on their performance, but on their learning. However despite the focus on lifelong learning that is evident in the definitions of professional development, less attention has been given by occupational therapy research to exploring the dispositions described in the personal orientation models, as influenced by the socio-cultural learning theorists. In considering the dispositions, occupational therapy researchers have tended to only investigate what motivates occupational therapists to engage in learning, and what influences this motivation, for example, the values ascribed to by the profession, or the influences impacting on motivation to engage. This approach generally leads to researchers turning back to the process orientation models in order to determine the barriers or enabler to learning perceived to influence motivation to engage.

With this in mind, it is perhaps not surprising that little attention has been given to whether or not occupational therapists have both the attributes for, and skills of, self-directed learners. For example, little is known about how occupational therapists choose to evaluate their performance against internal and external standards, whether or not they consider knowledge of themselves as learners when they select learning methods, whether or not they consciously use reflection on, and about their learning (as opposed to their reasoning about their clients) and so on, being just some of the attributes of the self-directed learner who ‘thinks’ about their learning. Thus, research to date has been somewhat piecemeal, with no studies found investigating either the profession’s readiness to be a self-directed learner, what they think about in relation to their learning (Fenwick, 2008), nor how they go about the ‘doing’ of the whole learning process (Law, 2010). In other words, occupational therapists have not investigated readiness to be a self-directed learner.

Of interest too, are the methodologies selected by occupational therapy researchers to investigate aspects of learning at, for, and through work. As the emphasis of researchers

has been on the types of learning methods used by occupational therapists, a number of the studies have used quantitative methodologies with data collection methods being primarily online or postal surveys. Although these studies (e.g., G. Kelly, 2003; Lysaght et al., 2001; Pui et al., 2005; Schnell et al., 2007) provide insight into actual, and for one study (Lysaght et al., 2001) preferred methods, it is not possible to determine the reasons why occupational therapists might prefer one method over another, nor how choice might be influenced by contextual, as well as individual factors. Other studies (e.g., McKinstry, 2005; Rappolt & Tassone, 2002) have used predominantly qualitative methods such as individual interviews or focus groups. In these studies, the number of participants tends to be relatively small, with findings not necessarily generalisable to all occupational therapists. In addition, these studies have not necessarily focused on self-directed learning per se, but on related phenomena, for example, the work of King and her colleagues (King, Bartlett, et al., 2008; King, Currie, et al., 2008) on the development of expertise in paediatric rehabilitation therapists, that of Murray and Lawry (2011) who investigated perceptions of participation in different learning methods for maintenance of professional currency, or Lowe et al. (2007) who considered the role of reflection in implementing new knowledge gained through continuing education. Few studies have used mixed methods thus the opportunity to investigate in depth the multi-faceted nature of the phenomenon of self-directed learning has not been taken, thus adding to the piecemeal nature of occupational therapy research in this area.

Finally, there is almost no New Zealand-based literature about occupational therapists' self-directed learning. What does exist is a survey-based study primarily undertaken by the New Zealand Association of Occupational Therapists to assist with planning of future continuing professional education events (Schnell et al., 2007), two studies investigating new graduates' competence to practice (Gray et al., 2012; Nayar et al., 2013) and one study investigating the effectiveness of a particular learning method for achieving the desired learning outcomes (Reed & Hocking, 2013). Thus, although the OTBNZ assumes that registered occupational therapists have the attributes of, and skills for, self-directed learning that are considered essential for ensuring continuing competence to practice, there is currently no strong research-based evidence to support this assumption. This is somewhat of a concern given that the CCFR, which is in essence a cycle of self-directed learning designed as a "practical living tool for professional development" (OTBNZ, 2011, p. 4), requires the occupational therapist to be ready to be self-directed

learner. Clearly, further research about the phenomena of readiness to be a self-directed learner is needed.

2.7 RESEARCH QUESTION

As noted in the introduction, and as demonstrated through the findings of the literature review, the aims of this study are to determine the extent to which occupational therapists are ready to be self-directed learners; the variables that may influence readiness to be a self-directed learner; and whether or not there is a connection between occupational therapists' use of the CCFR as a professional development tool and readiness to be a self-directed learner. In considering the findings of the literature review, and the aims of the study, the overarching research question was formulated being: *“Is there any connection between occupational therapists' use of the CCFR as a professional development tool and readiness to be self-directed learners?”*

In accordance with mixed methods methodology, although the purpose and aims of the study were outlined in the Chapter One, the introductory chapter to this thesis, and the research question formulated through the review of the literature, sub questions were not fully formulated, rather they evolved through a process of re-examination and reframing as recommended by Teddlie and Tashakkori (2009). The sub questions are outlined in Section 3.4 of Chapter Three.

2.8 SUMMARY OF CHAPTER TWO

The aim of this chapter was to review the conceptual and empirical literature related to the purpose and aims of this study. The literature review was organised into four sections being competence to practice, learning at, for, and through work, theories of self-directed learning, and occupational therapists' readiness to be self-directed learners. Maintaining competence to practice was identified as being an internally driven process of ongoing learning, related to both the standards and values of the individual practitioner and those of the profession. The need not only to maintain competence, but how this is assessed across the levels of individual practitioner through to regulatory authorities was discussed, concluding that almost regardless of the ways in which competence is assessed, learning at, for, and through work is seen as integral to maintaining competence.

The next major section of learning at, for, and through work introduced learning as being ongoing and lifelong, happening in multiple places and occurring with intent, through interaction and via engagement in experiences, along with thinking about those experiences. While a number of adult learning theories exist, those most relevant and that have been influential in the development of workplace learning theories are the psychological theories which focus on the learning to be acquired and how it is acquired, and the socio-cultural theories which acknowledge the interdependence between the individual and the work context in the learning process. Influences of these theories are seen in how the OTBNZ competencies are worded and in the mandatory requirement by the OTBNZ for practicing occupational therapists to engage regularly with the CCFR as a professional development tool. In considering the learning of occupational therapists, the differences between continuing professional education and continuing professional development were discussed with continuing professional education being seen more as the types of learning experiences engaged with, and continuing professional development being used more in the context to describe the processes of learning. In concluding this section of the literature review, the argument was made that self-directed learning runs as a thread through these definitions.

The third major section of the literature review introduced the phenomena of self-directed learning, illustrating the challenges that have occurred in defining and describing this multi-faceted phenomenon. The relationship between the steps in the CCFR and the process orientation models were identified along with relationship between the personal orientation models and the attributes that occupational therapists are assumed to have. This section concluded with an overview of some of the more common instruments used to measure readiness to be a self-directed learner.

In the final section, empirical research investigating the readiness of occupational therapists to be self-directed learning was discussed, providing the basis for the overarching research question which asks whether or not a connection exists between occupational therapists' use of the CCFR as a professional development tool and readiness to be a self-directed learner. The need for the current study was evidenced in this last section of the literature review, given not only the paucity of research on New Zealand occupational therapists' readiness to be self-directed learners, but also internationally. As argued, much of the research to date has been either qualitative or quantitative in nature focusing on either the parts of the process of the 'doing of' self-directed learning, and very

minimally on the attributes required of a self-directed learner. No studies were found where researchers aimed to explore both the attributes for, and skills of, self-directed learning with one professional group, using a tool designed to be a practical living tool for learning, mandated for use by a regulatory authority.

Having demonstrated the need for this study, the next chapter introduces the methodology selected to investigate the research question, along with the methods used and the processes followed.

CHAPTER THREE: METHODOLOGY

3.1 INTRODUCTION

Generally methodology chapters are organised to reflect the linear research process, starting with the author's paradigmatic stance that provides direction to the theories and methodologies selected, the choice of which, informs the research methods used to collect and analyse data (Johnson & Christensen, 2008; Shank, 2013). However, both Shank (2013) along with Johnson and Onwuegbuzie (2004), point out that research informed by a pragmatic philosophy may not exactly follow that process. This is supported by Crotty (1998) who states that more often than not, and as presented in the Foreword, pragmatist researchers start with a real-life issue or question, from which the research aims or objectives are determined, which leads to the selection of methodology and methods, followed by the theoretical perspective and epistemology. In following this order from real-life issue to epistemology, the pragmatist researcher studies what is important based on their values (Mertens, 2010), investigating the topic in a way that will provide the best understanding of the whole problematic situation (Shank, 2013), using combinations of methods that best provide the data to answer the research questions (Johnson, Onwuegbuzie, & Turner, 2007).

Although the flow of this study is consistent with the description in the previous paragraph, in order to aid the reader, this chapter is presented in the traditional format of a thesis starting with an overview of pragmatism and its alignment with occupational therapy philosophy. This is followed by an introduction to mixed methods methodology, the selection of methods for data collection and the processes used to analyse the data selected. The chapter concludes with a discussion of the ethical issues considered in the design of the research. Approval for this study was granted by the University of Otago Ethics Committee (Reference 10/045) on 23 March 2010 (refer to Appendix C for letter of approval), subject to addressing the confusion of roles between being a student researcher and a registered occupational therapist who is required to report to the OTBNZ the practices of any other occupational therapist that might place client(s) at risk. This

potential risk was discussed with the OTBNZ (refer to Appendix C), and a process determined in the unlikely event that this should occur. The information sheet was adjusted accordingly (refer to Appendix H).

3.1.1 Influences of the dualistic paradigms on research design

Paradigms are defined as the “shared belief systems that influence the kinds of knowledge researchers seek and how they interpret the evidence they collect” (Morgan, 2007, p. 50). Paradigms frame ways of viewing the world and are expressed by a scholarly community (Creswell & Plano Clark, 2011; Morgan, 2007) through their shared beliefs about what is the nature of knowledge, what counts as knowledge, how the knowledge is generated and what is valued (Greene & Hall, 2010), thus influencing all steps in the research process. However, as noted by Feilzer (2010), paradigms can also “constrain intellectual curiosity and creativity, blind[ing] researchers to aspects of social phenomena, or even new phenomena and theories” (p. 7). Evidence of this constraint is illustrated through the identifiable gaps in understandings of occupational therapists’ readiness to be self-directed learners, as outlined in Chapter Two.

Research about occupational therapists’ self-directed learning has tended to fall into what is described by Teddlie and Tashakkori (2009) as either the quantitatively oriented postpositivist paradigm focused on the analysis of numerical data, or the qualitatively oriented constructivist paradigm focused on the analysis of narrative data. By taking an either/or stance and therefore a dualist perspective, the opportunity to make sense of why some occupational therapists demonstrate readiness to be self-directed learners, confidently and competently using the CCFR as a professional development tool, yet others (according to anecdotal evidence) see it as a task to be ticked off, is lost. Understanding self-directed learning readiness is more than just listing the types of learning strategies occupational therapists commonly use, or identifying factors influencing choice of learning strategies, or determining the barriers to engaging in learning at, for, and through work. By themselves each of these aspects contributes only a small part towards the understanding of occupational therapists’ self-directed learning readiness. Supporting this point, Law (2010) has argued that occupational therapists should be researching “the ‘doing’ of the learning process” (p.15). As explained in Chapter One, the aims of this study are to determine the extent to which occupational therapists are ready to be self-directed learners, the various factors that might influence their readiness, and the potential connection between use of the

CCFR as a professional development tool and self-directed learning readiness. Thus this study aligns with Law's (2010) recommendations to investigate the 'doing' of the learning. This focus naturally calls for the use of mixed methods and its natural philosophical partner, pragmatism (Creswell & Plano Clark, 2011; Johnson & Onwuegbuzie, 2004).

3.2 PRAGMATISM AS THE UNDERLYING PHILOSOPHY

Pragmatism is a logical choice for a number of reasons, but principally because the aims of this study are congruent with pragmatism which is to "gain knowledge in the pursuit of desired ends" (Morgan, 2007, p. 89), in this case to investigate if a connection exists between the use of the CCFR and occupational therapists' readiness to be self-directed learners. Johnson and Onwuegbuzie (2004) outlined the general characteristics of pragmatism, which Teddlie and Tashakkori (2009) organised according to what pragmatists believe about the nature of knowledge, what counts as knowledge, how knowledge is generated and what is valued. Of interest to this study are pragmatist beliefs about the relationship of the knower to the known (epistemology), about what is logical, the nature of reality (ontology), and the place of values in the enquiry (axiology) (Mertens, 2010; Teddlie & Tashakkori, 2009). How these beliefs have shaped this study is described next.

Firstly, pragmatist-informed research focuses on the naturalist, process-oriented transaction between organism and environment (Johnson & Onwuegbuzie, 2004). To fully understand the self-directed learning readiness of occupational therapists requires a focus on the transaction between the occupational therapist and their understanding of the CCFR as a professional development tool, given that the design of the tool appears to be underpinned by a process of self-directed learning. Understanding this transaction can only occur through exploring "the reality of the world one experiences and lives in" (Teddlie & Tashakkori, 2009, p. 74) which is made more possible for the pragmatist researcher who, from an epistemological viewpoint, can choose to move between remaining totally objective through to having a highly interactive relationship with the participants (Teddlie & Tashakkori, 2009), depending on the data collection, analysis and interpretation methods selected. This ability to move through a continuum within a single study is of particular value in this study, given the insider-outsider perspective of the researcher. Usually the insider is the one with the knowledge that the outsider aims to gain (Rabe, 2003). However, as outlined in the Foreword, the researcher in this study is both an outsider

aiming to investigate the connection between use of the CCFR and occupational therapists' readiness to be self-directed learners, and equally an insider being a registered occupational therapist expected by the OTBNZ to demonstrate ongoing competence to practice through the use of the CCFR. Thus, at times in this study, the researcher has an insider perspective, for example, as described in the Foreword and during parts of the interview when acknowledging the challenges some participants raised. At other times the researcher was an outsider, for example, in analysing the results of the online questionnaire. This movement is acceptable from a pragmatist perspective.

Another characteristic of pragmatism is that it “endorses pluralism and carefully considered eclecticism” (Teddlie & Tashakkori, 2009, p. 74) with different sources of information and perspectives providing an understanding of people. In being pluralistic, pragmatists can utilise an “*inductive-deductive research cycle*” (Teddlie & Tashakkori, 2009, p. 87) with the research starting at any point in this cycle, using both qualitative and quantitative data (Creswell & Plano Clark, 2011). Pragmatic researchers can also use *abductive reasoning*, starting at the point where the researcher “observes a surprising event and then tries to determine what might have caused it” (Teddlie & Tashakkori, 2009, p. 89). Thus pragmatist researchers combine the logic of inquiry of induction (pattern discovery) with deduction (theory testing) and abduction or finding the ‘best’ explanation for sense making (Edmonds & Kennedy, 2013; Johnson & Onwuegbuzie, 2004). As explained in the Foreword, the surprising event underpinning this thesis is the unease expressed by many occupational therapists with the CCFR, despite the process of self-assessment through to critical reflection being clearly aligned with self-directed learning. In the Foreword, another reason to explain the level of unease felt has been posed, being that occupational therapists are not as ready to be self-directed learners as has been assumed. The process of abduction, deduction and induction is further expanded throughout this chapter. In doing so, a fuller picture of the possible connection between use of the CCFR as a professional development tool and readiness to be a self-directed learner may emerge (Johnson & Onwuegbuzie, 2004).

Thirdly, from an ontological perspective, pragmatic researchers view theories to be ‘true’ only to the degree that they work as judged by their applicability and predictability (Teddlie & Tashakkori, 2009), acknowledging that there can be one or more theories that explain the phenomena of focus (Creswell & Plano Clark, 2011). Thus in this study, although both Garrison (1997) and M. J. Fisher et al. (2001) draw from similar

assumptions about self-directed learners, the way in which they have conceptualised the behaviours is slightly different. These differing perspectives are used in the analysis with the final findings likely to add weight, or not as the case may be, to workability and therefore acceptability of the theories. Likewise, should it be possible at the end of this study to offer another explanation to the occupational therapy profession as to their struggles with the CCFR, the ‘truth’ of the explanation will be dependent on each individual’s assessment of the applicability of the explanation to their own experiences. In addition, pragmatist researchers emphasise “practicality, for example, (e.g., researchers collect data by ‘what works’ to address [the] research question)” (Creswell & Plano Clark, 2011, p. 42). Given this is a doctoral study that needed to be completed within a specific timeframe; practicality has influenced the design of the research and the selection of the data collection methods.

Finally, one of the key influencers in the design of any pragmatist informed study is the values of the researcher. Teddlie and Tashakkori (2009) suggest that the pragmatist researcher investigates the topic in ways that align with their value system “including units of analysis and variables that they feel are most likely to yield interesting responses” (p. 90), using the best methods to answer the research questions depending on the defined research questions and the phase of the research cycle. The practical decisions made in relation to the data collection and analysis phases are explained later in this chapter.

Adding weight to the selection of pragmatism (as proposed by Dewey) as the underpinning philosophy of this thesis, is that pragmatism is one of the informing discourses that has continued to significantly influence the development of the theoretical underpinnings of the occupational therapy profession (Hooper & Wood, 2002; Ikiugu & Schultz, 2006). Occupational therapy researchers are increasingly drawing on the philosophy of pragmatism to explore the “relations among things, not what takes place within things” (Cutchin & Dickie, 2012, p. 27), searching for “useful points of connection” (Mertens, 2010, p. 36). Similarly, this study moves on from previous research which has investigated, for example, motivators for engagement with, preferences for and types of learning strategies used, all of which could be framed as the factors influencing engagement in learning, to exploring the potential connection between occupational therapists’ use of the CCFR as a professional development tool and self-directed learning readiness.

3.2.1 Challenges to the use of pragmatism

Although pragmatism has been described as the natural philosophical partner for mixed methods (Creswell & Plano Clark, 2011), there are some shortcomings as described by Johnson and Onwuegbuzie (2004). Relevant to this study are the concerns that pragmatists are at risk of abandoning the standards of truth, objectivity and rationality (Muncey, 2009).

In relation to truth, pragmatists would argue that although they do not deny the existence of an external reality independent of mind, their focus is to say something interesting about the nature of the truth (Teddlie & Tashakkori, 2009) which is always contextual, related to action (Bietsa, 2010), and likely to always be provisional and tentative as knowledge changes over time related to our experiences (Johnson & Gray, 2010; Johnson & Onwuegbuzie, 2004). For pragmatist researchers, truth is never finite or absolute, but only what can be justified or warranted to the community at that time (Bietsa, 2010; Tashakkori & Teddlie, 2003). Somewhat differently to previous research which has focused on what occupational therapists do in relation to their ongoing professional development, in this study, readiness to be a self-directed learner has been considered in the context of the participants' use of the CCFR, designed as a practical living tool for professional development. The focus is on reasons given by the participants for the actions they take for each step in the CCFR process. Thus the findings from this study are influenced both by how occupational therapists self-rate their readiness, and what they choose to share about their actions. The analysis undertaken provides insight into what occupational therapists believe about their readiness to be self-directed learners, which is a perception that could change over time related to ongoing experiences.

Similarly, objectivity is recognised by pragmatists in so far as objectivity exists on a continuum with subjectivity, rather than at differing or opposing poles (Tashakkori & Teddlie, 2003). By removing the dualism, researchers can select different approaches to studying the issue knowing that this will “generate *different* outcomes, *different* connections between doing and undergoing [and] between actions and consequences” (Bietsa, 2010, p. 113), thus producing different ways of knowing, with no one way being more truer than another (Teddlie & Tashakkori, 2011). The value of being able to select different approaches for this study is the opportunity to gain greater understanding of those factors that may influence readiness to be a self-directed learner, both those predetermined through the selection of questions related to occupational and demographic data, and those

that may emerge through analysis of the interviews. This use of both qualitative and quantitative data is possible as outlined by the third standard of rationality, with Johnson and Gray (2010) and Teddlie and Tashakkori (2009) arguing that pragmatists view rationalism (deductive rational thought) and its dualistic partner empiricism (knowledge gained through experience) not as opposing partners but as being able to be combined.

A second weakness of pragmatism posed by Johnson and Onwuegbuzie (2004) is that pragmatic researchers do not always answer the question about who the pragmatic solution will be useful for. Greene and Hall (2010) counter-argue this point stating that research informed by the philosophy of pragmatism leads to an action-oriented inquiry process committed to progress. Drawing from this point, the focus of this thesis is two-fold in its actions. The first is to explore readiness to be a self-directed learner with the aim of gaining a better understanding of the connections between occupational therapists' use of the CCFR as a professional development tool and self-directed learning readiness. The second is to disseminate the findings for this study in such a way that the occupational therapy profession can determine for itself whether the explanation offered is in fact tenable and useful for the community.

Although the philosophical debate continues, for the purposes of this study, pragmatism has been selected as the underpinning philosophy for several reasons. Firstly, as discussed in Chapter Two, previous research on occupational therapists' learning at, for, and through work has been dominated by either the qualitative or quantitative paradigms which has potentially contributed to a piecemeal approach to understanding occupational therapists' readiness to be self-directed learners. In adopting the philosophy of pragmatism, the dualism of rationality and empiricism is overcome, with pluralism or the integration of quantitative and qualitative methods used to move between pattern discovery, theory testing and sense-making, in order to better understand the transaction that occurs between use of the CCFR as a professional development tool and occupational therapists' readiness to be self-directed learners. A second advantage in selecting this philosophy is the potential for the researcher to move backwards and forwards between insider and outsider roles, as needed, acknowledging that both previous as well as current knowledge and experiences can be used to shape the research. A third advantage is the awareness that research underpinned by the philosophy of pragmatism does not seek to find the one truth, but rather in the case of this study to propose an explanation that some occupational therapists could consider as being a reason for their struggles with the CCFR. In ending this section

of the methodology chapter, the stance taken is that this study is underpinned by one paradigm being pragmatism, as proposed by Creswell and Plano Clark (2011) being the natural philosophical partner for the methodology of mixed methods. This methodology is introduced in the next section.

3.3 MIXED METHODS

The earliest definition of mixed methods was described as the selection of “at least one quantitative method (designed to collect numbers) and one qualitative method (designed to collect words)” (Greene, Caracelli and Graham, 1989. p. 256) although, mixed methodologists have acknowledged that the use of both methods in the same study is evident in the early writings of cultural anthropologists and social scientists (Johnson et al., 2007; Yin, 2011). However, it is only in the last 25 years that mixed methods has become a specific research methodology, as opposed to a simple combining of methods (Creswell, 2010), with researchers increasingly selecting mixed methods to address complex research questions (Halcomb, Andrew, & Brannen, 2009; Hesse-Biber & Leavy, 2011).

Leading proponents of the methodology suggest that mixed methods has reached the point where it can be described as the “third methodological movement” (Tashakkori & Teddlie, 2010, p. ix) with its own worldview, language and tools (Creswell & Plano Clark, 2011), distinguishable from the quantitative and qualitative paradigms. Although there have been a number of definitions of mixed methods proposed, the one selected for this study is as follows:

Mixed methods research is an approach to inquiry that combines or associates both qualitative and quantitative forms. It involves philosophical assumptions, the use of qualitative and quantitative approaches, and the mixing of both approaches in a study...so that the overall strength of the study is greater than either qualitative or quantitative research (Creswell, 2009, p. 4).

As discussed earlier, the aims of this study are to determine the extent to which occupational therapists are ready to be self-directed learners, the factors that might influence their self-directed learning readiness, and whether there is a connection between use of the CCFR as a professional development tool and self-directed learning readiness. Mixed methods is an appropriate methodological choice for the researcher seeking breadth

and depth of understanding and corroboration (Creswell, 2011). The advantage of using mixed methods for the aims of this study is that it will allow for occupational therapists' self-directed learning readiness to be investigated in ways that have not necessarily been done before, strengthened by combining qualitative and quantitative data and reasoning abductively, inductively and or deductively (Teddlie & Tashakkori, 2009), thus using a multi-faceted approach to a multi-faceted phenomenon (Halcomb, Andrew & Brannen, 2009). Therefore the use of mixed methods is very relevant with the quantitative aspect of the study providing the data related to readiness to be a self-directed learner and factors influencing this, and the qualitative aspect allowing for deeper insight into occupational therapists' learning at, for, and through work, and their use of the CCFR. In using mixed methods, attention can also be given to the degree of interrelatedness that may be present (Kroll & Neri, 2009), which for this study means being able to provide another explanation as to why some occupational therapists feel challenged or frustrated with the CCFR.

In selecting mixed methods as the methodology, the next step is to determine which design to apply. There are a number of different ways of categorising the research design of a mixed methods study (Creswell & Plano Clark, 2011; Mertens, 2010; Onwuegbuzie, Slate, Leech, & Collins, 2009), with Leech and Onwuegbuzie (2009) suggesting that the type of design selected depends on the level of mixing (partial or full), time orientation (sequential or concurrent) and the emphasis of approaches (dominant or equal). In terms of workability related to the constraints of a doctoral programme of research, and the purpose of this study, the type of mixed methods design selected is convergent parallel (Creswell & Plano Clark, 2011; Edmonds & Kennedy, 2013) where the researcher "implement[s] the qualitative and quantitative strands during the same phase...prioritises the methods equally, keeps the strands independent during analysis, and mixes the results during researcher's overall interpretation of the data" (Creswell & Plano Clark, 2011, p. 410). A strength of this type of design is that it is congruent with the pragmatist paradigm, supporting the synthesis of complementary quantitative (a criterion-referenced self-report scale) and qualitative results (a guided interview based on recent learning experiences and CCFR).

3.3.1 Limitations of mixed methods design

The advantages of mixed methods can also be seen as its limitations. One of the long standing challenges has been the incommensurability thesis which argues that it is not

possible to integrate qualitative and quantitative research approaches given that they originate from paradigms that hold very different ontological, epistemological and axiological beliefs (Lincoln & Guba, 2005; Shank, 2013). Challenging these arguments are Teddlie and Tashakkori (2010) and Creswell (2011) who believe that methodological eclecticism is in fact possible, with Creswell (2011), for example, suggesting that researchers can move between paradigms during different phases of the study. Another solution to the incommensurability thesis is to use a single paradigmatic stance, such as is in this study with the selection of pragmatism as the underlying philosophy. In doing so, dualities can be rejected and the selection of diverse methods supported as “valued tools for inquiry with their particular strengths, like different lenses on a camera which add depth, focus and new dimensions to the composition” (Shank, 2013, p. 187), with researchers not forced into the use of a particular research method (Feilzer, 2010).

Alongside the philosophical arguments, researchers raise a number of pragmatic issues as limitations to consider in the selection of mixed methods. One of the major issues is related to the logistics of collecting both qualitative and quantitative data for a single study (Teddlie & Tashakkori, 2011). This is perhaps more of an issue for externally funded studies which can be very tightly time-bound. While a doctoral study is also time-bound there is usually more time in which to complete the data collection and analysis than may be afforded in externally funded research projects.

Although the strength of mixed methods is in the combining of qualitative and quantitative research approaches, this in itself is an issue as the researcher then needs to be well versed in both methods of analysis (Hesse-Biber & Leavy, 2011; Teddlie & Tashakkori, 2011). For some projects this has been addressed by the creation of large research teams, each member having expertise in one or other approaches; however, this can bring its own challenges in that the findings may not be fully integrated (Hesse-Biber & Leavy, 2011). This is less of a concern in this study as although a doctoral study implemented by one individual, there are some advantages as the expertise of supervisors was drawn on to assist in the design and analyses phases, with each supervisor having strength in either the qualitative or quantitative methods.

Another challenge noted by some (Hesse-Biber & Leavy, 2011; Mortenson & Oliffe, 2009) is the potential by researchers to weight quantitative findings over the qualitative findings. This may be done because the profession values one source of evidence over another, or the researchers are more experienced in one type than the other.

With this concern in mind, the emphasis in this study has been to equally weight the two sources of data in order to gain breadth and depth of understandings about the connection between use of the CCFR and self-directed learning readiness. Concerns have also been raised about the acceptance of mixed methods in more traditional disciplines, especially when it comes to the point of disseminating research in the academic journals (Mertens, 2010). However, this is less of an issue in the occupational therapy profession where occupational therapy researchers are encouraging more researchers to consider using mixed methods (Shank, 2013). Mortenson and Oliffe (2009) found that mixed methods was relatively common in occupational therapy research accounting for 14% of articles published across nine journals between the years of 2000 and 2005, with many of the studies cited using a combination of standardised instruments, interviews and surveys. The design of this research is consistent with the types of mixed methods studies recently published in the occupational therapy journals (e.g., Gupta, Paterson, Lysaght, & Von Zweck, 2012; Hoffmann et al., 2011).

Although there are some concerns about mixed methods as a methodology, Shank (2013) argues for more occupational therapy researchers to use mixed methods because it allows researchers “to see previously unnoticed relationships, to question assumptions and to find new insights” (p. 193). Thus mixed methods will be the lens for this study through which unnoticed relationships can be noticed, assumptions questioned and new insights gained into “the ‘doing’ of the learning process” (Law, 2010, p. 15), in relation to the CCFR. In order to meet the intended purpose of this study and to achieve the stated aims (as outlined in Section 1.3) research questions were formulated.

3.4 RESEARCH QUESTIONS

As recommended by Teddlie and Tashakkori (2009), although the purpose and aims were articulated at the beginning of this study, coming in part from the personal experiences outlined in the Foreword, as well as the broader professional context described in Chapter One and the identified gaps in the research literature discussed in Chapter Two, the research questions evolved throughout the research process. For example, the SDLRS (M. J. Fisher et al., 2001) was selected as the most appropriate scale to measure readiness to be a self-directed learner, but it was originally developed for nursing students. Before final selection as the measurement tool, the scale needed to be piloted with occupational therapists in practice, the outcome of which resulted in some minor changes being made to

the statements. Therefore, before any judgements could be made about the participants' scores on the adjusted scale, internal consistency needed to be calculated. Thus an additional research question, Question 2 was added in. Another instance of refinement was a research question originally included with the aim of exploring the content of the participants' CCFR. This question was removed when it became clear that the participants' CCFRs varied markedly and therefore pragmatically the level of analysis required was not feasible in this doctoral study.

The research questions are listed below following the approach recommended by Creswell and Plano Clark (2011) and Teddlie and Tashakkori (2009). The overarching research question for this study is:

“Is there any connection between occupational therapists' use of the CCFR as a professional development tool and readiness to be self-directed learners?”

In order to answer this question, research questions were developed for the quantitative and qualitative phases of the study as follows:

Research questions for the quantitative phase of this study were:

1. What is the degree of readiness of New Zealand occupational therapists to be self-directed learners, as measured by the SDLRS-A?
2. Does the SDLRS-A demonstrate internal consistency, and if so, is it more consistent with the factor structure of M. J. Fisher et al. (2001) or with the factor structure of Hendry and Ginns (2009)?
3. Which demographic and occupational variables influence readiness to be a self-directed learner?

Research questions for the qualitative phase of this study were:

4. Do New Zealand occupational therapists' descriptors of their learning at, for, and through work indicate readiness to be a self-directed learner as described by Garrison's (1997) Self-directed Learning Model?
5. Are there any descriptions of learning at, for, and through work relating to readiness to be a self-directed learner, that are unaccounted for in Garrison's (1997) Self-directed Learning Model?
6. What influences New Zealand occupational therapists' use of the CCFR as a professional development tool?

In the next sections of this chapter, the processes of participant recruitment along with data collection and analysis are outlined. The chapter concludes with ethical issues identified and the ways in which these were addressed.

3.5 DATA COLLECTION AND ANALYSIS

Using a convergent parallel mixed methods design, two overlapping phases of data collection were planned and implemented, one being the quantitative phase of the design, consisting of an online questionnaire, and the second the qualitative phase, consisting of a review of the participants' CCFR and a guided interview (Patton, 2002). The data were collected sequentially, firstly the online questionnaire, followed by review of the CCFR and then interview. The analysis strategy used was parallel mixed analysis (Teddlie & Tashakkori, 2009) with the quantitative data analysed in parallel with the qualitative content analysis of the interviews. Using this strategy, the researcher can allow the two data-sets to 'talk to each other' in an iterative manner, with inferences drawn from both data-sets integrated to form meta-inferences (Teddlie & Tashakkori, 2009). The procedures used for data collection and analysis are discussed in the next sections starting with the procedures to recruit participants.

3.5.1 Quantitative phase: Participant recruitment procedures

New Zealand occupational therapists' response to invitations to participate in research projects can be low, for example, the survey carried out by Schnell et al. (2007) on occupational therapists' professional development needs resulted in a response rate of only 22%. To ensure sufficient data for analysis for this study, the need to recruit from as large a pool of potential participants as possible was identified, with the OTBNZ selected to assist with recruitment, being the organisation that has the most up-to-date register of the population targeted for this study, that is, practicing therapists holding APC's.

To ensure participation, recruitment methods needed not only to be enticing, but also conform to the policies and procedures of the OTBNZ (A. Charnock, personal communication, August 7, 2009). As the OTBNZ uses email as the preferred means of communication, recruitment for this study was carried out by an email invitation sent by an OTBNZ designated staff member (refer to Appendix D). Attention was given to ways of wording the email invitation as recommended by Mertens (2010), including appealing to self/professional interest or altruism and a sense of connection with the researcher. To

assist potential participants to self-select into the study, the invitation included the inclusion criteria (all occupational therapists who were currently working in New Zealand and had held a New Zealand Annual Practicing Certificate since April 2009), and the exclusion criteria (supervised by the researcher or having had the researcher being a third party sign-off for registration purposes).

Given the total number of registered occupational therapists as at 31 March, 2010 that potentially met the inclusion criteria was 2166 (M. Ah Fair, personal communication, September 30, 2012), and in order to meet the time limitations of a doctoral study, the decision was made to first send the email invitation to a random selection of 400 participants, with one follow-up reminder email one month later. With 400 invitations, the aim was have a 50-60% response rate which had previously been achieved by Schnell, et al., (2007) when surveying New Zealand occupational therapists about their preferred learning methods. Those interested in participating in the study responded by emailing the researcher with their intent to participate. An information and consent form (refer to Appendix E) was sent by return email, and on return of the consent form (via email or post) participants were sent a URL for the online questionnaire. An alternative option was given to receive the questionnaire as a PDF file via email for completion and return either via email or via post, with less than five choosing this option.

The response rate from this first invitation with one follow-up reminder was only 11% (n = 45), which was considered too small to enable meaningful analysis of the data, thus the decision was made to invite all occupational therapists who potentially met the inclusion criteria, with a follow-up reminder sent two weeks later.. A maximum of two reminders were sent to potential participants who indicated interest but did not return the information and consent form, and to those who returned the consent form but did not complete the questionnaire online. The online questionnaire closed three weeks after the last email reminder was sent to those who had returned the consent form. In total, 204 (9.4%) of the 2166 occupational therapists holding current APCs responded to the email invitation. Of these 204, three did not meet the inclusion criteria, two chose not to continue, 20 failed to return their consent forms and 6 failed to complete the online questionnaire. Of the 204 who initially responded, 173 or 85% of occupational therapists interested in the study completed the first phase of the research through completing the online questionnaire. A thank-you email was sent to each participant on completion of the online questionnaire with a reminder that if they had indicated interest for being

approached for the second phase of the study, they may be contacted later. The description of the participants is presented in Chapter Four.

3.5.2 Quantitative phase: Development of online questionnaire

The first phase of data collection required participants to complete a two-part online questionnaire, the first consisting of questions designed to capture occupational and demographic data, the second being the SDLRS-A (M. J. Fisher et al., 2001). In collating the questionnaire, a number of design principles were utilised to mitigate the potential effects of non-response or return of incomplete questionnaires which can threaten validity (de Leeuw, 2008; Tymms, 2012). In order to ensure the online questionnaire was inviting and not intimidating, similar questions were grouped together under headings (Sue & Ritter, 2012). The first questions focused on professional history and current employment with the latter questions asking for more personal data such as ethnicity and age. The online design was also considered to ensure it was visually appealing and easy to navigate (de Leeuw, 2008).

Questions selected were in part influenced by registered occupational therapists demographic data already held by the OTBNZ, the literature review findings and by what was thought likely to yield ‘interesting responses’ (Teddlie & Tashakkori, 2009). In order to enable comparison between the OTBNZ data of registered occupational therapists and those participating in this study, the OTBNZ descriptions for gender, primary focus of employment, place of employment and ethnicity were used (refer to Appendix F for the online questionnaire with same-worded questions highlighted). From the literature it was evident that factors that could potentially impact on learning at, for, and through work are support of the workplace (Cusick, Convey, et al., 2009; Rappolt et al., 2002; Townsend et al., 2006), supervision of students (Andersen, 2001; Craik & Rappolt, 2006) geographical location (Curran et al., 2006; Schnell et al., 2007; Townsend et al., 2006), years of experience (King, Currie, et al., 2008), level of qualification (Esposito, 2012) and experience of being supervised or mentored (Andersen, 2001) and thus were included to determine whether or not these impacted on readiness to be a self-directed learner. Finally, factors thought to possibly yield interesting responses were identified, with questions developed to gather data about which years between 2005 and 2010 participants had applied for an annual practicing certificate, and participants’ experience in supervising occupational therapists. These variables, that is, number of years completing the self-

directed learning cycle for the CCFR, and experience in supervising other occupational therapists do not appear to have previously been investigated. It was thought these factors might be influential, as ongoing use of the CCFR may have encouraged participants to gain insight into themselves as learners, and similarly, supervising other registered occupational therapists may also lead to greater insights.

As discussed in Chapter Two, several scales exist for measuring readiness to be self-directed learners. Although originally designed for nursing education, the Self-directed Learning Readiness Scale (M. J. Fisher et al., 2001) was selected as there is evidence of applicability to health professionals other than nursing (Bridges et al., 2007; Huynh et al., 2009; Shankar et al., 2011) and due to its repeated use in studies of the same professional group (Deyo, Huynh, Rochester, Sturpe, & Kiser, 2011; Huynh et al., 2009). Other identified advantages were the ease of use, including being relatively short to complete for occupational therapists who are in practice, the ease to which it could be converted from print to online delivery and the fact that there was no cost associated with its use. To confirm the decision to use this tool, the psychometric properties of the SDLRS were also determined as outlined in the next section.

3.5.2.1 Psychometric properties of the SDLRS

Validity is a unitary concept based on the accumulation of relevant evidence (Gronlund & Waugh, 2009) which is used to inform interpretation of test scores for the purposes of the research (Mertens, 2010). Gronlund and Waugh (2009), state that ideally validity is determined through drawing relevant evidence from all five categories of face, content, construct, concurrent and predictive validity.

Face validity has been demonstrated for the SDLRS. Initially designed for Australian undergraduate nursing students, the 5 point-Likert scale, 40 item SDLRS (M. J. Fisher & King, 2010; M. J. Fisher et al., 2001) has been used in a number of pre-registration nursing (Avdal, 2012, ; El-Gilany & Abusaad, 2012, in press; Kocaman et al., 2009; Mead, 2011; Smedley, 2007; Yuan et al., 2012), medical (Abraham et al., 2011; Chakravarthi & Vijayan, 2010; Hendry & Ginns, 2009; Kek & Huijser, 2011; Newman, 2004) and pharmacy (Deyo et al., 2011; Huynh et al., 2009) studies to investigate the readiness of students to be self-directed learners. In addition, the SDLRS has been used with health practitioners specifically by Newman (2004) to investigate the effectiveness of Problem Based Learning with nurses, and after slight modification by Bridges et al. (2007)

to determine factors influencing the propensity of physiotherapists to adopt evidence based practices. Slight modification of the scale was also done by Devi, Devan, Shen, and Pang Han (2012) before administering to year two and three Indian medical students. In addition, the SDLRS has been translated into Turkish (Avdal, 2012, ; Kocaman et al., 2009) and Chinese (Yuan et al., 2012). The increasing use of the instrument across a range of health disciplines and countries suggests that the SDLRS has face validity.

Content validity of the scale was determined by M. J. Fisher et al. (2001) through extensive review of the self-directed learning literature. On the basis of the review, 93 items were selected and following independent review by 11 experienced nurse academics/educators using a modified Reactive Delphi technique (Keeney, Hasson, & McKenna, 2006), the scale was reduced to 52 items for the pilot study. The pilot study was undertaken on a convenience sample of 201 undergraduate nursing students (M. J. Fisher et al., 2001). Using the data from this pilot study, validity of the SDLRS was established through the use of exploratory factor analysis to determine item groupings (Stommel & Wills, 2004). Items which failed to load were removed, with the final version of the SDLRS scale consisting of 40 items distributed across three subscales being Self-Management (S-M), Desire for Learning (DL) and Self-Control (S-C).

Further research by Yuan et al. (2012) across four Chinese nursing programmes and with years 1 to 5 nursing students (N = 536) and by Smedley (2007) with 67 first year nursing students confirmed the same three factors, although the type of factor analysis and the results were not specifically reported in either of these studies. In contrast, Hendry and Ginns (2009) using an exploratory factor analysis, determined four factors for their sample of 232 first year Australian medical students, with only two of their factors corresponding to the Self-Management and Self-Control subscales identified by M. J. Fisher et al. (2001). Following the publication of Hendry and Ginns (2009) study, M. J. Fisher and King (2010) used a confirmatory factor analysis to re-examine the factor structure of the subscales using data from 227 first year undergraduate nursing students. While the same three factors as the original study were confirmed, a number of items appeared redundant. In concluding, Fisher and King (2010) recommended that the 40 item scale should continue to be used until further research validated the factor structure of the scales.

Validity is also determined through the degree to which the test predicts present (concurrent) or future (predictive) performance (Mertens, 2010), with several studies reportedly finding relationships between high (total score greater than 150) and low scores

on the SDLRS and variables such as academic performance and/or development of self-directed learning skills or behaviours over time. In the main, authors of these studies have shown that SDLRS scores increase through each year of academic study (Chakravarthi & Vijayan, 2010; Kocaman et al., 2009; Yuan et al., 2012), and that those who are in programmes that are learner-centred have higher scores than those in traditional learning programmes (Yuan et al., 2012). Similarly, Smedley (2007) found that students aged 20 years or older, were more ready to be self-directed learners than their younger peers. Although using a modified version of the SDLRS (38-item, 6-point Likert Scale) Bridges et al. (2007), found that Desire for Learning subscale scores could be used to predict propensity to be an evidence-based practitioner, inferring that the subscale is capable of identifying the commonality of information seeking behaviour expected in an evidence-based practitioner. In comparison, Abraham et al. (2011) found a weak correlation between the SDLRS subtest scores and academic performance of first year undergraduate medical students and Deyo et al. (2011) failed to find any correlation between readiness to be a self-directed learner and academic performance of preregistration doctoral pharmacy students. However, Deyo et al. (2011) did find that the SDRLRS could predict an association between self-directed learning readiness and self-directed learning habits, such as using study groups and preparing for classes. Finally, the SDLRS appears to measure constructs different to learning styles with El-Gilany and Abusaad (2012, in press) finding no relationship between the nursing students' SDLRS and Kolb's learning styles inventory scores.

Although there is some evidence of established validity for the SDLRS, the reliability of the tool could be questioned, with no test-retest, split-half or parallel forms reliability (Teddlie & Tashakkori, 2009) reported to demonstrate consistency of scores over time, or within the test. However, internal consistency reliability for the original 40-item scale has been established across a number of studies. In the initial study, M. J. Fisher et al. (2001) reported a Cronbach's co-efficient alpha for the total score of 0.92, with Self-Management as 0.86, Desire for Learning at 0.85 and Self-Control at 0.83. Subsequent studies (Avdal, 2012, ; Chakravarthi & Vijayan, 2010; Kek & Huijser, 2011; Mead, 2011; Newman, 2004; Smedley, 2007; Yuan et al., 2012) report similar levels of internal consistency of between 0.68 to 0.92 for the subtest scores, and 0.91 to 0.94 for the total score. Of note is the recent study by Shankar et al. (2011) whose reported levels were similar for the total score and all but one subtest score, Desire for Learning which was

0.56. In social science research a Cronbach's co-efficient alpha of 0.7 or higher is considered an acceptable level of consistency of the items (Gliem & Gliem, 2003; Pallant, 2011).

Based on the research cited, the SDLRS has face, content and construct validity and can be used with some confidence to identify self-directed learning readiness, or to predict the performance of students or health professionals. Although test-retest reliability has not been determined, the subscales have been shown to have a high degree of internal consistency across different ethnic and health professional groups. Thus, for the purposes of this study, the SDLRS can be considered to be a reasonably valid and somewhat reliable instrument, although further research is required to strengthen the original authors' claims that the tool is both reliable and valid.

3.5.2.2 Pilot of online questionnaire

The SDLRS (M. J. Fisher et al., 2001) was originally designed for nursing students in the formal learning environment, whereas the participants in this study are occupational therapists engaged in continuing professional development, in a range of environments. Therefore, the decision was made to pilot the scale. Six occupational therapists were invited to complete the SDLRS scale and asked to provide feedback on the time taken, clarity of instructions for completing the scale and wording of the statements. Changes recommended included additions to the instructions and to four of the 40 statements (refer to Appendix G for final version). After compiling the comments and drafting potential changes, the primary author of the SDLRS scale was contacted. In discussing the proposed modifications to the scale, two statements (numbers 41 and 42) which had failed to load in the original factor analysis undertaken by M. J. Fisher et al. (2001) were returned to the scale for this study, as the content of these was thought to be pertinent to occupational therapists in practice. One of these statements was slightly reworded to reflect the different professional groups, that is, the word nursing practices was replaced with occupational therapy practice. The original and revised statements are shown (with altered text highlighted) in Table 3. The revised scale is referred to throughout the thesis as the Self-directed Learning Readiness Scale – Adjusted (SDLRS-A).

The revised version of the questionnaire was piloted again by an occupational therapist, and with no further changes recommended was converted for online use via SelectSurvey.Net (Classapps, 2004) hosted on the server of the researcher's institution.

The survey tool was password protected with access to the survey restricted to the researcher and the Survey Manager.

Table 3

SDLRS statements modified to ensure relevance for occupational therapists

Original statement	Modified statement
I prioritise my work	I prioritise my learning needs
I have good management skills	I have good skills for managing my learning
I set strict time frames	I set strict time frames for achieving my learning
I set specific times for my study	I set specific times for my learning
I often review the way nursing practices are conducted*	I often review the way occupational therapy practice is conducted
I need to be in control of what I learn*	I need to be in control of what I learn

Note. * = Indicates statements that failed to load in the original factor analysis undertaken by M. J. Fisher et al. (2001) that were reinstated for this study.

3.5.3 Quantitative phase: Processes used for data collection and analysis

On return of their consent form, participants were sent the URL for the online questionnaire. The online questionnaire was set to be completed only once and from one computer IP address, and if any participants were unable to complete the questionnaire for any reason, instructions to contact the researcher were given. In the very few instances this occurred, the participant's responses were deleted, and they were invited to submit their data a second time.

Questionnaires returned by email or post (n = 10) were manually entered into SelectSurvey.net to ensure a full set of data was available for extraction into a Microsoft Excel spread sheet for data cleaning and coding (Pallant, 2011). Examples of data cleaning included:

- removing all identifiers from the electronic file,
- rounding years worked from part-years up to full-years
- where more than one qualification was given selecting the highest as was requested in the question,

- renaming types of employment where participant had selected 'other', but choice was already given in list of types of employment
- renaming focus of employment where participant had selected 'other', but choice was already given in list of focus of employment

Finally, incomplete surveys were removed ($n = 3$) with the result that 173 questionnaires were exported into the Statistical Programme for Social Sciences (SPSS, Version 19) for analysis. Statistical analysis undertaken included descriptive analyses of demographic data, and a factor analysis to determine the internal consistency of the SDLRS-A. Inferential statistics (i.e., T-tests and one way analysis of variance) were used to determine whether there any demographic or occupational variables influenced the SDLRS-A total and subtest scores.

3.5.4 Qualitative phase: Participant recruitment procedures

At the completion of the online questionnaire, 85% ($n = 147$) of the participants indicated their willingness to be contacted for the qualitative phase of the study which involved giving consent for the OTBNZ to extract the relevant sections of their CCFR, and to be interviewed. Given this is the first study of its kind for occupational therapy, it was important to ensure there were sufficient participants interviewed to gain a broad perspective of what occupational therapists do, how and why in relation to their learning at, for, and through work, and their CCFR. However, these interviews needed to be completed within the time limitations of a doctoral study, hence the decision to invite up to 16 participants being 11% of the 147 who completed the SDLRS-A.

An equal number of males and females were invited as whereas 7.8% of the 2010 register of occupational therapists identified as male (Occupational Therapy Board of New Zealand [OTBNZ], 2010), there is some research evidence pointing to potential gender differences in approaches to learning. For example, Reio and Davis (2005) compared male and female scores on Guglielmino's SDLRS (Guglielmino & Associates LLC, 2012) finding that the youngest males had the lowest mean score. Others such as Schutt (2009) found significantly different scores between male and female nursing students on measures of self-regulation. However, equally there are studies where no gender differences were reported (e.g., Berings, Van Veldhoven, & Poell, 2010; Sadler-Smith, Allinson, & Hayes, 2000). Given the lack of clarity in the research, a balanced number of males and females were sought, with all males who expressed an interest in being invited into the second

phase of the study being emailed with the invitation, the information sheet and the consent form (refer to Appendix H). Two reminders were sent one week apart, with eight of the 12 (66%) males consenting to participate in the second phase of the study. In order to ensure that the occupational therapists interviewed were fairly representative of the whole sample, female participants were selected ensuring a breadth of SDLRS-A scores. The eight identified females were contacted using the same reminder process as per the males, with all who responded to the invitation consenting to participate in this second phase. The description of the 16 participants is presented in Chapter Four.

3.5.5 Qualitative phase: Data collection procedures

The second phase of data collection consisted of review of the CCFR portfolio and the completion of a guided interview (Patton, 2002). These processes were first piloted with two occupational therapists, one a senior experienced academic with over 30 years' experience, the other less experienced, with eight years' experience and newly in post as an academic. Both provided access to their CCFR and participated in a one-hour pilot interview. Feedback from these volunteers was used to further refine the preparation of the participants for the interviews, and the questions asked. The rationale for the process and types of data collected and the outcome of the pilot process is discussed next.

Review of the CCFR was included in the qualitative phase for two reasons. Firstly, the aim of the study was to gain a greater understanding of the possible connection between use of the CCFR as a professional development tool and readiness to be a self-directed learner. To achieve this, the interview questions needed to be based around participants' learning experiences related to their CCFR. Secondly, the CCFR had the potential to yield interesting and rich data (Teddlie & Tashakkori, 2009) about what occupational therapists record about their intended and actual learning, which could be expanded on in the interview and compared against their SDLRS-A scores. However, in reading the pilot volunteers' CCFRs, it became clear that each participant not only completed their portfolios differently, but between different years they sometimes also changed what and how they worded different parts. Given this variability, and the need to be 'practical' about what could be collected and therefore analysed (Creswell & Plano Clark, 2011), it was decided to only use the CCFR data to tailor the interview questions for each participant. The interview template for one interviewee is included in Appendix I,

illustrating the generic questions asked of all participants and how the questions were adapted for this interviewee.

Patton (2002) outlined the range of open-ended interviews, from the informal conversational interview used in the field by ethnographers to the closed fixed-response interview such as used in consumer evaluations of products. For the purposes of this study, the general interview guide approach incorporating a conversational strategy (Patton, 2002) was selected as being the most appropriate, as it allowed for specific topics and issues to be covered in an interview outline in advance (refer to Appendix I), with the sequence and wording of questions determined in the course of the interview. In this combined approach the interviewer is also free to probe further in order to explore subjects in more depth, or to direct questions into other areas not previously anticipated. Flexibility was thought to be important for this interview, as previous experience (Penman, 2007) as well as anecdotal evidence suggested that occupational therapists may not have thought in much depth about the questions of what do they do, why and how in relation to their CCFR? In addition, some potential participants had already expressed concern that their CCFR would be judged as wanting, therefore it was important to use a conversational strategy that enabled participants to feel comfortable and safe to share their perspectives about any aspect of their learning. This strategy also allowed the searching for “useful points of connection” (Mertens, 2010, p. 36) as participants gave accounts of what they did, why and how in relation to their learning, and their use of the CCFR as a professional development tool.

Based on feedback from the pilot volunteers, the interview was loosely separated into two parts with participants firstly asked to describe something they had learned in the last year, with additional probing questions used to explore why and how this learning experience had occurred. In the second half, participants were asked to talk about their learning in relation to their CCFR. The constructs of Garrison’s (1997) Self-directed Learning Model were used to frame the questions, in ways that encouraged participants to reflect on themselves as learners, as well as their learning. Use was made of memos (Mertens, 2010) following each interview with small changes introduced to the questioning process as the interviews progressed.

Guided interviews were arranged according to participant choice and included phone (n = 12), face to face (n = 3) or Skype (n = 1). Each interview, which lasted between 1 hour and 1.75 hours was recorded in its entirety and transcribed fully. Participants were

asked to not prepare for the interview, although one participant asked for the interview guide, and several opened their CCFR online during the interview in order to refresh their memories.

3.5.6 Qualitative phase: Interview analysis procedures

All 16 transcribed interviews were imported to NVivo 9 for analysis, and at this point all transcriptions were cleaned with personal names replaced with a pseudonym selected by the participant. Any references to workplace, to other colleagues, to names of courses undertaken, or conferences attended were also removed and replaced with a generic description. Any gaps identified by transcribers were noted, and the relevant digital recording re-listened to and wherever possible, the correct words inserted.

One of the strengths of a mixed methods study informed by a pragmatist philosophy is that analysis of the qualitative data can be carried out inductively and/or deductively applying the principle of using ‘what works’ (Creswell & Plano Clark, 2011) to address the research question. Although inductive coding may have led to the development of a model of self-directed learning for occupational therapists, this was not the purpose of this study. Rather, the intent was to determine whether or not a group of occupational therapists are ready to be self-directed learners as determined both by their SDLRS-A scores, but also through their descriptions of what they do, why and how in relation to their learning, and more specifically the use of their CCFR as a professional development tool. In addition, as demonstrated in the literature review, theoretical models of adult self-directed learning already exist, but require more research to support their claims of validity. In this type of research, a strategy described by Hsieh and Shannon (2005) as Directed Content Analysis appeared to have good fit, being a structured process used to “provide predictions about the variables of interest, or about the relationships between variables” (p. 1281). In addition, it can be also used to “validate or extend conceptually a theoretical framework or theory” (p. 1281), and although the primary purpose of this study was not to ‘test’ a model as such, in using this analytical strategy, the opportunity to validate or extend a model conceptually could arise.

The model chosen for this study being described in some depth in Chapter Two is Garrison’s (1997) Self-directed Learning Model. This model was designed by Garrison to address what he saw as gaps in other models of self-directed learning, being that of the cognitive and motivational dimensions of self-directed learning, which unlike the external

management of the learning process, have previously attracted little attention by researchers. These three intimately connected dimensions are labelled Self-Management, Self-Monitoring and Motivation. To distinguish the dimensions, Garrison states that Self-Management refers to the “task control issues...the external activities associated with the learning process” (p. 22), Self-Monitoring encompasses “monitoring the repertoire of learning strategies as well as an awareness of and an ability to think about our thinking” (p. 24) and Motivation “play[ing] a significant role in the initiation and maintenance of effort toward learning and the achievement of cognitive goals” (p. 26).

Although Garrison (1997) proposes this to be a comprehensive model, a disadvantage for its use in this study was that it was primarily designed with the formal learning setting in mind. For example, Garrison refers to the “transactional balance between teacher and learner” (p. 23) in the Self-Management dimension and balancing “educational norms and standards (e.g., what counts as worthwhile knowledge) with student choice and the responsibility for constructing personal meaning” (p. 23) in the Self-Monitoring dimension. Although Garrison’s model may not be the most ideal choice for this study as learning for, in, and through the workplace does not just occur in formal educational contexts, researchers have used the model in a range of ways. For example, the model was applied to prisoners’ learning in the prison setting (Batra et al., 2012, April); as a conceptual framework to consider the factors that contribute to adult learning in a study investigating the ways in which science centre exhibition developers build their professional expertise (Young, 2013), and in a study investigating the relationship between intrinsic and extrinsic factors and self-directed learning for unionised nurses (Esposito, 2012). Finally, similar to this study, a team of researchers (Deyo et al., 2011; Huynh et al., 2009) have used both Garrison’s (1997) Self-directed Learning Model and M.J. Fisher et al.’s (2001) SDLRS as the conceptual framework and instrument of measurement respectively, to investigate self-directed learning readiness of pharmacy students. Given that no comprehensive models of health professionals’ self-directed learning could be found and that Garrison’s (1997) model has been used in previous studies, it was selected to inform the development of the interview questions and the coding framework for this study. In addition, although the descriptors for each dimension had at the time of data collection not been operationally defined for research purposes, each dimension was described in some depth by Garrison, enabling the adoption of a deductive approach to the analysis of the data.

3.5.6.1 *Coding processes*

The first step in the use of directed content analysis is the development of an organising (E. H. Bradley, Curry, & Devers, 2007) or coding framework used to “sensitise the researcher and facilitate focusing the inquiry at an early stage” (Morse & Mitcham, 2002, p. 9). In order to create operational definitions for the coding framework, Garrison’s original article was read and re-read a number of times. Others’ interpretations (Abd-El-Fattah, 2010) were also read and where necessary reference was made to the theorists (e.g., Winne, 1995; Zimmerman, 2002) that informed Garrison (1997) in the development of his model. An initial list of codes and descriptors were developed as illustrated in Table 4 being further refined through piloting on the first two interviews undertaken. An iterative cycle was undertaken with first reading the descriptors for each code, then searching for instances of where the code descriptor matched with what participants said in relation to the what, how and why of their learning in the interview transcript and then rereading Garrison’s model, followed by checking of the code descriptor. In doing so, some labels were reworded, definitions clarified and then refined as recommended by Guest, MacQueen, and Namey (2012).

In order to enhance the reliability of the coding framework, intercoder agreement was undertaken following the guidelines outlined by Guest et al. (2012), with the researcher and an experienced occupational therapy academic. The coding framework was explained and clarified before both coded two interviews separately. The outcomes of this coding exercise were compared with discrepancies explored and revision of code definitions where required (E. H. Bradley et al., 2007). In general, both coders paid attention to the same statements (82% agreement), and where the same statement had been highlighted, the intercoder agreement was 81%. Agreement of 80% is used as a guideline to demonstrate reasonable reliability (Guest et al., 2012), although others argue that a lower level of agreement is acceptable, especially in research that is more exploratory (Lombard, Snyder-Duch, & Campanella Bracken, 2002) and where all of the coding is undertaken by one researcher (Bradley et al., 2007). Table 4 presents the final headings and subheadings used for coding the interviews.

Having confirmed the coding framework, the 16 interviews were coded by reading the interview from the beginning, highlighting elements of text where the participant discussed any points in relation to how they described their learning in relation to what they did, how or why. The meaning unit selected for the analysis is that defined by

Graneheim and Lundman (2004) as the “words, sentences or paragraphs containing aspects related to each other through their content and context” (p. 106). Each interview was coded firstly for Self-Management, secondly for Self-Monitoring and finally for Motivation. Each dimension was coded in a different colour and as the meaning in the text became clearer with rereading each interview, parts of earlier coded text were reassigned to different dimensions. Memos were taken of identifiable self-directed learning skills or attributes which did not appear to ‘fit’ within the coding framework. When all interviews were coded, each set of attributes/skills in each dimension were read through, enabling the comparisons across the 16 participants. These comparisons are presented in Chapter Four, organised according to Garrison’s (1997) three dimensions of self-directed learning. The ways in which participants described what they did, how and why could sometimes be summarised across all of the participants, sometimes for many and occasionally for a few, or just one or two. Finally, the transcriptions were reviewed once more, with statements not coded considered for content suggesting attributes for, and skills of, self-directed learning not previously identified in Garrison’s (1997) model of self-directed learning. Using an inductive method of analysis, these statements were themed and compared with the dimension descriptors outlined by Garrison.

Table 4

Coding framework used for analysis of interview data

Dimension with overall descriptor	Relevant attributes for, or skills, of self-directed learning	Examples of statements coded against each attribute/skill
Self-Management External activities including the planning of learning goals, management of the learning resources, learning supports they use and how they know they've achieved their desired outcomes	Goals How they identify their goals, what influences goal settings?	<i>Things that I include in [the CCFR] are real goals and real areas that I want to develop.</i>
	Learning strategies What learning strategies do they use?	<i>I'm a kinaesthetic learner, so the style of the guy who taught appealed...he used a lot of case studies, trying out the techniques...and then reflecting back.</i>
	Learning support Supports such as financial, time etc.	<i>They paid for my study and were keen for me to have that skill.</i>
	Learning outcomes How they know they've achieved their goals?	<i>I come away with a sense of when I get back to work I'm going to be able to do this and this now I've done that.</i>
Self-Monitoring Monitoring of the repertoire of learning strategies, and the awareness of and ability to think about their thinking	Learning strategy rationale How do they decide what strategies to use, how do they know what is most effective?	<i>If I was to choose the best way to learn...it would be to learn alongside someone who was a good sensory therapist and then discuss with them afterwards.</i>
	Integration of learning How do they integrate new learning with existing knowledge?	<i>I'll make connections as I talk to people about it, about how it links in with what I'm going to do now.</i>
	Reflection Do they reflect on their learning, or on themselves as learners?	<i>How that I did it, did I achieve what I wanted to, what's the plan from there?</i>
	External feedback How do they get feedback, do they match between others feedback and their own self-assessment?	<i>...and seeing what it was like...what I didn't know and what people said, what feedback they gave me.</i>
Motivation Process of deciding to participate and stay and persist on tasks	Personal values What is important to them as a learner?	<i>I see something...that's something I want to do and I can absorb and take in...launch myself into that learning.</i>

Dimension with overall descriptor	Relevant attributes for, or skills, of self-directed learning	Examples of statements coded against each attribute/skill
Motivation continued... Process of deciding to participate and stay and persist on tasks	Affective states How do they feel about themselves as a learner, or the learning tasks they undertake?	<i>I have a thirst for knowledge when something... particularly interests me.</i>
	Personal characteristics Do they believe they can achieve goals, overcome adversity that may arise in the learning experience?	<i>I do try very much to do it myself because otherwise I think... you don't really learn very much just by being told the answer.</i>
	Contextual factors What influences their motivation to engage in the activity?	<i>...an awareness of [employer] expectations and developments. What's pressingly being required?</i>
	Task motivation What are the internal and external factors that influence motivation to persist in learning?	<i>But at the same time I keep going...I need to know more about that just in case something happens.</i>

3.5.7 Integrating the qualitative and quantitative data

With the analysis of the 16 interviews completed against each of the three dimensions, the final step was to determine whether the quantitative and qualitative data converged or diverged (Creswell & Plano Clark, 2011) through investigating whether or not there were any differences in what the participants did, how and why in relation to their learning at, for, and through work and their use of the CCFR as a professional development tool. To do this, each participant was categorised as lower, middle or higher scorer according to the location of their SDLRS-A score in relation to the mean score of the total sample. In addition both the lowest and highest scorers, as determined by their score being within two standard deviations from the mean, were identified.

The decision to utilise six participants for this final phase of analysis was determined in part by the inductive, deductive and abductive cycle used in this research. Having determined that there was a range of scores on the SDLRS-A, and that as the analysis of the interviews progressed, participants appeared to have different views about the value of the CCFR as a professional development tool, an observation was made that in some instances, the highest and lowest scorers described the use of their CCFR quite

differently. Having observed this pattern in the interviews, the decision was made to further investigate by sampling the three highest and lowest scorers and comparing these two groups. In selecting these two opposing groups of three participants each, it was thought that any definite differences would be more readily observable, thus providing more in-depth information about the potential connection between use of the CCFR as a professional development tool, and readiness to be a self-directed learner. The results of this analysis are presented under each of the three dimensions of self-directed learning in Chapter Four.

3.6 ETHICAL ISSUES

A number of ethical issues were considered in the design and implementation of this study including respect for persons and beneficence (Marshall & Rossman, 2011). Respect for persons includes respecting individual's rights to their privacy, their anonymity and their right to participate. Ensuring anonymity and privacy are essential in the small profession of occupational therapy, where senior members are often well-known and thus potentially identifiable. The right to participate (or not) was highlighted through the recruitment process, with the researcher unaware of who initially received the invitation to participate from the OTBNZ. Those that did respond to the invitation to participate at both phases of data collection were reminded of their right to choose not to participate (refer to Appendices E and H).

It was noted that full anonymity was not possible, as those who were interested in participating in the study emailed the researcher to request a consent form, and had to return this signed in order to be able to access the URL for the online questionnaire. However, in taking the online questionnaire, participants could retreat into full anonymity with the option to disclose their details only if they wished to receive a copy of their final score. In comparison, interview participants could not be assured of anonymity, but every effort was made to remove or replace data that had the potential to be identifying. For example, where participants gave names of courses attended or delivered in the interviews, these were removed from the interview transcript and from any quotes used, and similarly, if names of services or types of specific services were mentioned, these were also removed. Interviewee participants were also offered the opportunity to select their own pseudonym so there could be no assumption that real names were used in the presentation of data.

However, in selecting their own name, they would be able to later recognise themselves in any publications or presentations of the research.

Another anonymity issue to be considered for the 16 interviewees was that the OTBNZ would know of their involvement in the study, as a copy of their consent form to give permission to extract the contents of their CCFR portfolio had to be sighted by a OTBNZ member. Every effort was made to assure these participants that their anonymity could be preserved. Only one OTBNZ staff member (an administrator) who had no responsibility or role in the assessment of the occupational therapists' competence to practice was involved in this step. This administrator signed a confidentiality form, and on completion of the research all correspondence related to the study was deleted from hardcopy and electronic files.

Beneficence is defined as 'do no harm', and in this study was considered in relation to the interviews. Even though the CCFR portfolio is a mandatory requirement, it can be considered to be a 'private document' accessible only by the occupational therapist, their nominated supervisor(s), their third party-sign off, an auditor (if the CCFR is to be audited) and the OTBNZ staff. Occupational therapists may therefore use it in part as a private reflective tool, including information that they may want kept relatively private. With this in mind, participants were offered the opportunity as to how much content was released for analysis by selecting one or more of the seven competencies. In addition, supervisor, third-party sign-off and auditors' details were excluded, as was any of the other demographic data supplied to the OTBNZ. Thus participants could be assured that they maintained control of their information, allowing only that data they felt comfortable with to be shared. No other harm was expected in relation to participation in the interview; however, participants were also cautioned about the actions that could be taken should anything they shared in the interview be considered as a risk to clients/consumers of their service. This is a legal requirement under the HPCAA (2003).

3.7 SUMMARY OF CHAPTER THREE

This chapter consisted of an overview of the methodology and methods used to collect and analyse the data in order to answer the overarching research question, being: is there any connection between occupational therapists' use of the CCFR as a professional development tool and readiness to be a self-directed learner.

The design of the study has been shaped through the selection of mixed methods, with pragmatism as the underlying philosophy. The strengths and challenges of both were argued, however, the value of mixed methods for this study is that it enabled the in-depth investigation of the multi-faceted phenomenon of readiness to be a self-directed learner using both qualitative and quantitative methods of data collection and analysis. This study used a convergent parallel mixed methods design, with a quantitative phase consisting of an online survey and a qualitative phase consisting of a review of participants' CCFRs, followed by an in-depth interview. In merging the data at the level of analysis, this study aimed to overcome the dualist, fragmented perspective that has tended to be taken by previous occupational therapy researchers to understanding the complex phenomena of self-directed learning readiness of practitioners, allowing the unnoticed to be noticed, assumptions to be questioned and insights to be gained.

In the second section of this chapter, the research questions were introduced, along with the processes used to collect and analyse the quantitative and qualitative data. This chapter concluded with the key ethical issues considered for a population that is neither vulnerable nor powerless, but nevertheless could have felt at risk in participating in this study. The ways in which these issues were addressed are outlined. The next chapter (Chapter Four) presents the findings from the analysis of the qualitative and quantitative data collected.

CHAPTER FOUR: RESULTS

4.1 INTRODUCTION

As outlined in Chapter Three, the purpose of this study was to determine whether there was any basis for the explanation that some occupational therapists may potentially find using the CCFR challenging or frustrating because they lack some of the attributes for, and/or the skills of, self-directed learning. The aims of this study were to investigate the extent to which occupational therapists were ready to be self-directed learners; the factors that may influence readiness to be a self-directed learner; and, whether or not there is a connection between occupational therapists' use of the CCFR as a professional development tool and readiness to be a self-directed learner. With the overarching question for the study being is there any connection between occupational therapists' use of the CCFR as a professional development and readiness to be self-directed learners, the following sub-questions were identified:

1. What is the degree of readiness of New Zealand occupational therapists to be self-directed learners, as measured by the SDLRS-A?
2. Does the SDLRS-A demonstrate internal consistency, and if so, is it more consistent with the factor structure of M. J. Fisher et al. (2001) or with the factor structure of Hendry and Ginns (2009)?
3. Which demographic and occupational variables influence readiness to be a self-directed learner?
4. Do New Zealand occupational therapists' descriptors of their learning at, for, and through work indicate readiness to be a self-directed learner as described by Garrison's Self-directed Learning Model (1997)?
5. Are there any descriptions of learning at, for, and through work relating to readiness to be a self-directed learner, that are unaccounted for in Garrison's Self-directed Learning Model?
6. What influences New Zealand occupational therapists' use of the CCFR as a professional development tool?

In order to answer these questions quantitative and qualitative data was gathered, analysed and integrated. In the first section of this chapter, the demographic data of the 173 occupational therapists who consented to participate in the study is presented, followed by the results of the analysis of the quantitative data undertaken to answer Research Questions One, Two and Three. In the second section of this chapter, the demographic data of the 16 occupational therapists who agreed to be interviewed is reported, along with the directed content analysis of the interviews. This data addresses Research Questions Four through Six.

4.2 DESCRIPTION OF QUANTITATIVE PHASE PARTICIPANTS

In the quantitative phase of the study, 173 occupational therapists who met the inclusion criteria completed the online questionnaire. Table 5 compares the sample of this study with the total population of all registered occupational therapists with a current APC as at 31 March 2010 (OTBNZ, 2010b). As anticipated in a female-dominated profession, the ratio of females to males in the sample was high, and almost identical to that reported by the OTBNZ. Compared with the OTBNZ figure of 51%, just over half (64%) were aged between 36 and 55 years, with the remaining participants distributed across the age bands. The majority (71%) of participants identified as New Zealand European/Pakeha, which is similar to that reported by the OTBNZ. Given the size of New Zealand and the proximity of smaller towns to larger urban areas, participants were asked to only provide their postcode. Using the urban/rural profile categories descriptors (Statistics New Zealand, n.d.), it was apparent that most participants resided in urban areas (including main urban and independent urban areas) with 9% in areas described as either urban satellites, or having moderate to high urban influence, and 8% living in areas where the majority of the population works in rural areas (refer to Appendix J for descriptions of urban and rural areas). As the OTBNZ does not report geographical location, no comparisons could be made.

Table 5

Demographic characteristics as a percentage of the study sample compared with total number of OTBNZ registered occupational therapists (N = 2095) as at 31 March 2010.

Demographic characteristic	n	% of study sample	N	% of OTBNZ registered OTs
Gender (n = 172)				
Male	12	7	164	8
Female	160	92	1931	92
Age (n = 173)				
Under 25	6	4	209	10
26-35	37	21	639	31
36-45	51	30	604	29
46-55	59	34	463	22
56-65	17	10	163	8
65+	3	2	17	1
Geographic location (n = 169)				
Main urban area	128	76		
Independent urban area	13	8		
Rural areas with urban influence ^b	15	9		
Rural area with low urban influence	12	7		
Highly rural or remote area	1	1		
Ethnicity (n = 170)				
New Zealand European/Pakeha	122	72	1399	67
British/Irish	24	14	296	14
Maori	4	2	21	1
Other	20	12	379	18

Note. Only valid percentages are reported as not all respondents chose to answer all questions for all demographic questions. Data for geographic location was not reported in the 2010 OTBNZ (Occupational Therapy Board of New Zealand, 2010) statistics.

^aEthnicities listed included African, Dutch, Samoan, Australian, Filipino, Indian, Other European. ^bRural areas with urban influence includes those living in a satellite urban area, or a rural areas with high or moderate urban influences. Refer to Appendix J for definitions.

In relation to occupational data as shown in Table 6, years of employment as an occupational therapist ranged between 1 and 42 years, with a mean of 16.7 (SD = 9.5), compared with the OTBNZ reported average of 12.3 years. Thus the sample volunteering for this study was slightly more experienced than that of the total population. Over half (63%) of the participants held either an undergraduate diploma or bachelor degree as their highest occupational therapy-related degree. The majority of the participants (73%) were very familiar with the CCFR process, having applied for their APC either five or six times. Just over half of the participants were employed by a district health board with only a small percentage listing more than one employer, and two not employed at the time of

completing the survey. Half of the participants were employed full-time; the remaining part-time, with the majority working between 21 and 37.5 hours per week.

Table 6

Occupational characteristics as a percentage of the sample

Characteristic	N	Valid %
Years of employment (N = 173)		
1 – 10	54	31
11 – 20	63	36
21 – 30	41	24
31 plus	15	9
Highest OT-related degree (N = 173)		
New Zealand registration ^a	9	5
Undergraduate diploma	39	23
Undergraduate bachelor degree	69	40
Postgraduate certificate	20	12
Postgraduate diploma	16	9
Masters/Doctorate	20	12
Years completed APC application process (N = 173)		
One	3	2
Two	10	6
Three	17	10
Four	17	10
Five	24	14
Six	102	59
Current primary employer (n = 170)		
District Health Board	89	52
Private practice	20	12
School-based services	10	6
Tertiary sector (educational programme/research)	8	5
Non-government organisation	7	4
Community/not-for-profit organisation	8	5
Other	6	4
More than one employer listed	22	13
Hours of employment (n = 171)		
Full-time	91	53
Part-time	81	46
Current primary employment setting (N = 173)		
Physical health	53	32
Mental health	36	22
Developmental	18	11
Educational/vocational	17	10
Other	16	10
More than one employment setting listed	26	16

Note. Only valid percentages are reported as not all respondents chose to answer all questions.

^aQualification phased out in 1972

Slightly more participants worked in physical health (32%), than in mental health settings (22%), with the remainder distributed across other settings. This pattern differed from that of the OTBNZ where 49% work in physical health, 19% in mental health, 12% in educational/vocational based services, 7% in developmental services, and the remaining across other settings.

Participants were also asked to provide information about their experience of supervising allied health students and/or occupational therapists, as earlier research (Andersen, 2001) had suggested that this might be a variable that influenced self-directed learning readiness. As shown in Table 7, almost all participants had supervised either allied health students and/or occupational therapists, and over a number of years.

Table 7

Experience in supervision of allied health students and/or occupational therapists

	<i>Allied Health Students</i>		<i>Occupational Therapists</i>	
	Total number N = 172	No of Years N = 170	Total number N = 173	No of Years N = 173
Not supervised	19 (11.0)	18 (10.6)	26 (15.0)	26 (15.0)
Unsure how many supervised	20 (11.6)	—	12 (6.9)	—
1-5	58 (33.7)	57 (33.5)	68 (39.3)	55 (31.8)
6-10	28 (16.3)	35 (20.6)	29 (16.8)	39 (22.5)
11-15	17 (9.9)	26 (15.3)	12 (6.9)	18 (10.4)
16-20	11 (6.4)	14 (8.2)	8 (4.6)	15 (8.7)
More than 20	19 (11.0)	20 (11.8)	18 (10.4)	20 (15.0)

Note. Only valid percentages (in brackets) are reported as not all respondents chose to answer all questions. — = data not obtained.

Overall, the demographic and occupational characteristics of the sample recruited for this study were similar to that of practicing occupational therapists, as reported by the OTBNZ.

4.3 NEW ZEALAND OCCUPATIONAL THERAPISTS' READINESS TO BE SELF-DIRECTED LEARNERS

The first question asked in this study is what is the degree of readiness of New Zealand occupational therapists to be self-directed learners, as measured by the SDLRS-A? However, before being able to answer this question, the internal consistency of the SDLRS-A needed to be determined, firstly due to the slight adjustments that had been made to the scale to reflect the participants focus on learning at, for, and through work as opposed to a formal educational setting, and secondly, because the instrument was used with a different population than that which it had originally been designed for. Thirdly, as discussed in Section 3.5.2.1, previous researchers (M. J. Fisher & King, 2010; Hendry & Ginns, 2009) had not been able to confirm the original three factor structure identified by M. J. Fisher et al. (2001), suggesting the need for further validation studies. Thus, for this study, it was important to first demonstrate internal consistency of the SDLRS-A before undertaking any further analysis of the data.

4.3.1 Analysis of factor structure of the SDLRS-A

The second research question asked in this study is: does the SDLRS-A demonstrate internal consistency, and if so, is it more consistent with the factor structure of M.J. Fisher et al. (2001) or with the factor structure of Hendry and Ginns (2009)? A principal components analysis was undertaken on the 42-item SDLRS-A to evaluate the component structure. The adequacy of the sample for conducting this analysis was confirmed using the Kaiser-Meyer-Olkin test ($KMO = 0.779$) and Bartlett's test of sphericity ($p < .001$) as described by Pallant (2011).

The first task in a principal components analysis is to determine the number of components. There are two generally accepted approaches to this, one being the 'eigenvalue greater than one' Kaiser-criterion, and the other being examination of a scree plot. While both were undertaken for this analysis, the eigenvalue greater than one Kaiser-criterion resulted in 12 components (refer to Appendix K) which, according to Pallant (2011), could be considered to be too many for determining the number of factors for extraction. In addition, Costello and Osbourne (2005) state that the use of the Kaiser-criterion can be one of the least accurate methods for selecting factors, instead recommending the use of the scree plot and parallel analysis.

The scree plot (refer to Figure 4) indicated the presence of between one and four components, with a large discrepancy between the eigenvalues of components one and two, and again between the first two and the third and fourth components. Examination of the scree plot suggests that either a two or four component solution would be optimal. However, given that previous studies have determined either a three or a four factor solution (M. J. Fisher & King, 2010; M. J. Fisher et al., 2001; Hendry & Ginns, 2009), a principal components analysis (O'Connor, 2000) using a varimax rotation was run. Both a three and four-component solution were forced which accounted for 34.5% and 39.4% of the total variance respectively. The results of a parallel analysis also suggested a four component model.

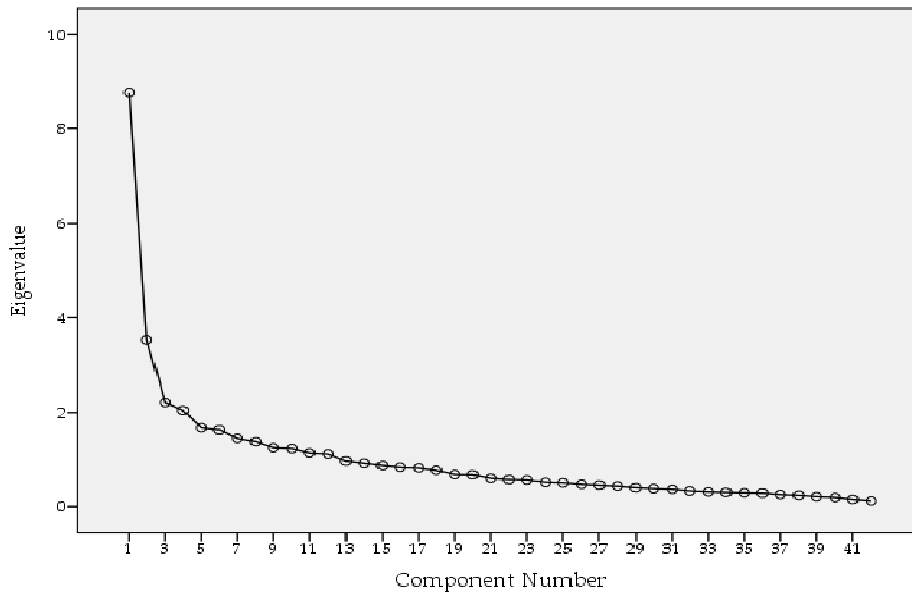


Figure 4. Scree plot of the component analysis for the individual items.

In analysing the three factor solution, only 29 of the 42 items (34.5% of the total variance) were accounted for, with 10 items cross-loading against more than one component and two items (29 and 40) failing to load. In comparison for the four factor solution, 35 of the 42 items were accounted for, with only five items cross-loading and the same two items (29 and 40) failing to load again. In this situation, Costello and Osbourne (2005) recommend selecting the rotation which has item loadings above .30, with few or no items cross-loading, and with more than three items per factor. The four component solution met these criteria and was therefore adopted for this study (refer to Appendix L for the rotated component matrix), with the four component structure accounting for 39.4%

of the total variance with the subtests accounting for 20.9% (Self-Management), 8.4% (Self-Control), 5.3% (Desire for Learning) and 4.9% (Expectation of Self). The two items that failed to load were “I like to gather facts before I make a decision” and “I am not in control of my life”, suggesting that neither of these statements are measuring an aspect of readiness to be a self-directed learner. It is acknowledged that 39.5% of the total variance is not strong,

With the final decision made for a four component structure, all five cross-loaded items were re-examined for their fit in each component, with only one, item 36 (“I can be trusted to pursue my own learning”) being moved from Desire for Learning to Self-Management to ensure a better fit with the other items in that component (refer to Appendix M for the final version of the 40-item scale). As with the two previous studies of the SDLRS, the SDLRS-A and all four subscales in the current study had good internal consistency using Cronbach’s alpha statistic (reported in Table 8), and were deemed fully acceptable for research purposes (Pallant, 2011).

As can be seen in Table 8, the majority of the strongest loading items in each factor corresponded with those reported in previous studies (Fisher et al., 2001; Hendry & Ginns, 2009), especially for the factor labelled Self-Management or Effective Organisation for Learning, and the factor labelled Self-Control or Self-Determination. Similarity of the strongest loading items was also evident between Hendry and Ginns’ (2009) third factor labelled Learning Self-Efficacy and in this study labelled Desire for Learning. However, there was no correspondence between the strongest loading items for Expectations of Self compared with Hendry and Ginn’s final factor, Critical Evaluation. In this study, items loading to Factor 1 (Self-Management) reflected the participants’ approach to their learning, that is, being methodical, systematic and self-disciplined, as well as their time management skills and problem solving abilities. Factor 2 (Self-Control) reflected their approach to evaluating themselves or their practice, goal setting and being both responsible for, and having the autonomy, to make decisions about their learning. Factor 3 (Desire for Learning) related to wanting and needing to learn, enjoying a challenge and being confident to find information. Finally, Factor 4 (Expectations of Self) related to holding high expectations of themselves and their learning, and reflection on their performance. Based on the results of the analysis, the 40-item SDLRS-A can be considered to be a reliable measure of readiness to be a self-directed learner.

Table 8

Comparison of three strongest items factor loadings from present study with previous studies

Present study (40 items, $\alpha = .89$)	Hendry & Ginns (2009) (36 items)	Fisher et al. (2001) (40 items, $\alpha = .92$)
Self-Management (15) $\alpha = .86$	Effective Organisation for Learning (8) $\alpha = .79$	Self-Management (13) $\alpha = .86$
I am self-disciplined I am systematic in my learning I am methodical	I manage my time well I am self-disciplined I am organised	I manage my time well I am self-disciplined I am organised
Self-Control (9) $\alpha = .79$	Self-Determination (4) $\alpha = .72$	Self-Control (15) $\alpha = .83$
I prefer to set my own learning goals I prefer to set my own goals I prefer to set my own criteria on which to evaluate my performance	I prefer to set my own goals I prefer to set my own learning goals I prefer to set my own criteria on which to evaluate my performance	I prefer to set my own goals I like to make decisions for myself I am responsible for my own decisions/actions
Desire for Learning (8) $\alpha = .76$	Learning Self-Efficacy (19) $\alpha = .89$	Desire for Learning (12) $\alpha = .85$
I enjoy learning new information I have a need to learn I want to learn new information	I enjoy learning new information I want to learn new information I can find out information for myself	I want to learn new information I enjoy learning new information I enjoy a challenge
Expectations of Self (8) $\alpha = .72$	Critical Evaluation (5) $\alpha = .72$	
I am responsible I have high personal expectations I have high personal standards	I evaluate my own performance I like to evaluate what I do I critically evaluate new ideas	

Note: Numbers in brackets signify the total number of items included in each factor. α = Cronbach's index of internal consistency

In relation to the second part of the research question which asked whether the SDLRS was more consistent with Fisher et al.'s (2001), or Hendry and Ginn's (2009) factor analysis, the present study identified the presence of four over three factors, therefore being closer to Hendry and Ginn's (2009) four factor structure. However, analysis of the highest loaded items between the items in this study and that of Hendry and Ginns revealed that although there were close similarities between Factor 2: Self-Control

in this study and the factor labelled Self-Determination in Hendry and Ginn's study and Factor 3: Desire for Learning in this study and the factor labelled Learning Self-Efficacy in Hendry and Ginn's study, there were also some differences. While differences in the number and contents of each factor could have occurred due to the slight changes made to the scale as outlined in Chapter Three, closer examination shows that apart from the reintroduction of two items previously removed by M. J. Fisher et al. (2001), as they failed to achieve the 0.3 loading, the four slightly modified items (refer to Table 3) still loaded to the same factors as in M. J. Fisher et al.'s (2001) and Hendry and Ginn's (2009) study. Thus, all three groups answered these items in similar ways, suggesting that the minor changes to these four statements did not greatly influence item loading. The differences in factor structures may instead be related to the difference in samples. Occupational therapists with ongoing learning experiences may respond differently to the SDLRS-A items, compared with undergraduate nursing and medical students who are commencing or underway with tertiary study, but have not yet had the opportunity to extend themselves as self-directed learners in the workplace.

4.3.2 Readiness to be a self-directed learner

Having determined that the items on the SDLRS-A appear to measure attributes for, and skills of, self-directed learning, and that the minor changes made during the piloting of the instrument with occupational therapists had not influenced the reliability of the instrument, the next question to be investigated was the degree of readiness of New Zealand occupational therapists to be self-directed learners.

Using the 40-item scale, participants' total scores were found to closely approximate the normal distribution as illustrated in Figure 5, with scores ranging from 132 – 194, with a mean of 162 ($SD = 13.6$, 95% CI [160, 164]). Participants' total scores for Self-Management ranged from 35 – 74, with a mean total of 56.3 ($SD = 7.73$, 95% CI [55.2, 57.5]); for Self-Control from 24 – 45, with a mean total of 36.2 ($SD = 4.07$, 95% CI [35.6, 37.0]); for Desire for Learning from 19 – 40, with a mean total of 33.7 ($SD = 3.55$, 95% CI [33.2, 34.2]); and, for Expectation of Self from 28 – 40, with a mean total of 35.8 ($SD = 2.74$, 95% CI [35.4, 36.2]).

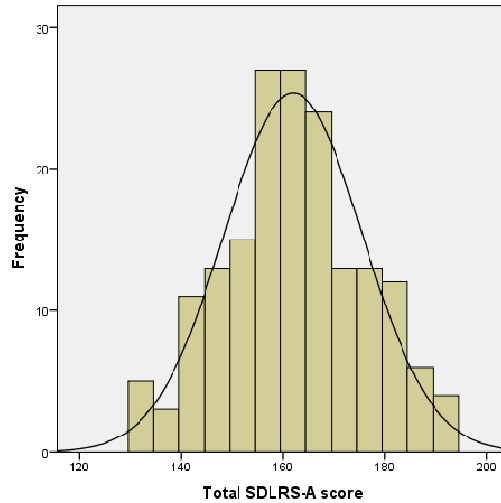


Figure 5. Histogram illustrating frequency of total SDLRS-A scores across 173 participants

When using the SDLRS, both M. J. Fisher et al. (2001) and Smedley (2007) recommend that a score of 150 or higher is used to indicate readiness to be self-directed learners. Although the SDLRS and the SDLRS-A are not identical, 34 of the 40 items remained unchanged between the two versions, and of the six items that differed, four had only minor word changes, loading to the same factors as in the original study. Therefore, although an exact comparison is not possible, the means are sufficiently close enough to suggest that occupational therapists are as ready to be self-directed learners as nursing students. Similarly, as illustrated in Table 9, and similar to earlier studies (M. J. Fisher et al., 2001; Smedley, 2007), participants tended to rate themselves lower on being ready to manage their learning than on perceived levels of self-control, desire for learning, and expectations they hold of themselves. However, it must also be pointed out that the difference in means between the four subtests may also be a function of how the items were constructed, and thus the way they are interpreted by the individual. Given that the apart from internal consistency, the reliability of the SDLRS has not been determined, it is possible that on a different day, or in a different circumstance, some participants may answer the statements slightly differently, and thus difference in means may be less or more so.

Table 9

Range, item means and standard deviation of participants' scores on SDLRS-A subtests

Subtest Scale	Min-Max	<i>M</i> [95%CI]	<i>SD</i>
Self-Management (15 items)	2.3 – 4.9	3.75 [3.68, 3.83]	0.52
Self-Control (9 items)	2.7 – 5.0	4.02 [3.95, 4.09]	0.45
Desire for Learning (8 items)	2.4 – 5.0	4.21 [4.15, 4.28]	0.44
Expectation of Self (8 items)	3.5 – 5.0	4.47 [4.42, 4.52]	0.34

The next section of this chapter presents the analysis of the data in relation to Question Three being which demographic and occupational variables influence readiness to be a self-directed learner?

4.3.3 Influencers of self-directed learning readiness

The impact of demographic and occupational variables on the SDLRS-A 40-item total and subtest scores were examined, with an alpha level of .05 used to assess significance for all statistical tests. It is acknowledged that an unadjusted alpha level leads to an experiment-wise error rate greater than .05, but a Bonferroni adjustment was not used here, as it was thought important to capture differences that may be potentially interesting for future research. All effect size magnitudes were assessed against Cohen's conventions (Graziano & Raulin, 2013; Pallant, 2011) and unless otherwise stated, all analyses included both the SDLRS-A total and subtest scores.

The first two demographic factors examined in this study were gender and employment status, to determine whether or not either of these variables impacted the total SDLRS-A and subtest scores. Independent-samples t-tests (two-tailed) were conducted for these two variables as shown in Table 10, with no statistically significant difference found between the SDLRS-A scores of females and males, nor between the SDLRS-A scores of full or part-time employment status.

Table 10

T-test results for gender and employment for SDLRS-A total and subtest scores

	Gender		<i>t</i>	<i>df</i>	Employment		<i>t</i>	<i>df</i>
	Female	Male			F/T	P/T		
Total score	4.05 (0.34)	4.00 (0.32)	0.5 3	170	4.04 (0.35)	4.05 (0.32)	0.0 6	169
Self-Management	3.76 (0.51)	3.67 (0.59)	0.5 6	170	3.73 (0.54)	3.75 (0.51)	0.2 7	169
Self-Control	4.02 (0.46)	3.95 (0.40)	0.4 9	170	4.06 (0.42)	3.97 (0.48)	1.2 0	169
Desire for Learning	4.21 (0.45)	4.22 (0.42)	0.0 4	170	4.18 (0.50)	4.24 (0.36)	0.8 5	169
Expectation of Self	4.48 (0.35)	4.44 (0.30)	0.3 9	170	4.47 (0.36)	4.48 (0.32)	0.2 4	169

Note. * = $p \leq .05$. Standard deviations appear in parentheses below means. F/T = Full-Time, P/T = Part-time

One way analyses of variance (ANOVAs) were conducted to investigate the impact of the following variables on the SDLRS-A and subtest scores:

- age
- number of years employed as an occupational therapist;
- number of years completing CCFR;
- highest level of occupational therapy-related qualification;
- number of allied health students, and/or occupational therapists supervised;
and
- number of years having supervised allied health students, and/or occupational therapists.

One-way ANOVAs were selected for this analysis as all data collected was either already categorical, for example, number of students supervised 1 – 5, 6 – 10 and so on, or was converted to a categorical variable prior to data analysis, for example, number of years employed was converted from the actual number given to categories of 1 – 5 years, 6 – 10 years and so on. As part of the analysis, it was found that some categories had too few numbers and were either collapsed or removed from the analysis. The number of groups in each variable is included in the notes section for Tables 11 and 12.

As shown in Table 11, no statistically significant differences were found between groups for age, number of years completing the CCFR (CCFR), highest level of occupational therapy-related qualification (Qual), and number of years supervising occupational therapists (YrsSupOT), and the SDLRS-A or subtest scores.

Table 11

Non-significant ANOVA statistics for differences in SDLRS-A total and subtest scales scores for age, number of years completing CCFR, level of qualification and number of years supervising occupational therapists

Scores	Age ^a (n = 173)	CCFR ^b (n = 173)	Qual ^c (n = 173)	YrsSupOT ^d (n = 147)
Total				
<i>F</i>	0.49	0.09	1.34	1.49
<i>p</i>	.75	.91	.27	.23
Self-Management				
<i>F</i>	0.78	0.53	0.73	.679
<i>p</i>	.54	.89	.54	.51
Self-Control				
<i>F</i>	0.56	0.43	2.18	2.56
<i>p</i>	.70	.65	.09	.08
Desire for Learning				
<i>F</i>	0.61	0.34	1.40	1.02
<i>p</i>	.66	.71	.25	.36
Expectation of Self				
<i>F</i>	0.29	0.58	2.07	.11
<i>p</i>	.89	.56	.11	.90

Note. ^aAges grouped into under 25, 26-35, 36-45, 46-55, 56-65 and 65 yrs plus. ^bCCFR grouped into 1-2, 3-4 and 5-6 years. ^cQualification grouped into Registration/Diploma, Bachelor, Postgraduate Certificate/Diploma, and Masters/Doctorate. ^dNumber of years supervised occupational therapists grouped into 1-10, 11-20 and 21 years plus

As shown in Table 12, at least one statistically significant difference between groups was found for the variables of number of years employed as an occupational therapist (Yrs Emp), the number of allied health students supervised (SupAH), the total number of years allied health students had been supervised (YrsSupAH), and the number of occupational therapists supervised (SupOT). In reaching statistical significance, the actual difference in

mean scores between groups across all variables was small to medium, according to Cohen's conventions.

Table 12

Significant ANOVA statistics for differences in SDLRS-A total and subtest scales scores for number of years employed, number of allied health students and occupational therapists supervised, and number of years supervising allied health students.

Scores	Yrs Emp ^a (N = 173)	SupAH ^b (N = 152)	YrsSupAH ^a (N = 152)	SupOT ^b (N = 147)
Total				
<i>F</i>	5.46	3.25	2.52	2.70
<i>p</i>	.01*	<.04*	.08	.07
η^2	.06	.04		
Self-Management				
<i>F</i>	5.94	3.52	1.40	.44
<i>p</i>	.00*	.02*	.25	.64
η^2	.07	.04		
Self-Control				
<i>F</i>	2.96	3.28	4.88	3.55
<i>p</i>	.05*	.04*	.01*	.03*
η^2	.03	.06	.06	.05
Desire for Learning				
<i>F</i>	2.56	1.81	1.76	5.15
<i>p</i>	.08	.17	.18	.01*
η^2				.07
Expectation of Self				
<i>F</i>	1.49	.170	1.57	.53
<i>p</i>	.28	.84	.21	.59
η^2				

Note. * $p < .05$.

^aYears employed and number of allied health students supervised grouped into 1-10, 11-20 and 21 years plus. ^bNumber of allied health students or occupational therapists supervised grouped into 'not supervised', 1-10, and 11 years plus.

Tukey's Honestly Significant Difference (HSD) post-hoc tests were conducted to assess which groups were different to which other groups for each of the occupational variables that reached statistical significance, as shown in Table 13. The first variable of interest is that of years employed where a statistically significant difference in scores was found between number of years employed as an occupational therapist, and the total SDLRS-A score, and the Self-Management and Self-Control subtests. The total SLDRS-A score was found to be statistically significantly higher for the 11 – 20 years and 21 years

plus employed groups, compared with those employed for 1 – 10 years. Therefore, experience did appear to influence readiness to be a self-directed learner with those employed as an occupational therapist for more than 11 years having a significantly different higher total score, compared with their less experienced peers. However, these findings also show that mean total SDLRS-A score did not continue to rise with experience, with no difference in the means of those employed for 11-20 years compared with those employed for more than 21 years.

Table 13

Comparison of significantly different groupings within each variable for mean total and subtest SDLRS-A scores

	Total SDLRS-A	Self-Management	Self-Control	Des for Learning
Yrs emp				
1-10	3.93 [3.84, 4.01]	3.57 ^a [3.41, 3.73]	3.92 ^a [3.83, 4.02]	
11-20	4.12 ^a [4.03, 4.20]	3.89 ^b [3.77, 4.00]	4.00 ^{ab} [3.87, 4.13]	
21 plus	4.08 ^a [4.00, 4.18]	3.78 ^{ab} [3.66, 3.91]	4.13 ^b [4.00, 4.25]	
SupAH				
Not sup	3.90 ^a [3.78, 4.03]	3.65 ^x [3.48, 3.83]	3.76 ^a [3.52, 4.01]	
1-10	4.03 ^{ab} [3.96, 4.09]	3.70 ^x [3.58, 3.82]	3.99 ^{ab} [3.91, 4.08]	
11 plus	4.13 ^b [4.01, 4.25]	3.92 ^x [3.78, 4.06]	4.13 ^b [3.98, 4.28]	
YrsSupAH				
1-10			4.00 ^a [3.92, 4.09]	
11-20			4.02 ^a [3.88, 4.17]	
21 plus			4.33 [4.14, 4.52]	
Sup OT				
Not sup			4.33 ^a [4.10, 4.57]	4.61 [4.39, 4.84]
1-10			3.98 ^b [3.89, 4.07]	4.19 ^a [4.10, 4.28]
11 plus			4.09 ^{ab} [3.94, 4.24]	4.23 ^a [4.07, 4.38]

Note: Means sharing the same superscript are not significantly different from each other (Tukey's HSD, $p < 0.05$) Bracketed numbers are 95% confidence intervals of the means. Blank cells indicate no statistically significant differences were found in that variable for any groupings.

^xStatistical significance achieved overall, but Tukey's HSD did not find any significant differences between the groups for this variable.

A different pattern was found for the Self-Management and Self-Control subtests and years employed as shown in Table 13. Similar to the SDLRS-A total score, the Self-Management mean scores differed significantly for the 11 – 20 years group compared with the 1 – 10 years employed group, while the mean score for the 21 years plus group was not

statistically significant from the other two groups, lying somewhere in the middle. Although it was thought that the Self-Management subtest scores would increase in relation to the number of years employed, this was only partially supported with those who were employed for 11 – 20 years scoring highest on this subscale. The second subset score examined was Self-Control, with the 21 years plus mean score differing significantly from the 1 – 10 years, with the 11 – 20 years group falling in the middle and not differing from either of the other two groups. Therefore, while the mean score on this subtest did increase with number of years employed, the difference in means was only significant when the least experienced group was compared against the most experienced group, and even then the difference was small according to Cohen's conventions, as shown in Table 12.

The second variable of interest was that of number of allied health students supervised, where a relationship was found between the number of students supervised and the total SDLRS-A scores along with the Self-Management and Self-Control subtests, although interestingly Tukey's HSD did not find any significant differences between the groups for the Self-Management subtest. As shown in Table 13, the total SDLRS-A score was found to be statistically significantly higher for the supervised 11 plus and not supervised allied health students groups, with no statistically significant difference found between these two groups and the 1 – 10 allied health students group. Therefore, while the mean score did increase in relation to experience of supervising students, the difference was only significant when the no experience group was compared to the most experienced, although according to Cohen's conventions the difference in means was small. A similar pattern was also seen for the Self-Control subtest score with the mean score for each group increasing in relation to number of allied health students supervised. However, similar to the total SDLRS-A score, the difference in means was only statistically significantly different for the not supervised and supervised 11 plus allied health students groups, although the effect size according to Cohen's conventions was medium indicating a larger difference between the means.

The last two variables were that of supervision of occupational therapists and number of years supervising allied health students, where as shown in Table 13, the number of occupational therapists supervised impacted on the subtest scores of Self-Control and Desire for Learning, and the number of years supervising allied health students impacted on the subtest score of Self-Control. The Self-Control subtest score mean scores for the not supervised and supervised 1 – 10 occupational therapists groups differed

significantly, with the 11 plus group means to be found not significantly different from either of the other two groups, falling somewhere in the middle. Although it was thought that Self-Control subtest scores might increase in relation to the number of occupational therapists supervised, this did not appear to hold true, with the mean score for the not supervised occupational therapists group being higher than either of the other two groups, with a small effect size. Equally, the Desire for Learning subtest score was statistically significantly higher for the not supervised group, compared with the supervised 1 – 10 and 11 plus groups, with no statistically significant difference found between the two groups with experience of supervision. Therefore, whereas it was thought that the Desire for Learning subtest score would increase with the number of occupational therapists supervised, this was not the case with the highest and statistically significant score being the group who had not supervised other occupational therapists.

Finally, the Self-Control subtest score was statistically significantly higher for the supervised allied health students 21 plus years group, compared with the supervised allied health students 1- 10 years group or the 11 – 20 years group, whereas there were no statistically significant differences between the supervised allied health students 1 – 10 years group, compared with the supervised allied health students 11 – 20 years group. While it was thought that the Self-Control subtest score would increase incrementally with the number of allied health students supervised, this was only partially true as while there was no statistically significant difference between 1-10 years group, compared with the 11-20 years group, those who had supervised allied health students for 21 years or more did have a statistically significant higher score.

In summary, Question Three asked is there any relationship between the SDLRS-A subtest and total scores, and the demographic and occupational variables? Based on the results of the t-tests and one-way ANOVAs, the demographic variables of age and gender and the occupational variables of number of years completing CCFR, level of occupational therapy related qualification, number of years supervising occupational therapists, and part or full-time employment, did not significantly influence either the total SDLRS-A score or any subtest scores. Participants likely to have a higher mean total SDLRS-A score were those who were more experienced in terms of years of employment, and those who have supervised a greater number of allied health students. The more experienced practitioners in terms of years of employment were also the group more likely to score higher in the Self-Management subtest than their less experienced peers, while both the groups

experienced in years of employment and who have supervised the greater number of allied health students were also more likely to have the higher Self-Control score. The other interesting finding is for the Self-Control subtest, where those who have been employed the highest number of years, and have supervised the greatest number of allied health students over the greater number of years, were more likely to have the highest mean Self-Control subtest scores.

Based on the results of the analysis of this sample, years of experience and experience in supervision does appear to influence readiness to be a self-directed learner. However, although the SDLRS-A scale provides data related to participants' readiness to be self-directed learners, it does not provide information about whether there is a connection between occupational therapists' use of the CCFR as a professional development tool and their readiness to be a self-directed learner. The knowledge of what people actually do, how and why is also vital which is the focus of the fourth, fifth and sixth research questions.

4.4 LEARNING AT, FOR, AND THROUGH WORK

To gain an understanding of how New Zealand occupational therapists describe learning at, for, and through work, and their use of the CCFR as a professional development tool (Research Questions Four to Six), the sixteen interviewee's transcripts were analysed using Garrison's (1997) three dimensions of Self-Management, Self-Monitoring and Motivation of his Self-directed Learning Model as the framework. Although Garrison presents these as three intimately connected dimensions (refer to Figure 3, page 44), for the purposes of this chapter each dimension is presented separately. As the overarching research question aims to determine whether there is any connection between use of the CCFR as a professional development tool and self-directed learning readiness, participants were identified as being low, middle or higher scorers related to whether their total score fell within or outside one standard deviation of the mean ($M = 162$). To determine whether any definite differences existed, comparisons are made between the three highest (Janet, Doug and Autumn⁵) and three lowest (Ivan, Tony and Lanie) scorers.

In the following sections, the demographic and occupational data for the 16 interviewees is presented first, followed by that of the six highest and lowest scoring

⁵ All names used in this study are pseudonyms.

participants. Participants' descriptions of what they do, how and why for learning at, for, and through work, along with descriptions of their use of the CCFR as a professional development tool is presented next under the headings of Self-Management, Self-Monitoring and Motivation, with a section at the conclusion of each dimension specifically comparing the highest and lowest scoring participants. It is worth noting that although Garrison (1997) refers to learning goals and in the CCFR the term used is SMART objectives, participants in this study invariably used the words goals and objectives interchangeably. Therefore throughout this chapter, these two terms are also used interchangeably.

4.5 CHARACTERISTICS OF INTERVIEW PARTICIPANTS

As shown in Table 14, the gender balance for the interviewees was equal, with the majority (81%) aged 36–45, living in the main urban area similar to the total sample of 173. Eleven (69%) of the 16 participants identified as New Zealand European/Pakeha the rest identifying with different ethnicities and two declining to answer this question which was also similar to the total sample. In relation to occupational characteristics, most were very experienced in completing the CCFR process compared with the total sample and half held postgraduate occupational therapy-related qualifications with the group being equally divided between having worked 1 – 10 years or 11 – 20 years. Thus this group was more experienced in some aspects, but proportionally had worked for fewer years.

Employers ranged from the district health boards through to the tertiary education sector, with just over half of the participants being employed in the DHB sector (similar to the total sample), and in mental health services, which was somewhat different to the total sample. The majority of this group had supervised between 1 – 10 allied health students and/or 1 – 10 occupational therapists being similar to the larger sample. The mean (161) and range (141-185) of scores for the 16 participants was similar to the mean (162) and range (132-194) of the total sample.

As outlined in Chapter Three, the three lowest and highest participants were identified on the basis of their scores which were within two standard deviations of the mean of 162, enabling further in-depth comparison between use of the CCFR as a professional development tool and self-directed learning readiness. The three scorers with the lowest SDLRS-A total scores were Ivan, Tony and Lanie. Their scores were in the

range of 141 – 144, being within two standard deviations from the mean, and lower than the score of 150 recommended by M. J. Fisher et al. (2001) and Smedley (2007) to indicate readiness to be self-directed learners. The three highest scorers, Autumn, Doug and Janet scored in the range of 181 – 185, also within two standard deviations from the mean. In relation to the four subtests, for Self-Management, the two groups scored either well below or well above the mean in line with their total score. A similar pattern was seen in Self-Control for the three higher scorers who all scored well above the mean, whereas the lower scorers scored on the mean or below, and similarly for Desire for Learning, although the lower scorers were more mixed with Tony scoring above the mean and Lanie and Ivan below the mean. Finally, for Expectation of Self, the lower scorers scored on or above the mean, whereas Doug's score was the same as the mean, and Janet's and Autumn's scores only slightly higher. However, it must be remembered that of all the subtests, Expectation of Self had the highest mean score of all four subtests, and the smallest standard deviation, therefore the similarity of scores is perhaps not surprising.

As shown in Table 14, these two groups were similar in age and all but one worked full-time. Level of qualification varied across the two groups, their type of employer and their experience of using the CCFR. In relation to those variables found to be significant influencers of readiness to be self-directed learners, Ivan, Tony and Lanie (the lower scorers) had been employed as occupational therapists for ten years or less, supervised fewer allied health students than Autumn and Janet, and fewer occupational therapists than Doug and Janet. Autumn, Janet and Doug had all been employed for more than 13 years.

Table 14

Demographic and occupational characteristics of participants interviewed

Name	Total SDLRS-A score	Age	CCFR ^d	Qual	Yrs Emp	Emp	Full/part time	Emp Focus	SupAH (YrsSup)	SupOT (YrsSup)
Ivan ^a	141 ^c	36-45	4	Bach	10	DHB	Full-time	MH	6-10 (6-10)	6-10 (1-5)
Tony ^a	143 ^c	36-45	6	Bach	5	NGO	Full-time	MH	1-5 (1-5)	1-5 (1-5)
Lanie	144 ^c	26-35	6	PGC	7	DHB	Full-time	MH	6-10 (1-5)	1-5 (1-5)
Dave ^a	150	26-35	6	Bach	6	Educ	Full-time	> 1	1-5 (1-5)	1-5 (1-5)
Valerie	151	46-55	1	PGC	8	NGO	Part-time	MH	Not sup	1-5 (1-5)
Annie	152	26-35	5	PGD	9	Tertiary	Part-time	PH	1-5 (6-10)	6-10 (6-10)
Thomas ^a	155	36-45	4	Bach	14	DHB	Full-time	MH	11-15 (6-10)	6-10 (6-10)
Perre	159	46-55	6	Bach	17	DHB	Part-time	PH	Unsure (1-5)	Not sup
Muzza	160	36-45	6	Bach	8	DHB	Part-time	> 1	1-5 (1-5)	6-10 (6-10)
Alex ^a	161 ^b	46-55	5	Dip	6	DHB	Part-time	PH	Not sup	Not sup
Matt ^a	165	36-45	5	Master	13	Tertiary	Full-time	MH	11-15 (6-10)	1-5 (6-10)
Paul ^a	169	46-55	6	PGC	13	DHB	Full-time	MH	6-10 (11-15)	6-10 (6-10)
Ellen	175	26-35	6	PGC	11	DHB	Full-time	MH	1-5 (1-5)	1-5 (1-5)
Doug ^a	180 ^c	36-45	6	Doc	19	Tertiary	Full-time	Other	6-10 (6-10)	16-20 (16-20)
Autumn	181 ^c	36-45	3	Bach	13	Tertiary	Full-time	> 1	20 + (6-10)	1-5 (6-10)
Janet	185 ^c	36-45	5	Master	16	< 1	Part-time	MH	20 + (11-15)	11-15 (6-10)

Note. Participants are listed in table from lowest to highest SDLRS total score. All participants live in a main urban area except for Alex, Lanie and Perre who live in rural areas with low urban influence. Bach = Undergraduate bachelor degree; PGC = Postgraduate Certificate; PGD = Postgraduate Diploma; Master = master level degree; Doc = Doctorate; DHB = District Health Board; NGO = Non-Government Organisation; Educ = School providing specialist therapy services; Tertiary = Tertiary Education; MH = Mental health; PH = Physical Health, > 1 = more than one employment focus.

^aRefers to male participants. ^bMean total SDLRS ^cTotal score within two standard deviations of the mean. ^dNumber of years completing CCFR. Note there is no relationship between years employed and years completing CCFR as participants may have only included years employed in their current position, compared with total years employed as an occupational therapist.

4.6 DIMENSION ONE: SELF-MANAGEMENT (TASK CONTROL)

One dimension of Garrison's (1997) Self-directed Learning Model is that of Self-Management which encompasses "what learners *do* during the learning process" (p. 23). According to Garrison, self-managing learners, in collaboration with their teachers, continuously assess and negotiate goals, learning strategies and resources, and outcomes to be achieved. In applying the model to occupational therapists' learning, instances of how the participants determined and documented their learning goals or objectives, the types of learning strategies and resources used, and the ways in which participants identified that learning had occurred, or outcomes had been reached are outlined. In addition, in analysing the interview transcripts, it was also apparent that there was a gap in Garrison's model. As participants described the processes of determining their learning goals, they also described how they identified their learning needs, an aspect of self-directed learning not specifically addressed in Garrison's model. The 16 participants' descriptions of what they did, how and why to manage their learning both at, for and through work, and in relation to their CCFR is presented in the following sections, starting with the identification of their learning needs.

4.6.1 Learning need identification

The processes by which learning needs were identified varied across the 16 participants, however, almost all participants described a process of identifying their learning needs based on perceptions of their competence or confidence in the knowledge and skills required to offer an effective service for their clients. For example, Doug, a higher scorer, described situations where he had not "*been sure about something*" as being the initial driver for identifying a learning need, Autumn's (a higher scorer) indicator was when she felt unhappy about her performance, whereas Dave, a middle scorer, described a feeling of awkwardness as being the cue that he lacked the necessary knowledge to meet a particular client's needs. Thus for most participants, identification of learning needs arose from a feeling of disquiet, or lack of comfortableness related to their performance, or through self-assessing against their own internally derived criteria.

While the descriptions of higher scorers Doug and Autumn, middle scorer Dave and lower scorer Lanie are examples of self-reflection which may or may not be shared with others, Paul (a middle scorer) described how daily informal discussions with his

colleague gave the opportunity to reflect on his practice, and through this, *“to recognise some of those things that are coming up...so you know what you’re going to look for when you do go to do some learning.”* Interactions could also occur in more formal ways, for example Valerie, a middle scorer, found formal supervision valuable, where the supervisor *“would really get me thinking on a completely different level”*, the outcomes of which would assist Valerie in identifying *“ what would I love to do? What would it be good to do next?”* Thus, Valerie used supervision to assist in the identification of her CCFR learning needs. Similarly, reflecting on an experience with the guidance from a skilled supervisor provided opportunities for Janet (a higher scorer), to identify something *“that might need to be learnt or something that I might need to know”*, which she drew from when developing her CCFR learning goals. For some participants, having a supervisor who acted in the role of challenger, or sounding board enabled them to work through a process of identifying their learning needs.

While self-reflection alone or reflection within a supervisory relationship enabled learning need identification, with individuals assessing against primarily internally derived criteria, some participants also gave examples of how learning needs were identified through the process of self-assessment against externally derived criteria. For example, Ivan, a lower scorer, described the process of determining his CCFR learning needs through thinking about *“what you’re actually doing in your job”*, determining what he needed to learn in order to perform in his role. Alex, a middle scorer was a little more specific, describing how he identified his learning needs through considering each OTBNZ competency, and thinking *“whether I have any sort of doubts”* about his performance. Higher scorers such as Janet and Doug were even more specific, describing a process of assessing themselves against both their job description, and the OTBNZ competencies, in order to identify their CCFR learning needs. Doug explained, *“like in relation to my job...what are the things I’m not sure about or...that I need to know a little more...in relation to [that] competency.”*

While middle scorer Alex’s and higher scorers Janet’s and Doug’s examples point more to the participants self-assessing without necessarily reference to others, some described using processes that also involved comparing the results of their self-assessment with others’ (e.g., managers or supervisors) assessment of their performance, using for example a formal performance appraisal system, or other external benchmarking systems. Autumn (a higher scorer) gave the example of completing a research portfolio for

assessment by an external agency, with the outcomes of that assessment providing the impetus for identification of her learning needs. Similarly Muzza's (a middle scorer) CCFR learning needs were identified following performance appraisals, with strengths and areas to work on identified with her manager, and as Muzza explained, "...at the end of the meeting...you go away and everybody kind of has some ideas..." of what needs to be addressed. For these participants, having externally developed criteria against which they were assessed by their manager, or other, led to the identification of knowledge or skill gaps from which learning goals, either generally, or for their CCFR were generated. Some participants also described the value of gaining feedback from others about their performance as an integral part of their self-assessment, in order to develop learning goals. Doug (a higher scorer) formally seeks feedback from his team "*which then informs areas that I might need to develop myself*", whereas Dave (a middle scorer) described a simple process of informally getting feedback from the therapists he supervised, in order to identify what he could do better, which then became a learning goal in his CCFR.

Self-assessment, whether against internally or externally derived criteria, and alone or with others either informally, or through a formal review process, requires that the individual have the time and space to reflect on their current performance. In order to identify her learning needs, Janet (a higher scorer) described her need "*to have some space or create some space to put all those ideas together and then look at where the gaps are.*" Another of the higher scorers, Doug, described a process of creating space, usually at the end of his workday to "*think about where am I going and what do I need to do to get there*", which gave him a "*good bank of ideas of things that I would like to do*", which he drew from when determining his CCFR learning goals. Similarly, Perre (a middle scorer), identified how changing her work hours to part-time had given her more time to reflect on her performance in order to accurately identify her learning needs and set appropriate learning goals, compared with when she had worked full-time.

Finally, while most participants described the process of identifying learning needs in relation to their employment as an occupational therapist in a specific service, several of the participants noted that they chose to identify learning needs related to their own professional interests. In referring to her CCFR goals, Annie (a middle scorer) described how she has,

...always felt like I set the goals for what I wanted to do, rather than what a service wanted me to do. I've been quite lucky that way. Umm, so I've usually been able to

follow my interests and I'm interested in lots of things, so I've never really had a problem finding goals.

Similarly, Thomas (a middle scorer) described how he had identified an interest in exploring a particular topic that was not to do with his job per se, but was an area that he was motivated to understand more about. However he countered this interest by stating that although he had identified this as a learning need, he had not pursued it for his CCFR goals, because the topic was *“more just for me and a bit fanciful.”*

4.6.2 Goal determination and documentation

All participants recounted experiences of determining and documenting learning goals, whether more generic or for their CCFR, with almost all participants describing the importance of having goals that were meaningful and relevant to them. As described in the previous section, for many of the participants, learning goals arose from either their self-assessment against internally derived criteria, or externally determined criteria such as the CCFR competencies or job descriptions. Sometimes these participants had clearly articulated learning needs that informed their learning goals, but for others, the learning need was less clearly articulated. For a few participants, learning goals were developed out of formal structures such as performance appraisals, with employer expectation being an influencing factor. For example, Alex (a middle scorer) stated that his CCFR goals are *“generally related to something I'm working on at the current time”*, whereas for others, goals may not have come from the identification of a specific learning need, but rather be determined by the employer, for example, Tony (a lower scorer) stated that *“when I came into [workplace] they were keen that I do [a specific training course].”* Goal setting for some was also influenced by the future direction of their employer, for example, Valerie and Dave's (both middle scorers) goals were both influenced by their decision to ensure that they had the knowledge and skills required for where the service might head in the future.

In contrast, for some participants, the stimulus for setting a goal was the cues in externally provided resources such as professional development calendars. Annie and Muzza (both middle scorers) used calendars of events with Annie saying *“I love having a whole year diary in front of me and going, I want to go to this and I want to go to that”*, and Muzza talked about *“knowing what's out there”* to assist her to identify her learning goals. Dave (a middle scorer) added that what is ‘coming up on the horizon’ not only

includes “*what’s coming up as an opportunity through work but things that I want to explore to try and improve my [client’s] lives.*” However, Paul (also a middle scorer) warned against this longer term planning stating “*...a number of things can come up but by the time you’ve sort of planned it, um something else has cropped up and it just um it can become a mountain if you’re not careful.*” He goes on to say that from his perspective, the important thing is to identify exactly what it is that you want to learn and to pursue it, which becomes a challenge when he tries to translate these into CCFR goals. For Paul, sometimes what is planned early in the year is no longer relevant as other opportunities have cropped up.

For some participants, goals were not always determined or committed to once the learning need had been identified, rather time was given to exploring if the learning need, and thus goal was valid in relation to the expectations of their workplace, or of themselves, and could be met with the resources available to them. For example Doug (a higher scorer), described how in thinking about which goals to include in his CCFR, he asks: “*what is the thing that’s most important or perhaps make the biggest difference*”, and what resources he can access to enable meeting the goal. Dave (a middle scorer) uses a similar process of having “*usually thought a lot about where I am, and where hopefully I’m going in that year...and [what the employer’s] direction is too*”, ensuring that his goals align with the focus of the service. Answering these questions assisted these participants in deciding whether they should commit to their learning goal, or not.

Several participants also considered their future, weighing up the relevance and usefulness of the CCFR goal for this year, against their longer term personal or professional goals. For some, this longer term goal might be more personal, for example, assisting them to work towards being a particularly type of occupational therapist as described by Tony, a lower scorer, “*I like to look back...to think about where I’ve come, if I’ve come as far as I’ve wanted to... then to, with that knowledge...to have goals and objectives that reflect where I want to be*”, or based on the skills and/or knowledge they perceived they may need in the future, for example Dave, a middle scorer described his current goal of completing postgraduate study, as being essential for his future goal of working overseas, where postgraduate qualifications are required. Similarly, Autumn (a higher scorer) described the process of developing one of her goals related to a body of knowledge she believed she would need in the future. Autumn stated “*[name of research method] is something I was aware... I was lacking...in a sense, it was a gap but it wasn’t a*

sort of a real learning need until I [am] in the situation [where this knowledge is needed]”.

Although most participants described processes of setting their CCFR goals based on what they perceived they may achieve in the 12 months, some also described only setting a goal once they became aware of the existence of an upcoming learning opportunity. In this situation, the participant may not have identified a specific learning goal, or even a specific learning need, but for any number of reasons, the event or learning activity was seen as worthwhile doing or attending in order to meet a previously unspecified need. For example, Lanie (a lower scorer) described how she often “*grab[s] opportunities as they’re coming along through [the] work environment*”, and equally Tony, another lower scorer stated:

the way I’ve used [the] CCFR in the past is that the more serendipitous stuff...pops up and you think ‘oh yeah that looks interesting I’ll go to that.’ I’ve tended to put that in after the fact, into my CCFR as sort of like a running record of professional development or something...I create a goal to fit it.

When this occurs, participants described entering the activity and an associated learning objective retrospectively into their CCFR, explaining that they could not plan ahead for such a situation, as the learning activity was not known about at that time.

Similarly for some participants, the stimulus for goal identification might come about through the sharing of ideas with colleagues. Muzza (a middle scorer) asked a colleague to help develop a goal, when she was unsure of how she could address a particular CCFR competency in a non-clinical setting, and Tony (a lower scorer) gave an example of working on his CCFR goals with a group of occupational therapy colleagues: “*there’s just throwing around ideas and reminding each other and thinking about what we’re going to put and saying ‘I think I might put this’.*” The stimulus for engaging in a learning activity might also come from colleagues, with several participants giving examples of engaging in a learning experience because a friend or colleague had invited them to do so. For example, Matt (a middle scorer) stated, “*I didn’t really want to do the [name of craft] course but ah my friend was really um determined to go*”, and Ellen, also a middle scorer described enrolling in postgraduate study because a friend suggested doing the paper together and Ellen “*...kind of thought ohh well, why not?*” For both of these examples, Matt and Ellen had included the activity in their CCFR, with a learning goal, yet

neither had initially identified these areas as specific learning needs arising out of their self-assessments against internally or externally derived criteria; rather, the goal was one they chose to adopt because they perceived that the learning might be interesting and/or useful for them, as suggested by someone else. Ellen acknowledged that she is often influenced by what happens in her environment *“I don’t set great goals about where I want to be in three years’ time as far as my learning goes. I, you know, I like to kind of see how I’m feeling about learning about particular things”*, such as the course suggested by a colleague.

Finally, several of the participants also described thinking about the content of their goals related not so much to their identified learning needs, but more how these might be read or interpreted by those in authority. For example, Matt (a middle scorer) has tended to think carefully about how he completes his CCFR, as he stated, *“my self-assessments, I think, are probably a bit on the overly positive side...because, you know, I want to retain my annual practicing certificate.”* Matt does go on to explain that over time as he has become more confident with the CCFR, his self-assessments and therefore goals have become more accurate. Although a higher scorer, Autumn also described a similar process of considering how *“someone external [is] making a judgement about you”*, and therefore considering what CCFR goals she sets, as does Lanie, a lower scorer, who is concerned that to acknowledge a lack of competence, by setting a goal is challenging: *“we’re employed in a role and we’re being paid to do the role and we’re expected to be at this level...if we’ve got gaps in that level, you know, what does that say?”* Thus for some participants, the goals set may not reflect their actual learning needs.

4.6.2.1 Documenting Goals

The process of identifying and documenting goals also varied across the participants. Although the CCFR Practitioner Handbook (OTBNZ, 2011) presents the process as linear, beginning with self-assessment followed by the creation of objective/s for continuing competence, many of the participants started at different points along the process. For example, Janet (a higher scorer) completes her self-assessment then thinks about the expected outcome from her learning, before working backwards stating, *“I think about what the objectives and the activities are that will give me the outcome that I want and then I think about why I want to know that.”* Whereas, Lanie (a lower scorer) starts with the activity, which may or may not be related to her self-assessment: *“Sometimes I will think... this is what I want to achieve, what area [in the CCFR] does it fit in and I’ll*

plonk it in and then I'll go, ooh, I need a self-assessment. How could I tie that in?" Similarly, Annie (a middle scorer), used a learning activity she was already involved as the impetus for setting the goals. As Annie explained, the event gave her *"some natural goals that I find places for in the CCFR."* In comparison, Perre, also a middle scorer, starts with the self-assessment, as *"when there's clarity in the self-assessment, when it's really crystal clear, then the objective is simple."*

Clarity was also commented on by Annie (a middle scorer) who, like a number of the participants, found the writing of goals for some CCFR competencies easier than others. Those such as Competency 7: Professional Development (refer to Appendix A) were easier for Annie, as she was confident that the goals she set were congruent with the criteria listed under the competency. On the other hand, other competencies such as Competency 1: Implementation of the Occupational Therapy Process were harder to create goals for, as Annie has less opportunity to implement the occupational therapy process in her current role, which is not 'hands-on' with clients. Others described being not sure what the competency meant, and therefore writing a relevant goal was more challenging. For example, Tony explained how he did have some gaps in goals for some of his competencies because he has not *"really been sure about...ah what to put there."*

Occupational therapists are very familiar with the use of SMART (specific, measurable, achievable, realistic, time-bound) objectives for planning their interventions with clients, and in addition the OTBNZ expects occupational therapists to create SMART objectives in their CCFRs. The value of SMART objectives was identified by some participants, for example, using SMART goals helped Tony (a lower scorer) to ensure his goals were *"not too lofty or not too difficult, 'cause I want to make sure that I do it...rather than making it too massive...and then it just gets overwhelming."* Likewise, Lanie (a lower scorer) also thought carefully about how many she should write, *"I certainly try and limit...in terms of my objectives, I try not to have more than one or two on the go at once...[or] none of it will get done."* However, despite the common usage of SMART objectives, some described the documentation of their learning objectives in their CCFR as challenging. For some, the challenge may be in the writing of goals, or as Muzza (a middle scorer) states *"it was harder in many aspects...pie in the sky and just grab something out...it was more random."* For others, it did not appear that goal writing was difficult per se; rather some participants acknowledged that they did not give this part of the process much forethought. This occurred in part because they did not value the CCFR as a

professional development tool, or they did not perceive that goal setting was of particular value to them. For example, Matt (a middle scorer) described having difficulty with writing CCFR goals especially for those competencies that were of less interest to him, or felt less tangible, and similarly, Ellen (also a middle scorer) explained, *“I’m not really a goal setter. I’m not typically a person who sets goals.”*

Despite participants being familiar with the SMART acronym, in reviewing the CCFR portfolios in preparation for the interviews, goals were not always SMART or necessarily worded as learning goals. Instead, for many participants, goals were sometimes worded related to a particular work task. For example, Thomas (a middle scorer) states a learning goal in Competency Two: Safe, Ethical, Legal Practice to *“enhance consumer participation, specifically in treatment planning”*, or the example of Dave’s (a middle scorer) goal in Competency One: Implementation of Occupational Therapy Practice, which was *“By the end of the year I will have been involved in creating the [named] programme as part of the occupational therapy role in my work environment.”* These goals are focused on particular work tasks, which may or not be part of a job description, rather than being developed on the basis of an identified learning need. Similarly, Perre (a middle scorer) talked about her goals as tasks she intended to do rather than what she aims to learn, although Perre explained this way of writing the goals worked for her. *“So the objective is to do them so that that information is happening, is percolating behind the scenes.”* Perre argued that the learning she anticipated occurring is inherent in the tasks she set, although this may not be evident to others.

In comparison, some participants tended to frame their CCFR goals in relation to what they needed to learn in order to undertake a particular work task, for example, Janet (a higher scorer) wrote in Competency 4: Communication: *“I will engage in a course in supervision and mentoring, focusing on facilitation of communication in supervision and strategies to encourage effective communication”*, and Ellen (a middle scorer) wrote for Competency 3: Culturally Safe Practice *“to review literature on how suicide is viewed in Maori/Pacific Island cultures in New Zealand.”* Annie, also a middle scorer, described her thinking about a potential goal in this way: *“I’ve mostly been involved in qualitative research...so something I need to find out an awful lot about is how to develop a survey and really gear my brain in a different way.”* In describing her CCFR goal, Annie identified her previous knowledge and skills, then a task she knows that she will need to be able to do which will require a different type of knowledge, and then her expectation that

she will need to change her thinking as a result of that learning. Ivan (a lower scorer) phrased his goals in relation to the outcome he hoped to achieve, for example, aiming to be really “*comfortable with it and get an understanding of it and get a feel of it.*” Here the goal, although articulated as the next stage of learning about a skill, is phrased in ‘feeling’ words of getting comfortable and getting an understanding of what the skill requires. Interestingly, for many of the participants, the process of writing goals was closely related to their choices of learning strategies and resources.

4.6.3 Learning Strategies and Resources

Garrison (1997) maintained that capable self-directed learners balance “the factors of proficiency, resources and interdependence” (p. 23) when selecting learning strategies and resources. Interdependence in Garrison’s model reflects the balance between what is required by the institutional or subject norms versus the learner’s choices or preferences. The participants in this study used a range of learning strategies or activities, often in combination. A lower scorer, Ivan’s description is typical of those given:

I like to get lots of information around it and then read that and mull that over and then probably umm, if I can, go and see someone else doing it or get someone else to show me or tell me or something and then try it.

The strategies, or learning activities identified by the participants are described in the following paragraphs, with the rationale for the choice of learning activities presented further on in this chapter in Section 4.7.2.

Regardless of their SDLRS-A score, most of participants listed similar learning strategies in their CCFR, for example, formally structured learning activities such as attending conferences, shorter organised sessions such as in-services (occupational therapy specific or multi-disciplinary), seminars (less than one day), as well as one to three day short courses or workshops. For a few, having the opportunity to plan for and teach on a seminar or in-service, was a learning strategy. Some attended formal postgraduate study for credit, whereas a few listed attending writing or journal clubs, or other similarly focused groups meeting on a regular basis with a formalised structure. In contrast to these group-based learning activities, participants also gave examples of solitary activities, with almost all participants listing reading, many of the participants listing sourcing and using resources from the internet, with only a few identifying reflective writing, journaling or reviewing others’ documentation.

Some participants identified going to someone with more knowledge and/or expertise for assistance, which gave the opportunity to observe or shadow or to see how others do 'it', for example, an aspect of occupational therapy intervention. Dave (a middle scorer) explained this stating: *"Last year I did some hand therapy for a while, and I learned more working with the hand therapist on that serial casting...than I would have through reading about [it]."* For some, it was less about observing or following, and more about hearing or being inspired by someone more knowledgeable than themselves, for example, Tony states *"I've always quite enjoyed um someone who....can inspire [me] in some way."* Many of the participants identified pairing with another therapist or work colleague, through formal or informal supervision, as a key learning strategy to address their learning needs, although this was not always listed as an activity in their CCFR. Interestingly, despite almost all participants having experience of supervising allied health students or other occupational therapists, very few considered being a supervisor as a learning strategy, and only two participants described learning from the clients they worked with.

Discussion with others was another learning strategy mentioned by almost every participant, although again it was not always listed as an activity in the CCFRs of these individuals. Occurring informally, participants described learning through discussion with their peers; for example, Dave stated; *"respecting the knowledge that everyone has rather than just thinking your knowledge is most important...it's that learning through the talking and doing alongside."* Some participants looked for, and discussed practice experiences or clinical issues with those on the same level as them, whereas Alex (a middle scorer) also described feeling comfortable in approaching his team leader: *"she's very knowledgeable...and has had years of practice."* Participants also described how these informal discussions were used to provide feedback on their performance, or on their understanding of concepts.

Another learning strategy or activity identified by the participants, that again was not always included as a strategy in their CCFRs related to learning by doing, described by some as trial and error, or 'nutting it out'. Muzza (a middle scorer) described this as *"I have a look and get a feel...and then...usually a bit of a practice"*, or as Autumn (a higher scorer) explained; *"for example, stats and writing...my older supervisors have encouraged me to just do more of it, and learn it as you do it."* The rationale for choice of learning strategies is addressed in more depth later in this chapter in Section 4.7.2 under the

dimension Self-Monitoring, whereas specific external factors influencing choice of learning strategies are discussed in the next section.

4.6.3.1 *Resources, proficiency and interdependence*

In describing their choice of learning activities, participants gave examples of how the choices made were influenced by resources available, the type of learning opportunities on offer, or expectations of their employer.

Muzza (a middle scorer) explained that her choice of learning activity is often determined by answers to just two questions: *“Can I afford it? Can I afford the time out?”* Consideration was also given to the time and energy it might take to convince the employer to fund or part-fund the learning activity as Lanie, a lower scorer explained *“in terms of actually putting that to management and justifying uumm, spending money to send me off to [name of Australian city] to do a workshop...was quite a task.”* In this way, participants might chose not to pursue a particular learning activity for their CCFR, or for their learning generally, because the effort needed to apply for funding was not thought to be worth it for the perceived outcome. In comparison, for several participants having a supportive manager helped, as described by Tony (a lower scorer) who described having an employer who paid for his study and similarly, for Annie (a middle scorer) who stated; *“I have been really lucky in getting DHBs to fund the study that I’ve done.”* Time constraints were not only raised in relation to applying for funding but could also dictate the choice of learning activity, for example, for Thomas (a middle scorer), time and funding needed to be balanced with family demands: *“I didn’t end up doing postgrad here because I’ve got a one year old”*, whereas for Perre (also a middle scorer), living in a rural area means that a lack of resources can influence her choice of activities, *“...being more remote...it’s difficult to get funding. That’s just a fact up here.”*

Another factor that needed to be balanced was the type of learning opportunities that might arise over a year. With limited resources, Muzza (a middle scorer) described the challenge of making an early choice that would later prevent her from being funded to attend a more worthwhile learning activity later. Not only are learning opportunities limited by financial resources, but as Alex stated, being in a smaller rural DHB can limit potential learning opportunities, as there are fewer experienced staff or specialised units to learn from or alongside. Lack of support from Lanie’s (a lower scorer) employer may also

have been the reason for her struggle to find learning opportunities. *“I haven’t gone out to seek them because it’s so huge. It is enormous.”* She added:

I think how much support is really going to be behind you. Ohh yeah, we’ll be behind you but a lot of the time it’s just lip service...and so there’s this reluctance to jump into that huge pit because it is huge.

The influence of the employer was also evidenced in Muzza’s (a middle scorer) choice of learning strategies. Rather than select activities congruent with her learning style for her CCFR, Muzza selected activities she perceived her employer would value, for example, *“a conference is more a legitimate reason to go somewhere and talk to experts.”* However, Muzza did not find attending conferences to be as useful as, for example, discussing issues with an experienced practitioner; nor did she find reading literature as useful for her learning as opposed to, for example, talking with people who live with the condition that she wants to learn more about, yet Muzza tended to identify activities in her CCFR that she believed others would consider valid, as opposed to what would work best for her learning style. However, it is not only the employer that can influence choice of learning activities. Valerie (a middle scorer) also described the challenge of being dyslexic, but identified searching and reading the literature as a learning activity in her CCFR, because of her perceived need to have the research evidence to support her decision-making.

However, resources were not always a limiter. For example, the introduction of virtual learning had provided Autumn (a higher scorer) with more flexibility as although she could fly to another city to attend a workshop organised by her employer, the employer had started *“putting little umm, video type things online”*, which provided more choice for Autumn’s learning. For a few participants who chose to elaborate on their responses, it was evident that in determining the learning activities or strategies to use, either in the CCFR or generally, there was an ongoing balancing between their preferred ways of learning, the resourcing available to support these preferred ways, and the expectations and resources of their employers and themselves. Consideration of this balance impacted on their selection of learning resources.

4.6.4 Assessing achievement of learning goals

The last component of Self-Management is outcomes, or how do the participants know they have achieved their learning goals? According to Garrison (1997), capable self-

managing learners not only have the skills to collaboratively set goals, but are also able to determine the criteria for evaluating their learning, and to assess their progress towards their goals. All participants in this study were able to recount the ways in which they ‘knew’ they had learned, although criteria used varied between individuals, and according to whether it was knowledge or skills that was the focus of the learning.

Several of the participants talked in quite simple terms about having a ‘sense’ of learning having happened. Examples shared included a ‘sense of knowing’ with Janet (a higher scorer) stating, *“I know that I’ve learnt something because I know something that I didn’t know yesterday...I can sense or see something different in the way I think about something or I feel more confident in using that skill, language or idea.”* For Annie (a middle scorer) there is a ‘sense of a change’; *“There’s been a clicking – there’s been a result”*, and for Ivan (a lower scorer) ‘a sense of fit’; *“It’s probably, when it fits, it’s something I understand.”* Others used descriptors related to feelings, for example, Dave (a middle scorer) knows that learning has occurred when he feels more comfortable with what he says, whereas Autumn (a higher scorer) has a sense of ease. Some participants talked about feeling more confident, whereas others described coming away from a learning experience feeling motivated, as explained by Janet (a higher scorer) about a team learning experience: *“We came back to our practice environments all bubbling and enthusiastic and excited about this knowledge.”*

Some participants used criteria that were more concrete, for example, Alex (a middle scorer) described having gained knowledge that *“I could use, I’ve got that in the back of my head”*, whereas, others such as Valerie (a middle scorer), knew she had learned something when she was given *“a really different way for me to think.”* Others such as Doug (a higher scorer) had a clear process they followed which gave them confidence they had learned: *“I’ve checked out all the right sources...I’ve kind of exhausted all the avenues...got all the information and formulated an idea in my head that I think is the right idea.”* Only Alex (a middle scorer) took this a little further, challenging this ‘sensing of learning’ by questioning himself:

I’ve sort of read this and absorbed a few bits and pieces...and I use those when I’m dealing with a client, then afterwards I evaluate...I guess in terms of well, was it useful for me to have that information? Did I feel more confident handling that person or not?

When talking about the learning of practical skills, most participants knew they had learned when they could use the new skills in their workplace, for example, Tony (a lower scorer) explained this as: *“When I get back to work I’m going to be able to do this, this and this...I’m going to do this differently in this way as a result of that training.”* Lanie, also a lower scorer, explained that for her learning has occurred when she can take it away, implement it, understand it and see the outcome. Sometimes, the learning experience did not introduce the participants to new material, but rather might affirm what they already knew or could do, as Annie (a middle scorer) explained: *“It was quite affirming and it was...okay, I still don’t know how to do a complex wheelchair prescription but I’m going to give it a go.”* Similarly, Ellen (a middle scorer) described being able to *“link the theory into my practice, and that felt quite good that I could make some...more connections about why I did things.”* Participants also acknowledged that they knew they had learned something when they could apply the new knowledge to a situation other than that it was originally intended. For example, Autumn (a higher scorer) described learning about a new research skill, but rather than use it as initially intended, she stated: *“So I’ve applied it in that way but that wasn’t really the purpose of the course.”*

Knowing that learning had occurred was not just restricted to a feeling, or being able to do something differently, or being able to apply new knowledge to the intended situation or a different situation. A number of the participants described knowing that they had learnt when they were able to communicate this to another person. For some, it was hearing themselves as they explained or shared their knowledge with another, realising that they did understand and could articulate their understanding, whereas for others it was when they were able to present their learning formally at conferences, in-services or seminars. Still others used examples of more informal settings such as meetings or in team discussions, or just being able to talk casually with a colleague. Thomas (a middle scorer) explained this:

You know you’ve learnt it when you can then sit back and sort of tell someone who hasn’t learnt it and they can sort of nod and, and it seems that you’re making sense and yeah, relaying the information. I think that’s when I know I’ve learnt it fully. You can learn it, understand it...but I think, yeah, that [learning] only becomes evident when you express it.

Others added that knowing learning had not only occurred when expressed to another, but also when the other person can understand what is being communicated, and

taking this knowledge and adjusting ways in which they work accordingly. As Dave (a middle scorer) explained: *“Whereas now with some knowledge, I feel a bit more comfortable with what I’m saying and some of the stuff that I’m sharing, and that’s being taken on by other people in a new level it seems.”*

Finally, while all of the participants could describe (albeit for some with prompting and time to reflect on the question) how they knew they had learned, and many could articulate the internal criteria they used to determine whether or not they had learned, the degree to which their CCFR critical reflections demonstrated that they had achieved their learning objectives did vary somewhat. The OTBNZ (2011) guidelines state that the outcome of the learning (what happened, what did I do?) must be recorded and evidenced through critical reflection. The critical reflection should also include consideration as to whether a change in practice has occurred, and whether there is likely to be benefit to the client or others. Interestingly, there was much variation throughout and between the CCFRs as to how participants completed the written critical reflections. Some participants such as Tony (a lower scorer) documented what he had learned, entering this in the critical reflection. *Size up situation quickly but carefully. Your safety comes first*”, although other entries did evidence his ability to critically reflect, for example:

I have struggled to complete this activity. I have found that it is something that can be easily cast aside. I would like to keep it as a goal though, as I believe it would help me to maintain momentum with professional development.”

Others such as Thomas (a middle scorer) also varied in his recording of his reflections. At times these were very brief such as, *“It’s good to do things when you think of them”*, a reflection related to organising enrolment on a particular course. Other reflections were more detailed, for example, *“I found the training to be of great value. Of note was the ability to spend [time]... in practice sessions, with a strong focus on practicing listening skills...focus on listening has improved both my management and clinical skills.”* In comparison, higher scoring participants such as Doug tended to have more detailed critical reflections that met the OTBNZ criteria, with the outcomes of the critical reflection being used to shape the next self-assessment. For example, Doug reflects on the process of gathering and interpreting feedback in relation to his communication with his colleagues. His critical reflection reads as follows:

The feedback I received indicated that overall I am a clear communicator, although I can be curt and to the point if I am stressed, which leads to a sense of frustration on others behalf. Since receiving this feedback and discussing it with my supervisor, I have implemented some strategies to ensure that I keep lines of communication open. I continue to seek further feedback in the coming year.

In this critical reflection, Doug describes the outcome of a task he undertook to learn more about how his style of communication may impact on his colleagues, the process he used to make sense of it, the outcome, and his ongoing plan. The majority of Doug's critical reflections were of similar depth.

4.6.5 Comparison of high and low scorers' descriptions of what they do, why and how

According to Garrison's (1997) descriptors, participants in this study were all self-managers of their learning to varying degrees, with variability evident across all 16 participants, in the ways in which they described their ability to determine their learning needs, define and document their goals, in the learning strategies they selected, the ways in which they determined they had learned and their documentation of their CCFR critical reflections. However, the degree to which the participants varied across their descriptions becomes clearer when the ways in which high and low scoring participants describe what they do, why and how.

Janet, Doug and Autumn, the high scorers, all described skills or attributes that were comparable to Garrison's (1997) descriptors suggesting that they are capable self-managers of their learning. All three participants had clear processes for determining the goals for their CCFR, usually starting by reflecting on whether or not they had achieved previous goals, and using that as a base for defining their goals for the next year, for example Janet explained, "*some of my CCFR goals have actually sprung from something I've already done some learning about, but...there's more questions.*" In addition, they also used a range of other internal and external data sources including considering their evaluations of themselves against their employers' expectations, their aims for the future, feedback from managers or their team about current performance, along with the future directions of their service/organisation, and interactions with supervisors and/or mentors. Drawing from these various data sources all three participants spoke confidently about

their learning needs, which informed their CCFR self-assessments and objectives. As Autumn states “*my formal learning needs are quite explicit really.*”

Doug and Janet found the structure of the CCFR helpful, considering their job descriptions and relating this to the OTBNZ competencies, whereas Autumn found setting objectives for each competency slightly challenging, insofar as she found that “*the competencies sit so awkwardly with my current role*” as an academic rather than a clinician. However, as a clinician she had found the CCFR to be a good way to organise her thinking and to see the progress she had made in the previous 12 months, even going so far as to say it was a useful process in terms of career development. All three high scorers focused their goals for the present, whilst also considering the future.

These higher scoring participants also took their resources into consideration when planning their goals, for example as Doug stated, “*I choose things that are realistic, that I hope that I can get done in the time that I’ve got, and with the resources I’ve got to do them, and that are actually going to help me in my job*”, thus as Garrison (1997) stated balancing proficiency, resources and interdependence. This reasoning was also evident in Autumn and Janet’s descriptions of selecting activities. In addition all three participants described or gave examples of the interconnectivity between their self-assessments, objectives, learning activities and critical reflections. These three participants also provided detailed descriptions of the criteria they used to determine how they knew they had learned, using statements such as having succeeded at tasks that drew from that knowledge, or having a sense of ease or confidence in the knowledge or skill learned.

Compared with the higher scorers, Lanie, Tony and Ivan (the lower scorers) tended to approach the development of their goals in a somewhat less structured manner. Lanie acknowledged that she doesn’t consciously self-assess in order to determine gaps in her knowledge and skills, instead “*grab[bing] opportunities as they’re coming along through your work environment...not [ones] that you’ve gone to seek out*”, whereas Tony did complete his self-assessments, finding it challenging to do so. Like Lanie, Tony described how he was not always sure of what was expected for some competencies, or even what the OTBNZ expected in the self-assessments, “*I haven’t really been sure about...what to put there as a...self-assessment.*” All three participants gave fewer examples of sources of data they drew from to inform their self-assessments, compared with the higher scoring group.

It is perhaps not surprising that with a lack of clarity in the self-assessment, both Lanie and Tony find the CCFR goal determination and documentation more of a challenge. Tony described using external prompts such as reviewing others' CCFR goals as a stimulus for his own goal setting, or discussing possible goals with others, and Lanie explained how she sometimes created learning goals after a serendipitous or unplanned for learning experience occurred: *"I'll do some training...and think "oh I should put that [goal] in there."* Another reason for Tony's perceived challenges was his belief that the goals he sets should be the steps that lead towards being the type of practitioner he wants to be. When he doesn't have a clear sense of where his is headed, then goal setting becomes more challenging.

Low scores in the SDLRS-A are not only related to the skill of being able to determine the goals, but also to management of self. Ivan's challenges were somewhat different to Tony and Lanie, in that he felt that he understood the CCFR process describing for example, how his CCFR objectives are drawn from those in his performance appraisal. However, Ivan acknowledged that he often leaves the documentation of these until the last minute, which means that he doesn't get to do the level of conscious thinking he sees as important to do, in order to create relevant, meaningful goals. Ivan described the need to start reviewing his previous years CCFR goals much earlier, explaining that he thought this would probably help to improve the standard of his CCFR.

Likewise, Lanie and Tony tended to fill in their CCFR just before it was due to be completed, although both identified that they were planning measures to change for the next year, as explained by Lanie: *"I need to be thinking about that [focus of her objectives] prior, so that I'm not forced to dream up some topic on the spot...[that's] not going to get achieved."* Lanie realised as the interview progressed that her approach to completing the CCFR at the last minute was potentially working against her. She described gaining this insight as a *"brainwave, thank you very much. I've taken something away from this."* In comparison the higher scorers reviewed their CCFR more often, for example, Janet described *"I start to think about it, towards March rather than at the time"* it is due to be done, and likewise Doug, in his monthly supervision, makes a *"conscious effort to discuss one part of it."* The higher scorers, particularly Janet and Doug did appear to actively use their CCFR as a professional development tool.

Unlike the higher scorers, the lower scoring participants did not necessarily perceive or describe a strong relationship between their self-assessments, objectives,

learning activities and critical reflections. Often these participants identified an activity they thought would be useful to do, and then would create the goal and self-assessment to match. Although Ivan felt he understood the CCFR, he did not provide the same degree of detail about how he connected from self-assessment through to critical reflection, as the higher scorers did. Both Tony and Lanie were also less clear, for example, Lanie described her challenge to complete self-assessments without first setting an objective *“and so yeah, it’s probably not until I’ve actually got an objective that I can actually, truly do a self-assessment”*, and Tony described finding the self-assessments as being quite difficult. Finally, lower scorer participants offered less depth in relation to the criteria they used to evaluate whether learning goals had been met. Lanie was initially at a loss, stating, *“I don’t know. How do you know you’ve learnt something?”*, before suggesting that perhaps it is when *“you can take it away and implement it and understand it and see the outcome.”* Similarly, Ivan described the need to be able to understand something, in order to know that he had learned it, stating, *“I have to understand something and then the learning happens.”*

The only area where the high and low scorers appeared to be no different was in the types of learning activities they selected. Between what was documented in their CCFR portfolios and in their interviews, all participants listed examples of learning strategies that were formally structured, learning from others through observing, engaging in supervision, discussion with others, and learning through doing. However, the lower scorers were less likely to refer to the interdependence of balancing their preferred goals or learning activities with available resources as clearly as the higher scorers did. For example, Lanie described herself as being *“not very structured, so I tend to go with whatever the opportunity is providing me at that point in time.”* These reflections suggested that the lower scorers may not be as proficient as the higher scorers in balancing what is offered or available, with what provides the best learning experience for them. In comparison, although a low scorer, Ivan was more aware of the interdependence, giving examples of identifying learning needs of the team and finding ways that both he and his team could achieve their objectives, within their existing resources.

4.6.6 Summary of Dimension One: Self-Management

To summarise, all 16 participants were self-managers of their learning to some degree, and most used these skills to manage their planned learning in their CCFR online

portfolios. All participants were able to describe the processes they used to identify their learning needs, and were able to write goals as expected of self-directed learners. The processes by which they identified their learning needs and created their goals differed as did their perceived skill in writing goals, with the lower scorers in the main, finding goal setting and writing, especially for the CCFR more challenging than higher scorers. Learning needs and therefore goals may be identified through structured processes and frameworks such as performance appraisals, or emerged through reflection which could be alone or with others, formal or informal and focused on general discussions or specific incidences occurring in the workplace. The choice of learning needs and goals could be influenced by the employer, but for some (primarily the lower scorers) may also come from suggestions of others, or documented related to upcoming professional development events or activities, as opposed to identifying the learning need and goal first, before identifying the activity for learning.

Participants could be hindered in the management of their CCFR goals when they had written too many or they were too broad, or when they were unsure of what was expected in a specific OTBNZ competency in relation to their workplace, or where their self-assessment was vague or ill-informed. Whereas the higher scorers understood the relationships amongst self-assessment to identify learning need, objective setting, activity selection and critical reflection in the CCFR, tending to work through this process in a linear fashion, the lower scorers sometimes started by looking at the outcome they expected to achieve, or upcoming formally arranged events and then backtracked to the goal and identification of learning need, whereas others engaged in a learning experience and then used this to backtrack in their CCFR defining their learning goal, and creating a self-assessment in accordance with the learning they had gained.

Participants also described using a number of different learning strategies, sometimes concurrently and sometimes sequentially to achieve their learning goals. Learning strategies included both formal and structured learning experiences designed by others, as well as informal learning opportunities created by the participants themselves. The choices made were likely to be an outcome of the participant balancing the factors of proficiency, available resources and interdependence (Garrison, 1997), with the higher scorers articulating this more clearly than the lower scorers.

Finally, all participants were able to provide descriptions of the ways in which they knew learning had occurred. These included notions from 'sensing' a change, or 'feeling'

in a different way, through to having specific knowledge of what occurs in their thinking around their learning. Participants also described seeing outcomes of their learning, in what they could do differently, as well as being able to apply the learning to their context. Again the higher scorers were able to more clearly articulate the criteria they used to determine how they know they have learnt, and this was often evident in how they documented their CCFR critical reflections. However, being a self-directed learner is more than just being a manager of one's learning. This dimension overlaps with both Self-Monitoring and Motivation (Garrison, 1997), with participants' ability to self-monitor presented next.

4.7 DIMENSION TWO: SELF-MONITORING (COGNITIVE RESPONSIBILITY)

Self-Monitoring is another dimension in Garrison's (1997) Self-directed Learning Model, addressing the cognitive and metacognitive processes of learning. As suggested by Garrison, self-monitoring learners are aware of how they integrate new learning with existing or prior understandings. Additionally, they pay attention to how they are learning, evaluating their repertoire of learning strategies, and their progress towards achievement of learning goals. This internal self-assessment or critical reflection which includes "observing, judging and reacting to their tasks and activities" (Garrison, 1997, p. 24) provides knowledge of oneself as a learner and what one has learned, which is constantly compared with feedback from others, a process termed collaborative confirmation. The 16 participants' descriptions of what they did, how and why to monitor their learning both at, for, and through work, and in relation to their CCFR is presented in the following sections.

4.7.1 Integration of new learning with prior understanding

In answering the question about recent learning experiences, all participants explained the processes they used to integrate new learning with existing understandings. This could be an individual reflective experience, for example, Perre's (a middle scorer) memory of reading an article on cultural competence was triggered by a specific incident that arose in her workplace. The triggering incident stimulated Perre to review what she remembered, "*So I go back and I have a look and I think that's applicable in this situation. So it's like, what else is there around that?*" Perre has the skills to both remember the reading, to locate it again, evaluate what she now understands in relation to the latest incident, and to then determine what else she needs to know in order to further her understanding. This process led Perre to formulate a new goal for her CCFR.

Some participants gave more specific examples of how they integrated new learning with previous understandings. For example, Doug (a higher scorer) described the process he used to make sense of information he had gathered to meet his CCFR goal of learning about a different educational system. This included *“think[ing] about what I already know and...then seeing what information I can find, and like validating that information by talking to people who have...knowledge or experience of...whatever it is I might be trying to find out.”* Doug makes the point of checking or validating his understandings against another’s perspective. Ellen (a middle scorer) also gave a similar example of a learning experience arising out of the need to manage a risky situation in the workplace. Ellen undertook a *“literature review...working out what was considered best practice, and comparing that with our current processes”*, and then discussed her findings with the rest of the team, in order to work out what could be done differently.

For several of the participants, postgraduate study provided the structure to enable them to connect previous understandings with their new learning. Janet (a higher scorer) described the connections she made through her study, as assisting her to *“link the theory into my practice...I could make some more connections about why I did things...Why umm, a few people were acting...in a particular way and I could start to understand a bit more why that was.”* Dave (a middle scorer) described completing the prescribed course readings, having them *“just churning away in the back of my mind...while I’m doing my practice...and then that starts generating meaning making for me, usually when I’m coming to write the assignment.”* This meaning making was sometimes recorded in the critical reflection component of the CCFR, but not always.

Other participants described purposely interacting with others to aid the integrating of their new learning with existing understandings. After attending a workshop, Autumn (a higher scorer) likes to talk with others, recalling that *“I’ll make connections as I talk to people about it, about how it links in with what I’m going to do now... it concretises it a little bit more.”* Similarly, Thomas (a middle scorer) described the ongoing interactions he had with an occupational therapy friend around issues that interested them, as valuable:

I guess it’s evident that you’re creating, you’re putting something out there that is either verbatim or something...but more probably it’s a melding of a few different ideas. If the other person’s nodding...and challenging it, I guess, and pushing that idea along...that’s what a conversation can do.

A few participants also described the value of reflecting alone as a way of ensuring new learning is consolidated. For example, Annie (a middle scorer) writes in order to help make sense of what she is learning. Perre (also a middle scorer) described observing an instance at work, then going away and thinking “*okay, so I’ve observed that. Do I do that?*”, and similarly, Autumn (a higher scorer) finds that when she “*read[s] different things, [and I] reflected in different ways, I came to realise I hadn’t learnt how to be as family centred, as I thought I had.*” Likewise, Ivan (a lower scorer) talked about his learning as an undergraduate student where it wasn’t until he sourced and read a particular textbook, that he “*started putting the pieces together, and once I got that, I really grasped the whole idea of frames of reference, approaches, models*”. Interestingly, although other participants identified the value of reflection for consolidating knowledge, Ivan did not use the word reflection, even though his description would suggest that this was the process he used. Again, instances of integration of new learning with prior understandings were sometimes evidenced in participants’ CCFR critical reflections, but not always. For example, some of Tony’s (a lower scorer) CCFR critical reflections were actually lists of tasks to focus on next, such as “*I have subscribed to the Pacific Health Review. It emails a monthly newsletter that reviews journal articles related to Pacific Health*”, and “*Need to continue to develop understanding of tikanga and basic Te Reo*”, the focus of which may have reflected his understanding of what was required in this section as opposed to his actual ability to demonstrate integration of new learning.

In contrast, not all learning opportunities necessarily led to learning. Several participants described being exposed to new learning, but for various reasons, realising they had not had the opportunity to integrate the new learning with their existing knowledge. For example, Lanie (a lower scorer) described learning about a particular therapeutic technique, but that “*the learning had really gone by the wayside with that one*”, as it was something that she wasn’t able to specifically use immediately in her practice and therefore her new learning was not integrated with her prior knowledge. Likewise, Janet (a higher scorer) described attending a course with her staff, as it was offered at no cost to herself, or her service. Janet acknowledged that following the course the folder sat on the bookshelf unopened, because the information it contained was not relevant to her current role. In addition, many of the staff who attended also had not integrated their new learning with their existing knowledge because “*the realities of the practice environment didn’t really afford them the opportunity to do anything more than*

[attend].” In contrast, Tony (a lower scorer) described being aware of the potential for this to happen, countering this by consciously considering what a course might offer and ensuring the knowledge to be gained will be immediately applicable to his practice.

As part of describing their learning experiences, all of the participants talked about the process of comparing their internal assessments of what they understood with external feedback. This process of collaborative confirmation occurred frequently, especially for those participants who worked alongside the same team members every day. For example, Ellen (a middle scorer) described this as a situation where “*other people will comment on your work or your knowledge or your learning*”, allowing opportunities to compare internal self-assessment with external assessments. Alex (a middle scorer) gave an example of where his clinical decision was challenged by a nurse, finding this to be very valuable as he “*reflect[ed] on my initial approach and assessment and [my] whole dealings with that client...and um, that, that changed me.*” Dave (a middle scorer), also gave examples of how collaborative confirmation occurred every day as he “*constantly check[s] with other people that they understand what I’m on about...so you get a good feeling from them for where you’re at, and what you’re doing.*” Inherent in this statement is the notion of doing, evaluating his performance, and checking this against external feedback.

Collaborative confirmation was also evident in Perre’s (a middle scorer) descriptions of discussions with her supervisor, who “*calls me on things and she says, okay, why have you done blah, blah...and then I can relate it to why I did and it’s like, okay. So I can avoid that step next time sort of thing*”, and similarly, Muzza (a middle scorer) described the outcome of her supervision as “*often what I’ll find is...I’ll mull over it and then either go back or make a, a change or whatever is needed or appropriate.*” Thus for these participants, supervision provides a number of opportunities to integrate new insights gained. The value of collaborative confirmation was also affirmed by Muzza (a middle scorer) and Autumn (a higher scorer) who both used the example of ‘Johari’s window’ (Halpern, 2009), suggesting that supervision is helpful for thinking through what knowledge or skill gaps they may have, that they may not be aware of, or as Muzza stated “*I don’t know what I don’t know.*” Effective supervision not only assisted these participants to identify new learning needs through comparing what they understand with new insights offered, but at times was also used as the basis for identifying new learning needs for their CCFR.

Engaging in the collaborative confirmation process could also be influenced by others, with several participants describing factors that influenced their use of external feedback. Annie (a middle scorer) described carefully considering who she approached for feedback in relation to her research: *“I need to start showing people...starting gently with the people whose feedback I am least nervous of...people who I know understand my fear about what I’m doing.”* The people she selected are the ones she trusted would provide feedback in a way that did not make her feel like she could not achieve what she needed to. For Perre (a middle scorer), it was also important to have a supervisor *“who you can actually be very candid with and honest”*, in order to make the most of the collaborative opportunities, and Muzza (a middle scorer) looked for key people *“that you trust and that know you. They know how to challenge you.”* Respecting the person providing the feedback was also important, as in the example given by Ellen (a middle scorer), who described not listening to feedback from a colleague, *“who has been there a very long time, and is very opinionated...I don’t always believe what he says.”*

A self-monitoring learner not only consciously integrates new learning with previous understanding, and reflects on the match between their internal assessments and the external feedback they receive, but also considers whether or not the learning strategies they have used are the most effective to enable their learning. Why participants might select certain learning strategies over others is discussed in the next section.

4.7.2 Rationale for selecting learning strategies

In Dimension One, participants’ commonly used learning strategies were listed (refer to Section 4.6.3). These included formal learning, non-formal learning from another, learning alone and learning through doing. In this section, how participants used knowledge of themselves to select strategies is presented, along with the reasons participants selected different types of learning strategies, whether for their general learning, or for their CCFR.

4.7.2.1 Knowledge of self as learners

Many of the participants were very aware of how they learned best, using this knowledge when planning learning activities. For example, Alex (a middle scorer) stated that *“I do think about, you know, the best way for me to learn stuff”*, and similarly Autumn (a higher scorer) described having *“a sense of how I learn best [having] gravitated*

towards those umm types of learning experiences where I could” because she “kind of reflected on it...how learning occurs for me.”

The influence of having consciously learned about their learning styles was evident for some participants who were able to identify their styles in relation to theoretical frameworks such as Fleming’s (2006) Visual, Auditory, Reader/Writer or Kinaesthetic (VARK) learning styles, or Honey and Mumford’s (Mumford, 1999), or Gregorc’s learning styles (Reio & Wiswell, 2006). For example, Matt (a middle scorer) described himself as an auditory learner for knowledge-based learning, and more kinaesthetic for when he needed to learn a therapeutic skill, whereas for other types of learning he saw himself as *“probably a funny combination of activist reflector.”* Where possible, those participants who understood their preferred ways of learning, aimed to select learning experiences according to their preferences, for example, Alex (a middle scorer) explained *“if there’s an opportunity to do hands on, then you know, I would probably prefer to do it that way”*, however, he also went on to say that the hands-on *“doesn’t sort of work for me if I don’t have a theoretical base.”*

Some participants may not have identified a specific learning or thinking style, but did describe the types of learning strategies that worked for them. For example, when learning something new, Janet (a higher scorer) would first read and then ask somebody, because *“those strategies have worked for me before”*, and when selecting a workshop, Tony (a lower scorer) aimed for a facilitator who used narratives, as *“then I find that that really grabs me...whereas if it’s more sort of theory then I struggle with it more.”* Others focused more on what enabled their learning, for example, Matt (a middle scorer) described himself as an organised learner, wanting to know exactly what is going to happen, although he also countered this stating that the more profound learning for him came more often from serendipitous or unplanned learning opportunities: *“The more interesting stuff, the sort of ah-ha moments come when you’re not really expecting it.”*

Although some participants had learned about learning styles and applied this knowledge to themselves, others described becoming more aware of their learning styles through an unsatisfactory learning experience, as was the case for Doug (a higher scorer) who for skill-based learning considered that he learns *“best from somebody showing me and then practicing.”* From this experience, Doug has learned to *“check out how [the course or workshop] was going to be taught, and what the structure is going to be...all*

those kinds of things”, before deciding to participate in the learning experience. Two of the participants also described how awareness of having a specific learning disability shaped their choices of learning strategies. For example, one of these (Valerie, a middle scorer) tried using various ways to study for exams in her undergraduate programme: *“I remember sitting there thinking, why is this not working, you know, surely I should be able to go away and um, after that [and] know it.”* In response to this unsuccessful experience, Valerie formed a study group, where those involved could talk through their understanding of the concepts, which she then followed with mind mapping, enabling her to be successful in her study. Like Doug, Valerie reflected on why she found learning difficult, and with the diagnoses of dyslexia confirmed, then sought strategies that would enable her to learn.

Some participants stated that they could not always expect to learn in their preferred ways, as Dave (a middle scorer) explained, *“you can’t go through your life learning the way that suits you best all the time.”* Dave described how learning was more difficult if the learning experience required a large component of reading and writing, however, he challenged himself to learn in this style by enrolling in postgraduate study, because *“I want to be able to have meaningful discussions with my peers...and not just share my ideas without reading or knowledge behind them.”* Similarly, Muzza (a middle scorer) chose learning strategies that she thought her employer would view as valid and therefore be more likely to fund, than a strategy that better suited her learning style.

Some participants described how awareness of themselves as learners increased when they taught or coached others. For example, Dave (a middle scorer) described a situation where he supervised an occupational therapy student, becoming aware by the end of the placement that he had not thought about the student’s learning styles: *“At the end [of the placement], when we were talking I was like actually I don’t really think you’re a talker, I probably just expected you to be just like me.”* On reflecting on this experience, Dave noted that he had become more aware of the need to adjust his teaching style to others’ learning styles. Similarly, Tony (a lower scorer) described being more aware of his learning style because *“we’re having to teach support workers how to do their work, and how to use the computer systems and things...I think that’s kind of, you know how do we do this better, it’s always in our minds.”*

Perhaps surprisingly, a number of the participants acknowledged not giving their leaning styles much thought. For example, Thomas (a middle scorer) remembered being introduced to learning styles in his undergraduate degree: *“I think I was just fairly middle*

of, middle of the range for everything. Mmm...but I never give it a lot of thought”, nor did Matt (another middle scorer) who felt that “*sometimes oh there’s so much happening...um that it’s just sort of easier not to think about it [his learning style] too much.*” Similarly, Thomas (a middle scorer) also described learning as a subconscious process explaining that he did not choose not to think about himself as a learner, as in fact he saw that he was always learning through the tasks and projects he completed in his workplace, rather it was just not something he did consciously: “*You know, this, this conversation would be most I’ve thought about it (laughs), the most I’ve articulated it, yeah.*” Likewise, Perre (a middle scorer) felt that learning styles wasn’t something that she needed to think about too much, if the desired outcome was being achieved. For Perre, knowing about her learning style is an “*ingrained part of our processing that is happening...thinking about our learning is automatic...its pre-conscious.*” A few participants even found it challenging to think about a recent learning experience, for example, Matt (a middle scorer) explained “*sometimes it can be a little bit hard to pin down so um, like when you said ‘what’s the stuff that you’ve been learning?’...probably I don’t, it’s not as conscious as it could be.*” From the examples shared by these participants, understandings of themselves as learners was less conscious for some than for others, but did appear to relate somewhat to their SDLRS-A score with the higher scorers appearing to be more aware of themselves as learners, than many of the middle or lower scorers.

Regardless of their understandings of themselves as learners, all participants described the types of learning strategies they used and why, both for learning generally, and often for in relation to their CCFR. These descriptions categorised under formal learning, non-formal learning, learning alone and learning through doing are presented in the next section.

4.7.2.2 Formal learning

In order to categorise the different types of learning, the term formal learning as proposed by Eraut (2000) was used to categorise any learning activity where any one of the characteristics of a prescribed learning framework, an organised learning event, presence of a designated teacher or trainer, award of a qualification or credit, or the external specification of outcomes is present. Although a number of different types of activities were listed by the participants, the rationale for attending or participating in each often overlapped.

For some, the decision to attend a workshop or a conference related to a learning goal of increasing conceptual or theoretical knowledge, as Tony (a lower scorer) explained, *“I also quite like...more sort of theory stuff that gets you thinking in any way”*, and, similarly Doug (a higher scorer) attended, to *“hear about people’s research or their practice ideas and what’s going on in the world.”* Most participants attended workshops or seminars to further develop their practical skills. Lanie (a lower scorer) valued workshops because she *“can take aspects...a whole skill from the training and straight away, start utilising them”*, and likewise Tony chose workshop topics that enabled him to *“get lots of chances to try it out too...so it wasn’t going to be something that I’d put up on the shelf and um possibly lose the skill.”* Thus, these participants focused on the knowledge or skill they anticipated gaining through their attendance or engagement in the learning activity.

Conversely, others focused more on the experience they anticipated having, particularly valuing the opportunity to talk with the presenters or facilitators, or those attending. For example, Ellen (a middle scorer) valued postgraduate study, often listing this as a learning activity in her CCFR, as it provided the *“opportunity to talk to other clinicians and the networking, the sharing of experiences”*, but also to be able to ask questions, and likewise Ivan (a lower scorer) and Annie (a middle scorer) preferred workshop learning because as Annie stated, she could *“actually question [the facilitator and] get feedback.”* Similarly, Doug (a higher scorer) liked conferences for the opportunity to network, to *“look for people...to discuss things with”*, and Autumn (also a higher scorer) decided to attend a journal club as she anticipated being able to *“bring our own work and discuss...[to] have some group interaction.”* While the type of learning activity varied, each of these participants identified the value of having the opportunity to interact with others, in order to further develop their knowledge or skills.

Some participants preferred to be able to listen, to observe and then perhaps to practice a skill, such as Perre (a middle scorer) who valued workshops which allowed her to *“sit and listen and watch and do”*, or Valerie (also a middle scorer) who enjoyed postgraduate classes when she could *“just sit there and listen and then put it to something and then um, talk about it.”* Likewise, Matt (a middle scorer) found postgraduate study valuable for listening first, then asking questions that might not be *“really particularly well thought out, but that’s what triggers another thought which makes you get to your ah-ha moment really.”* Several of the participants also described using a combination of formal and non-formal learning strategies, for example, Tony (a lower scorer) used formal

supervision in conjunction with attending conferences “*to try and go a bit deeper with it [the new learning gained from the conference] to try and bed it in and anchor it a little bit more firmly.*” Interestingly, regardless of the type of activity chosen, the need to receive feedback on their ideas, or their performance or both, was often raised. Annie (a middle scorer) talked about this as having her practice affirmed: “*It was realising that what you were doing, there was no great mystery to it, it was affirming.*”

The credibility of the presenter or facilitator also influenced some participant’s choice of learning activity, as Muzza (a middle scorer) described, “*it’s probably around the speaker. So, whoever it is, and their credibility and if they’re known.*” Thus for Muzza, it was not only whether the content might meet her learning needs, but who delivered the learning experience. Similarly, Tony (a lower scorer) also considered the presenter, as he seeks inspiration from attending workshops: “*I suppose that inspiring stuff too is helping me, is stuff that helps me clarify my role*”, especially where the presenter used a range of strategies such as case studies, trying out techniques, reflecting back and engaging in discussions.

Some participants had also presented seminars or in-services and described the preparation for these as a learning process in itself, for example, for Paul (a middle scorer), the preparation provided opportunities to “*reflect on his knowledge*”, and Annie (also a middle scorer) liked presenting her research at seminars, as it enabled her to “*throw ideas around*” with attendees who affirmed her ideas and provided additional resources. Likewise for Lanie (a lower scorer), being asked to give a seminar was a good learning experience as she had “*to be really engaged in it...seeking sources and reading them or asking questions*”, thus expanding her understanding of the topic.

Although participants often started with describing formal types of learning, and commonly listed these as learning activities in their CCFR, many also described selecting learning from another as a learning strategy.

4.7.2.3 *Non-formal learning*

Learning from another can also be informal, or as Eraut (2000) terms it, non-formal deliberative learning where the individual has an idea of the outcome desired, for example, filling an identified knowledge or skill gap, but takes advantage of learning opportunities as they arise, rather than being specifically planned for. Learning from another could be from someone who was more expert, or a work colleague or even a student. Interestingly,

learning from another, particularly colleagues was the least planned for of all of the types of learning strategies in the CCFRs, yet described by almost all participants.

In learning from another, the participant might select someone who they perceived as the expert, having skills in either structuring or scaffolding a learning experience, as Matt (a middle scorer) explained, “[they] can help you out and then you can get there”, or as Thomas (also a middle scorer) shared, “I might talk to someone [an expert] and I’ll learn things from them or they’ll direct me to learning.” Ellen (a middle scorer) also drew from her colleagues to assist her learning, as she explained, “I want to know the knowledge, how they learnt about it and how they came to gaining that knowledge for themselves. Is it through reading or is it through experiences, or through whatever?” Others gave examples of learning through supervision, for example, Lanie (a lower scorer) explained being challenged by her supervisor, who “made me very uncomfortable but she encouraged a lot of umm, internal reflection and, yeah, really got me to pull things to bits.” These participants described situations where learning was possible because of how the other person structured the interactions.

Participants also approached others when they needed to find answers or solutions that they had been unable to find out for themselves in any other way. For example, for Annie (a middle scorer): “That’s something [a concept], I’m not understanding but that if I’m going to use this or learn about this, I need to understand, so that gets highlighted...to be discussed with the experts in the area.” Similarly, Alex (a middle scorer) approached his team leader to show him a skill especially, “if I’m not too confident and I know she’s got time to show me.” At other times he used the opportunity to learn from his supervisor: “Good tips, you know and what I need to look out for and that sort of thing.”

For some, learning from others was not so much about being pointed in the right direction, or given a specific answer or solution, but instead provided the opportunity to gain a perspective different to their own. Again, this could come from the expert, as in Annie’s (a middle scorer) description of approaching experts to “help me see what I’m seeing differently”, whereas for Muzza (also a middle scorer), the conversations in supervision allowed her to describe “kind of how I’m feeling, what I’ve experienced, what I’m going through...and then challenging yourself and reflecting on different behaviours or different ways of doing things.” Similarly, Thomas (a middle scorer) used supervisors “as sounding boards, testing the waters for the ideas that I’m having.”

Sometimes discussing with others is not to gain a different perspective, but rather to validate, as described by Paul (a middle scorer): *“You know ‘cause that gives you, it’s sort of like an affirmation you know when you’re reflecting on things [with others].”* For Perre (a middle scorer), learning was enhanced if she could discuss what she had learned at a workshop with another attendee: *“Then I would sort of like play back what I had then gleaned to, to catch up with what [they had learned]...then I would umm, yeah, just weigh it up with them.”* Likewise, Doug (a higher scorer) used discussion to validate understandings he has gleaned through his reading, *“by talking to people who have had...knowledge or experience of...whatever it is I might be trying to find out.”*

Discussion with colleagues was not always planned for, but could occur serendipitously throughout the day in the workplace, as part of a joint intervention session, during staff or team meetings, or at the end of the day. This unplanned discussion was not always listed as a learning strategy in the CCFR, yet provided opportunities to learn, for example, from others in the same workplace who as Ellen (a middle scorer) explained, *“have a lot of experience in the field that we work with”* thus understanding the context. However, it is not only experience that the participants valued, but the opportunity as Ellen states, to be exposed to different types of knowledge which was helpful for her learning because,

they’ll mention something and I go ‘what’s that about, or what do you know about that?’ Or... ‘I’ve never heard that you would do that’...but it’s like you say, hearing, then gets you thinking about what you know or don’t know in relation to that.

For Ellen (a middle scorer), learning from others in the workplace *“is one of my main learning processes...I learn so much from just being at work through other people, and in fact, I hear everyone who is new saying, that’s where they do most of their learning.”*

As with formal learning, some participants also learned through observing, shadowing or working alongside another expert or colleague. For example, Muzza (a middle scorer) described her ideal learning experience as *“go[ing] and spend[ing] a day or two with an expert and say, I’ll just be your shadow. I’m not going to say anything, I’ll just absorb and then give me a few days and then we can talk about it.”* Similarly, Doug (a higher scorer) also described the process of learning practical skills through observing and asking someone to ‘show’ him how to do the skill, followed by opportunities to practice. Shadowing was often combined with other strategies. For example, Alex (a middle scorer)

felt it important to understand the theory first before he engaged in the practical learning: *“If somebody is talking to me about a certain thing, then I know what they’re talking about...if there’s a practical, sort of hands on demonstration or situation where that’s being applied...I have that theoretical information to help me understand.”* Others such as Janet (a higher scorer), preferred to watch first, then talk with others who have used the skill, and then *“get them to walk me through it...then I’d probably also have a go”*, evaluating her learning by thinking *“how that went and what else I needed to know and work from there.”*

Slightly different from shadowing or observing was the learning strategy of working alongside each other. Dave (a middle scorer) described joining a hand therapy intervention session, where the hand therapist described what he was doing, and why. This process alerted Dave to his knowledge gaps, as *“I could keep up with him to a point, but then would just miss it.”* Dave could ask the expert to explain further and in doing so the learning happened. Similarly, Dave described another experience of having his colleague observe his practice with the aim of receiving feedback about his performance, in this case his *“ability to write good concise notes. We talked a lot about that and finding systems that are meaningful...so you’d work through everything about that session and the bigger picture thing, about the [service type].”* Thus, Dave’s learning was not just limited to the skill he needed to develop further, but also the importance of this in the broader context, something he had previously been unaware of.

In learning from others, participants also provided some insights into the type of learning experience they sought. For example, Annie (a middle scorer) talked about the need to trust the other person, selecting those who *“can frame their feedback to me in a way that won’t completely put me off or make me feel like I can’t do it.”* Annie wanted to avoid being judged for a lack of knowledge, whereas Doug (a higher scorer) chose a supervisor who he believed was credible or knowledgeable, but who would also *“have the patience to guide me in the process.”*

Finally, although almost all the participants had supervised one or more students or one or more occupational therapists, only Tony (a lower scorer) described the learning he gained from being the supervisor, rather than the supervisee:

They talk through, you know their reasoning processes and various things they've done. I always find I learn quite a bit from that too, and think oh yeah that was a good way to do it, or I might have done this differently.

Although learning from another in non-formal ways was valued, so was learning alone, and this was an activity that was listed by many of the participants in their CCFRs.

4.7.2.4 *Learning alone*

Learning alone encompasses activities such as reading, written reflections, and reflecting alone, and was a learning strategy listed by nearly all the participants, with reading being one common activity that they all engaged in.

Reading was selected when participants wanted to explore or better understand concepts, or to gain a different perspective about a particular topic, for example, Doug (a higher scorer) explained: *"I do read articles, and every time you're doing that you always pick up some little gem...that you've never thought about or that really challenges the way you've understood something or it brings a new understanding."* Similarly, Tony (a lower scorer) looked for resources such as journal articles that could give him information that he could put into practice, and Annie (a middle scorer) also liked reading as she could use the experience to self-assess prior to learning from another *"I can, maybe identify the gaps in, in my understanding a bit more eloquently than if I just go and talk to people and go, what do I do with this?"*

Some participants also used reading to confirm what they might already understand, or to find the knowledge for a defined learning need. For example, Doug (a higher scorer) used the Internet to see *"what information was available there about [a particular topic]"* as one of his first steps towards learning something new. In contrast, others sought readings that would build on their existing knowledge. Dave (a middle scorer) described needing *"some form of um meaningful interaction with the knowledge that I'm gaining if I'm reading and writing, for it to stick."* Meaningful for Tony (a lower scorer) was that the reading needed to have *"...stories about the way people did something. I find that a whole lot more helpful and it sort of sinks deeper than um if it's theory without so much application."*

In comparison, some participants did not necessarily read for a specific intent, rather they browsed or read widely, allowing the ideas to sit in the back of their mind for later use. For example, Perre (also a middle scorer) reading allowed her the opportunity to

gain some information which she would then “*sit with*”, processing the new knowledge which enabled her to move to the next step of implementation of new ideas. In general, reading was an ideal learning activity, as literature could be accessed relatively easily and could be done at a time of their choosing. As described by Paul (a middle scorer), reading is:

something you can do yourself at any time and you don't have to turn up to do it, you know you don't have to feel pressed to do it. And...no one's really gonna be testing on your comprehension.

Similar to reading, writing was seen as a solitary activity that participants did to meet diverse learning needs and again could be done at a time of their choosing. For Annie (a middle scorer), writing was not a strategy she had used as a clinician, but it had become a very useful way to organise her thoughts for her postgraduate study,

I need to start writing as soon as I need to start doing something. So even if it's headings or concepts or highlighted bits or underlined bits, so a very messy document will start to, to take shape.

Several other participants, currently in clinical roles, also described using written reflections, such as Muzza (a middle scorer) who explained, “*sometimes I still write things down, like if I, if something is really burning, I'll write it and just put it away and reflect on it that way*”, whereas Ellen (also a middle scorer) viewed her written reflections as a way to clarify her thinking and thus, learning. Through writing about clinical situations that have gone well and not so well, Ellen described the value to her of being able to look back over these and “*look for things that I could have done differently, so I suppose it's kind of indirectly thinking about what I can learn from the situation.*” In a similar vein, Tony (a lower scorer) used written reflection when he wanted “*to wrestle with things more and to go a bit deeper, and stuff I'm discussing in supervision...to try and bed it in and anchor it a little bit more firmly.*” Writing for all of these participants was a valuable learning strategy.

Quiet solitary reflection was also seen to be a useful learning activity by some participants. Perre (a middle scorer) described the value of reflection simply as “*when I reflect, I learn.*” Reflection provided Perre with “*ways of improving or changing or shifting perception, umm, applying something in a different way.*” Thomas (a middle scorer) stated how he reflected through thinking about what went well and what did not,

modelling this for the staff he manages. Janet (a higher scorer) described valuing reflection as it allows her to step back from the situation, and to *“take a reflective position or a reflective space, to put them all in one place to look at them umm, and to look at what did happen but also what didn’t happen.”* Janet felt that being able to take an objective stance was vital to her learning.

The final type of learning strategy selected by the participants was learning through doing, and again was the strategy that most described using and valuing, but interestingly was not often listed in the CCFR portfolios.

4.7.2.5 *Learning through doing*

As noted in the previous sections, many of the participants combined a number of learning strategies, which often culminated in learning through doing. Learning about tangible objects for some could only be done practically, for example, Ivan (a lower scorer) noted that if he *“really want[s] to learn something; I need to get in there and learn it, practice it.”* Annie (a middle scorer) described this learning strategy as valuable for her as *“there’s no point in me looking through catalogues for equipment. I need to pull it apart and play with it, and I can look at features and things.”* For Annie, this gave the opportunity to see how the equipment worked, in order to learn how to use it. Others described giving things a go in order to identify what they did not know, for example, Doug (a higher scorer) described learning to respond appropriately during formal welcomes:

The only way I’m going to know what I need to know is by giving it a go...and seeing if there are gaps, seeing what it was like, you know what I didn’t know and what people said, what feedback they gave me.

Although the majority of the participants are clinicians, only two described the learning that occurred from interacting with the users of their services. Paul (a middle scorer) explained the value of this learning: *“I like experiencing things with patients learning from them. I mean I’ve worked with people who have had full lives and done an awful lot of things that I haven’t done.”* Paul described how learning occurred for him, through what his patients might show or share in relation to their life experiences.

4.7.3 Comparison of high and low scorers' descriptions of what they do, why and how

According to Garrison's (1997) descriptors, participants in this study were all self-monitoring learners to varying degrees. However, differences between the high and low scorers were also apparent in this dimension, although slightly less so than in Self-Management. All six participants talked about how they knew they had learned, giving examples of how they integrated new learning with their existing knowledge or skills. However, there were some differences between the high and low scoring participants in relation to using the process of collaborative confirmation, and in determining their choice of learning activity for their CCFR.

The higher scorers provided clear examples of how they used the process of collaborative confirmation. For example, Doug explained the outcome of confirming he had a full understanding of the topic when all that he was finding was supporting what he already knew. Both Autumn and Janet provided similar examples of engaging in learning experiences where they had opportunities to 'test' their knowledge, confirming their understandings with others. Autumn described this interaction as a specific learning strategy she opts to use as *"I work it out as I talk it out which is sometimes not a great thing in life, but if you're in a learning forum, it's okay"* stating, *"I don't mind if I end up disagreeing with myself, or I say it wrong or something."* Janet too, gave an example of having her CCFR portfolio audited, stating *"I liked the fact that I was going to be...reviewed...exposed like that."* In general, higher scoring participants were more open to not-knowing, as in the example of Doug who attended a powhiri to test what he did or did not know thus, deliberately opening himself to critical evaluation in order to identify knowledge and skill gaps to be addressed.

Ivan and Tony (the low scorers) also gave examples of using the process of collaborative confirmation for checking their learning. For example, Tony described the process of learning about a particular therapeutic technique that started with getting information about the technique from the internet, then joining a peer group where literature about the technique is discussed, with group members taking turns to give presentations on their learning. Tony attended a two day workshop, and then started implementing the technique with clients. Of the three lower scorers, only one participant, Lanie, gave examples of being less confident to show what it was she may not have known, stating *"I think there's a certain amount of vulnerability in acknowledging, hey, I*

don't have this information. I don't have this skill. I don't, or I do, but I'm not sure about it." However, Lanie did go on to say if there was a *"client or a situation thrown my way and I just feel absolutely out of my depth"*, that she would seek support or knowledge from others.

In relation to selection of learning strategies, all six participants were able to explain why they selected certain learning strategies. However, the differences in the high and low scorers became more overt when the participants discussed the types of learning strategies they selected for their CCFR. The higher scorers were conscious of their preferred learning strategies, describing how reflecting on previous learning experiences had helped them to define their learning styles, and the value of using these wherever possible. Autumn noted *"it's something that...you need to learn how to learn...you need to know about yourself."* Where they were unable to have their choice, they found ways to accommodate, for example, Janet described how she *"complement[s] whatever I'm doing with my preferred strategies, I'll always go and read and ask somebody afterwards."* Having knowledge of themselves as learners meant that the higher scorers tended to include only those learning activities in their CCFR portfolios that were the most effective for their learning.

In comparison, the lower scorers did not always select their preferred learning strategies for their CCFR. This was very evident for Tony, when he reflected that the interview question raised his awareness of the differences between his preferred learning strategies, as opposed to those identified in his CCFR. As he explained, *"when you listed off those activities, when I think about it...even though I put them down as activities, they're the things I find harder to do and less likely to do"*, stating that this revelation was *"pretty telling isn't it... [I should] sort of look to make my activities [in the CCFR] fit my learning style a bit better."* In contrast, Ivan was aware of which learning strategies were effective for him, describing his learning as being dynamic, although unlike the higher scorers, he also thought that his learning could look *"random and a bit haphazard."* Lanie too tended to think less about how she learns, noting that she tends to focus on the here-and-now, on what she is doing, *"not 'the what it is' I'm thinking about, or 'the what is it that's behind the task."* In relation to her CCFR, Lanie did complete the critical reflection step, but she described this as the finish of the cycle for her, *"archiv[ing] it and think[ing], ohh. That's done."* Focusing on her CCFR as set of tasks to be completed was also evident in how Lanie wrote her objectives, which tended to be about the tasks she would do, rather

than an identified learning need. When asked to consider one, Lanie noted, “*It was more about going and learning this tool, not so much reflecting on why I wanted to learn it*”, or thinking about what might be the most effective learning strategies that would enable her to learn.

4.7.4 Summary of Dimension Two: Self-Monitoring

All participants were self-monitors of their learning to some degree, providing examples of the processes they used to integrate new learning with existing knowledge structures, with higher scorers differing from lower scorers in how they used collaborative confirmation, and the ways in which they thought about their learning strategies for their CCFR activity. Some participants described a conscious process of starting with what they knew, and then adding to this knowledge in layers as they engaged in learning activities. Others, in the examples they gave, seemed to have a subconscious process, engaging in a learning activity or two, and allowing the new information to ‘sit’ or ‘churn’ in the back of their mind as they went about their day to day practices, knowing that they would draw on this when needed. Most described a collaborative process with new understandings emerging from joint discussions about a concept or idea.

Collaborative confirmation, as described by Garrison (1997), is the process of where the student integrates the teacher’s feedback with their internal measures of assessment. To do so requires the individual to being open to being evaluated by another. Almost all participants spoke of seeking feedback from others such as their managers, colleagues, those they considered more experienced, or their clients. Other opportunities for feedback also occurred serendipitously, with participants describing situations where others’ responses to them in an event or situation provided external feedback, and thus an alternative way of checking whether there was a match between their own and others’ perceptions. Higher scoring participants actively engaged in collaborative confirmation, whereas some of the lower scoring participants were a little more wary, feeling less confident to show, or share what they felt to be knowledge or skill gaps, unless there was a trusting relationship in place, for example, with a supervisor.

Self-monitoring also includes the ability to monitor the learning process, which for these participants, in the context of the CCFR, was about knowing oneself as a learner in order to select the most appropriate learning strategies. Overall, participants in this study articulated the reasons why they would select particular learning activities compared with

others, with most participants describing the type of learning experience offered, and the fit to their learning style. Higher scorers used this knowledge of themselves to good effect, identifying learning strategies for their CCFR that matched their learning style, whereas several of the lower scorers had not really consciously considered this possibility prior to the interview.

Almost regardless of the type of learning strategy, participants sought opportunities to interact with others, to express their ideas, to have their ideas validated, or to be challenged to extend their understandings through the sharing of different perspectives. Some participants valued particular strategies where they could be guided or scaffolded to find the answers or develop their knowledge. The opportunity to develop skills was another rationale for most participants for choosing a particular learning strategy, and was often linked with learning through doing. Most participants preferred to learn from others more knowledgeable than themselves, although the other person did not need to be a recognised expert, but could be a peer or professional colleague, with participants choosing these types of learning experiences when they wanted to hear, or to observe, before they had the opportunity to interact or practice. Often participants considered who was providing the learning experience, and for some, these facilitators or presenters were checked for credibility, or for the type of teaching/learning methods they used to ensure congruence with the participant's learning style. Finally, for a few participants, delivering seminars or workshops was their chosen learning strategy, as it ensured that they really understood the concepts in order to pass their knowledge onto others, or to have others add to their knowledge through the subsequent discussions. All participants also valued learning alone, which could be through reading or reflection. Reading provided opportunities to extend their knowledge, to confirm their understandings, or to be exposed to different perspectives. Reflection was chosen to clarify or deepen understandings. The advantages of these solitary activities were that they could be done in the time and place of the participant's choosing.

According to Garrison (1997), self-directed learners not only manage and monitor their learning, but engagement in the learning is significantly influenced by the learner's motivational state, which is thought to be pivotal. How levels of motivation influenced participants' entry into, and sustaining of energy, for learning at, for, and through work, especially in relation to their CCFR is presented next.

4.8 DIMENSION THREE: MOTIVATION (ENTERING AND TASK)

The third dimension in Garrison's (1997) Self-directed Learning Model is that of motivation. According to Garrison, the learner's personal values and affective state which includes attitudes to themselves as learners, the learning task (i.e., can I learn in this way?) and the goal (is this worthwhile and of value?), influences both motivation to commence the learning experience, and ability to continue to direct and sustain effort in order to achieve the learning goal. Entering or sustaining motivation is also influenced by the context of the individual. The 16 participants' descriptions about what influenced their motivation to engage in and sustain learning, both generally, and in relation to their CCFR is presented in the next sections.

4.8.1 Entering and sustaining motivation – Influence of values

In answering questions about why they selected particular learning goals, or engaged in particular learning experiences, participants identified their underpinning values. Participants were often more general in their answers stating their motivations for engaging in a learning experience, or for setting a particular goal because they believed, as Autumn (a higher scorer) stated, *"it would be a really good thing to do."* However, some participants were more specific as to how their values influenced the motivation to engage in learning experiences.

For many of the participants, the primary motivator was related to providing a good service to their clients, as summarised by Thomas (a middle scorer): *"A lot of my motivation is; I want to do a good job."* Thomas explained that his learning goals were not necessarily focused on particular interests he may have, but rather that *"my work ethic drives me to do a good job."* Likewise Dave (a middle scorer) did not want to be *"a lazy therapist ticking off the boxes and going through the motions and not really providing the energy"*, rather he valued developing his knowledge further, in order to be a 'good' occupational therapist. Other participants described their motivators in relation to their interactions with their clients. For example, Alex (a middle scorer) was specific about being motivated to learn in order to be *"able to offer somebody the best advice and help I can really, and in terms of helping them meet their goals and expectations, I mean that's my motivation in terms of learning."* Similarly, the need to offer accurate information was valued by Dave (a middle scorer): *"When there's a gap in your knowledge, there's not much there, or these answers don't feel genuine or they feel hard"*, then filling this gap is

the motivator for his learning. In a similar way, some participants such as Muzza (a middle scorer), valued developing knowledge or skills related to their role: *“The neurogenic fatigue one, for example, it was something that was kind of key to us as OTs, but a lot of the rest of the team didn’t get it.”* Muzza valued developing her knowledge in this area, in order to be able to justify why she was focusing on this area of deficit of the clients she worked with. Likewise, Tony (a lower scorer) also valued being able to develop his knowledge in order to justify his occupational therapy focus, giving an example where *“I was in a generic role I wanted to be able to firm it up in my head...what OT was in mental health.”*

While most, if not all, participants valued offering a good service for their clients, which included having the knowledge they needed for their role, a few also valued learning relevant to their own goals. For example, Janet (a higher scorer) looked *“forward to learning some new things”*, and Annie (a middle scorer) valued being stimulated, explaining that meeting this need *“drives me to seek out more...I think that sounds like fun...like it will be a good idea. I’ll do that and see what happens.”* Thinking about his learning, Matt (a middle scorer) valued learning about topics that interested him, such as ethical issues, because *“I think they’re quite juicy, and I thought well that was...sort of topical”*, and Tony (a lower scorer) had also identified an area that he was interested in, which aligned with his personal values and that he also saw as potentially applicable to his work role.

Almost all the participants described being motivated to engage in learning experiences, as Perre (a middle scorer) described, *“when something is of interest to me and I can see that it’s relevant to what I want to learn... and it is going to be worth it, either for her own “perception, for my inner awareness” or “for my client group.”* The value of relevance for herself, or her client group, is one Perre drew on repeatedly to avoid impulsively selecting learning tasks. Paul’s (a middle scorer) perspective is similar, explaining *“I don’t want, or see...applying myself, and using my finances and resources and energy, if I don’t see it really applies to my practice specifically.”* In contrast, Annie (a middle scorer) was very clear, especially in relation to her CCFR, that she would only *“set the goals for what I wanted to do, rather than what a service wanted me to do”*, whereas Thomas (also a middle scorer), described balancing what was needed for his role in the service, versus his own personal learning: *“I came across the addiction stuff and I thought,*

oh I should really do that. That's what I should do because this other stuff's more just for me and a bit fanciful."

A motivator for some participants was the achievement of personal goals, such as completing postgraduate study, for example Dave (a middle scorer) stated, *"the reason I started doing my postgrad course was because I wanted to go and work in [country name]...so that was the start of it"*, whereas Ellen (also a middle scorer), used enrolment in one postgraduate course *"to consolidate my knowledge in this area."* Although underpinning values are key drivers of motivation, affective states also influenced participants' motivation to enter, and sustain their learning.

4.8.2 Entering and sustaining motivation – Influence of affective state

Similar to how values influenced participants' approach to their goal setting or starting and maintaining the learning experience, their beliefs about themselves as a learner and the learning task also influenced their motivation to commence. As identified through all dimensions in this chapter, all participants described the need for the learning experience to be interesting. For example, Matt (a middle scorer) stated, *"I'm probably not unique in that it's much easier to learn stuff that I'm really interested in, and it's more difficult to learn stuff that I don't find interesting and I'm not bothered about."*

In the main, participants also preferred to develop their own goals. Where this was possible then participants, for example, Dave (a middle scorer) described being *"more energised doing it [the learning]."* However, this was not the case for all, with Ellen also a middle scorer, who preferred not to hold preconceived ideas or specific goals about specific learning experiences, as she feared being disappointed if it did not live up to her expectations. Rather, Ellen described how she tended to go into a learning experience with the thought that *"if I agree to go to do a course, that I will take what I get from it."* In contrast, Perre (also a middle scorer) was almost distrustful of her first reactions about a potential learning experience, preferring to evaluate whether the learning opportunity would offer her what she needed. Having learned from earlier experiences, Perre explained:

I would umm, be more impulsive and do things spur of the moment and get into something and then, at the end of the day I'd think...well, that really wasn't worth the effort or...it didn't have the value that I impulsively thought it might have.

Several participants shared experiences that also impacted on their motivation. For example, Autumn (a higher scorer) found that the writing group she joined failed to offer what she had originally hoped for, to support her goal of developing her writing skills, and Ellen (a middle scorer) equally shared her frustrations about an experience that did not meet her learning needs:

It was more about the momentum of the course. It didn't keep me interested and want to learn more about that area...I was probably a little bit bored as well as I wasn't able to apply it as much as I would've liked.

Ellen talked about the learning having to be “*presented, I suppose, in a way that is interesting, or makes me feel motivated that I want to learn more about it myself,...[then] I'll direct myself to investigate further about a particular topic.*” Similarly, although often one of his selected CCFR activities, Tony (a lower scorer) described his struggles with literature that had “*loads of graphs and loads of statistics and it was just hard going*”, and Alex (a middle scorer) also shared similar feelings about “*those sorts of articles...sort of evidence based practice, I find quite annoying because it's a lot of statistics...I find those are limited in application.*”

Some participants were very aware of how they had come to understand themselves as a learner, and were very comfortable with this. For example, Janet (a higher scorer) explained that earlier in her career,

to admit that I didn't know things was quite a big deal and then I discovered, it's much better to admit that you don't know something and to find out, and to work through a process of engaging and actually, you learn so much.

Whereas others, such as Lanie (a lower scorer), felt wary of acknowledging that there may be a knowledge gap, especially when it came to her CCFR self-assessments. In self-assessing for the CCFR, Lanie described “*...that reluctance to, to feel like that new grad or the student...I didn't like feeling like that.*” Thus feelings about themselves as learners impacted on their motivation to identify learning needs, and to engage in the learning experience.

In knowing how they learned best, participants did at times challenge themselves around topics, such as Matt (a middle scorer) who stated, “*I didn't really want do to the [name of technique] course.*” As Matt explained, “*I was actually quite shit at it and I generally don't like doing things that I'm not very good at.*” However, he persevered at the

learning activity, with the learning he gained about himself being almost as valuable as the content of the workshop. Similarly, Annie (a middle scorer) described, “*railing against that [a specific topic] in so many ways*”, but was able to describe the value of engagement in the learning experience, even though her entering motivation was low. In comparison, some participants were also aware of becoming complacent, or expecting less of themselves as learners. For example, Dave (a middle scorer) preferred to guide his own learning rather than rely on others, but stated that he was also aware that

there’s probably times when I take the easy way out when it would be better to have a harder look at what I’m doing...I could probably do with her [his supervisor] kind of poking a stick at me a bit more.

Likewise, Lanie (a lower scorer) was concerned that it was easy to become complacent over time, relying more on the day-to-day learning that occurred through her daily interactions with clients and staff; hence she will sometimes decide to do “*the odd workshop...here and there, well that’s enough, you know.*” Although Lanie also clarified this stating, “*at the same time, every now and then, I think...I should be pushing myself a little bit more, you know. Am I really doing justice to, to the people I’m working with, if I’m not really, you know...*” Others such as Muzza (a middle scorer), also noted that

...because I’ve been working in the same area for the same amount of time...how do you challenge yourself and it’s probably the challenge...for me has been that it maybe, I haven’t really challenged myself, you know.

Participants’ values, their beliefs about themselves as learners and their approach to the learning tasks, are all factors that influenced their motivation to enter and sustain learning. In the next section the influential contextual factors are presented.

4.8.3 Entering and sustaining motivation – Contextual factors

As presented in earlier sections of this chapter, all participants described their perceived ability to identify their learning needs, determine their goals, select and use learning strategies, and identify criteria by which to measure learning had occurred. However, the degree to which they could do this was at times contingent on the characteristics of their learning contexts. In sharing their experiences, participants described the barriers and enablers which affected their levels of motivation, both for starting and maintaining the learning experience.

One of the contextual factors that appeared to influence levels of motivation included the participants' role, and therefore level of control, they potentially had over their learning. For example, some participants liked to have full control of their learning process, and were in the roles or positions that enabled and expected this behaviour. This was the case for Janet (a higher scorer) who had a role "*where I'm afforded the opportunity to do those things.*" Similarly, Perre (a middle scorer) being part-time, had more time to give to reflecting on her practice, one of her preferred activities, and for her a necessary component of the CCFR process. Perre compared this flexibility with that of her colleagues still working full-time with families, "*I don't know how they manage with the health system as it is at the moment...I think I'm lucky that I can actually enjoy this process now, whereas before I didn't and I understand why I couldn't.*"

In contrast, others recounted where they had been directed to a learning experience, but this had not necessarily influenced their motivation. For example, Tony (a lower scorer) described starting a new job and being asked to do training on a particular intervention approach. Although he had not determined this goal, Tony was motivated to take up the opportunity as being useful learning for his new role. Similarly, Thomas (a middle scorer) initially felt that a learning experience associated with a managerial task he had volunteered for, had "*been forced upon me.*" Although the learning goal was set for Thomas, he found the learning valuable, explaining that he has learnt over time the value of going with the flow, as it works well for him. His attitude is to "*embrace it [opportunities] and see what happens.*" Embracing opportunities was also the approach taken by Ellen (a middle scorer), who gave examples of being encouraged by a colleague to enrol in a postgraduate course. As Ellen explained, "*it's easier to get motivated to learn about things when there are other people around...when you've got that external stimuli*".

However, there were some factors which did influence the perceived levels of entering or sustaining motivation, including the CCFR mandated requirements, workplace expectations and resources.

4.8.3.1 CCFR mandated requirements

One of the major factors influencing participants' motivation to initiate and maintain planned learning was the CCFR requirements. Several participants described how the mandatory requirement of setting a learning goal for each competency was influential, with Doug (a higher scorer) explaining this as being the "*difference between having a*

choice about what I want to do...and having some constraints on what I actually need to do as a registered health professional, who is in a particular role.” Paul (a middle scorer) described the challenge of *“feeling a bit dictated to and also knowing what you want to learn”*, explaining that he aimed to be more open to the CCFR, rather *“than thinking ‘oh you know what do I have to do this for?’...[the] attitude you take into a thing, is what you get out of it as well.”* This perceived lack of control over determining their learning was evidenced in a number of descriptions. For example, Matt (a middle scorer) commented,

Sometimes it is a matter of thinking ‘well what can I put down for this’ because I have to have seven competencies...even if the most interesting learning might all be about two or three competencies I have to make sure that I’m covering everything ...ticking certain boxes.

Several participants described seeing the CCFR process as nothing more than a task they needed to comply with. For example, when thinking about what her objectives could be, Autumn (a higher scorer) stated, *“I am very much thinking about what kind of thing do they want to hear, what would suffice for this category, rather than this is what I really want to learn about.”* Rather than selecting his preferred learning strategies, Tony (a lower scorer) described listing learning strategies that may be the *“more credible ways of demonstrating we’ve ticked off our objectives...maybe it’s needing to feel like you’re complying with something, rather than trying to find the best way to do it.”* For these and other participants, the CCFR was not seen as a professional development tool; rather it was seen as being an externally imposed task, which then influenced their motivation to start their identified learning, as Lanie (a lower scorer) explained:

It seems very stilted and hard to get myself moving on those... yes, this is ‘good for me and I’ve planned to do [it]’, and this will benefit my practice in this way, but I’m only doing it because I need something in this area.

The ways in which participants thought about the CCFR process also had an indirect effect on their motivation to commence the learning. Objective setting or learning strategy choice can be rushed, as explained by Dave (a middle scorer), *“within that time frame, I’m also trying to mow through my goals as quick as possible.”* Similarly, for Alex (also a middle scorer), the one half-day allocated by his workplace for working on his CCFR is *“not long enough to really go through and do all of the seven competencies...I don’t do it at home.”* In rushing through the process, participants may not select the best

learning strategy or most relevant topic for their identified learning needs, consequently their motivation to engage may be hampered. Although a higher scorer, Autumn shared similar ideas, noting that she paid lip service to the whole process, as it did not allow her to focus on her needs. She described her ideal process:

...competency one, [should] prompt me to think about this aspect of my career and hey, yes, this is an important area to develop for me, what, do I need here, what's my reflection here? How do I feel about this?

However, for Autumn, the process is reversed, where she writes what she thinks the OTBNZ wants to read, tending not to refer again to her CCFR until the following year. Autumn described that her motivation to attend to what is written in her CCFR is low, as mostly her objectives are not connected with, or related to, her own personal learning goals.

In comparison, several of the participants found the mandatory aspect of the CCFR process to be very helpful, for example, Thomas (a middle scorer) shared that, “*in general...having activities and goals and reflections, it's quite nice...a little bit of time out to think about what you do, and yourself.*” Thomas explained that he wouldn't ordinarily choose to organise his learning in this way, but having to do so was a positive experience, and assisted his motivation to engage in the planned learning. Likewise, Perre (also a middle scorer) enjoyed the process of updating her CCFR, relating this to her

approach to it on the day, then that's what makes it good. It's like the stress is not part of it. The time constraints aren't part of it. I've made time. My mind is clear. My mind is ready. It's like approaching it with umm, curiosity.

In taking this approach to working through the process, Perre found that she identified goals that she was motivated to achieve.

4.8.3.2 Workplace expectations

Another factor mentioned by a number of the participants was workplace expectations as already referred to in the Self-Management Dimension (refer to section 4.6.3.1). One of the factors seemingly influential in the level of motivation to engage in the learning experience, was the actual amount of time participants could realistically give to achieving their learning goals. As explained by Annie (a middle scorer), “*even though the clinical work of OT is fantastic...40 hours a week working within the health system...it*

didn't leave me as much room for learning as I would have liked.” Likewise, Lanie (a lower scorer) described the pace of the workplace as being a mitigating factor: *“It's go, go, go...you know, do we actually stop and ask those questions”* referring to the challenge to find time to reflect on what she needs to learn, especially for her CCFR. Similarly, Dave (a middle scorer) noted that when there are pressures at work: *“You expend energy in one area [and] how much of a toll it takes in other areas”* which he believed impacted on his ability to stay focused on completing his postgraduate studies, which was one of his CCFR objectives.

Employer expectations or arrangements also influenced the goals participants set for themselves. For example, even though Dave (a middle scorer) had planned a goal for his CCFR around a particular activity at work, he was reliant on others to create the environment that would enable him to achieve his goal. Unfortunately for Dave, the event was altered with the result that his preferred learning goal was going to need changing, as he explained *“...it's a little bit out of my control.”* Dave also identified selecting learning strategies that *“are meaningful to employers”*, with the result that he *“struggles to engage in learning, in ways that I struggle to learn with.”* By not using his preferred learning strategies, Dave's motivation to engage is influenced. Similarly, Muzza (a middle scorer) described choosing learning strategies for her CCFR that she perceived her employer would see as credible. Although Muzza's preferred way of learning was to learn from others (i.e., an expert), she tended to choose strategies such as conferences, even though they were not her preferred way of learning explaining, *“that real verbal bombardment which I don't like. I really don't do well in that kind of situation...you've got so much information coming, it takes a long time to actually kind of digest it”*, thus influencing her motivation to learn. The value employers placed on particular learning activities was also something that Janet (a higher scorer) had found. Although Janet acknowledged having a degree of autonomy, and thus anticipated being able to determine her learning, she noted this was not the case for other occupational therapists. Her experience had been that the occupational therapists could see as many clients as they wanted, but if they wanted to take time to *“go to supervision or if you want to stop and say this is not working, I need to take stock of where I'm up to, it's all sort of stuff, that's still not valued [by the employer].”*

4.8.3.3 Resources

The influence of available resources has already been introduced under the Self-Management dimension (refer to section 4.6.3.1). However, resources were also raised by

participants as being a factor that influenced entering motivation. Available resources influenced the learning strategy selected, for example, Autumn (a higher scorer) reconsidered attending a learning opportunity that would have enabled her to meet her goals, as it *“is more time consuming...because I’ve got to go and drive somewhere.”* Similarly, Alex and Perre (both middle scorers) described how living in rural areas could limit their choice of learning strategies, with Alex stating, *“the opportunity to do further education or have hands on sort of experience, or similar choosing, it’s fairly limited here.”* With limited options, participants described selecting learning strategies that were not always their preferred option, and thus motivation to engage can be influenced. Perre (a middle scorer) acknowledged the need to weigh this up, for example, in order to achieve a particular learning goal, travel to another area of the country may be required, which has implications for time and cost. For each decision made, Perre asks herself *“Is it going to be worth [the] time and effort that I put into it to gain what I want? And, will that be as useful as I imagine?”*

The available funding resource also influenced participants’ choices and therefore their levels of entering motivation. For example, before even confirming a learning goal Annie (a middle scorer) *“look[s] for funding [to] see how realistic it was before it really became a goal”*, at times considering *“how much of my own money or time am I going to have to contribute to this, and there’s been times I’ve taken leave or I’ve paid for things myself.”* Alex (a middle scorer) also described how funding influenced his choice of activities along with timing, for example, he may choose *“a conference or something like that, which could help me out in terms of my objectives, but [isn’t] realistic because there’s no budget for it, or I don’t have time to do that.”* Muzza (a middle scorer) also described how her employer’s financial constraints influenced her choice of learning activities, realising that if she chose an activity earlier in the year, then no further resource would be available for other learning events occurring later in the year. For Muzza this made *“a huge difference to the learning and what you want to do.”*

4.8.4 Comparison of high and low scorers’ descriptions of motivational influencers

Garrison (1997) states that motivation is pivotal in self-directed learning, playing a large part in the effort individuals give to their learning goals. All the participants gave examples of learning experiences they had been motivated to start and complete, and as

with the Self-Monitoring Dimension, the differences between high and low scorers were less apparent than for Self-Management Dimension.

The values that underpin motivation to engage in and sustain learning for their CCFR varied across the six participants, related in part to their workplace and their role in that workplace. However, a clearer difference was evident in the beliefs that they held about themselves as learners, which were influential in their motivation to engage or sustain a learning experience. Through the interview, the higher scorers shared their enjoyment of the learning process with Janet stating, *“I do like the process of engaging and learning something new...I get a lot out of it...there’s a big payoff for me.”* Both Janet and Doug talked about their enjoyment of learning from when they were young; Janet describing herself as being the child who always questioned and still does so, and Doug described having a love of learning new things as a child and being *“naturally drawn to more academic things.”* Autumn talked too about valuing the interaction that occurs in any learning experiences she has, finding that it gives *“just pure pleasure...[which] puts me in a good space for learning.”* Based on these descriptors, these participants enter a chosen learning experience with high levels of motivation; they expect to find the learning pleasurable. In addition, they were likely to engage in some learning experiences more for the enjoyment they expected to gain from participating, as opposed to meeting specific learning needs relevant to their role and/or needs of the workplace, or even for their CCFR. Related to their enjoyment of learning, higher scorers were also internally motivated to continue learning, which made goal setting for their work and/or for their CCFR easier. For example, Autumn described engaging in learning opportunities that would further develop her skills and knowledge, enabling her to create products that *“give back to the professional world and to consumers what they have given me”*, and Doug chose to complete a postgraduate programme of research, because he was motivated to find out more about a topic of interest.

The lower scorers also described enjoyment of learning, although they tended to discuss enjoyment in relation to a specific learning experience they had undertaken relevant to their current day-to-day practice. Compared with the higher scorers, although Ivan (a lower scorer) was interested and motivated to learn, the learning needed to be relevant, not just *“learning for the sake of learning.”* Also a lower scorer, Tony talked about a particular workshop: *“I signed up for a three day course...um yeah thoroughly enjoyed it”*, choosing to then enrol in another workshop by the same facilitator, as he

found the facilitator's style inspiring. Tony also expressed enjoyment at being stimulated to think: *"I like that sort of big picture theory stuff as well...to just get me thinking...I do enjoy wrestling with that sort of stuff."* However, Tony also acknowledged that he has to work harder to maintain his motivation to continue learning as the newness or novelty of the topic wears off, an issue which was not raised by the higher scorers. Likewise, Ivan described learning experiences he enjoyed, such as getting excited about a chapter in a new textbook that he is reading. However, motivation can also be difficult to maintain, as Ivan described:

[I] really push[ed] forward with the [name of intervention] course but...right in the back of my head, I thought this is so dry. You know, it's going to be all this work umm, and I knew in myself that I would be able to complete it, but it was just like pulling my own teeth out.

On the other hand, Lanie described herself more as the type of learner whose level of motivation is related to the amount of pressure she experiences to engage, stating *"that's my learning style, very much a pressure worker...I certainly need enough pressure on me and enough motivation with the pressure to do it [the learning]."* However, Lanie also noted that her motivation can change as she engages in a learning experience, giving the example of being asked to prepare an in-service on a particular topic. Although Lanie was initially reluctant to do this she found that once she got started, she found it enjoyable as *"it was a topic that was of particular interest to me. That was the difference."* Other topics may have been relevant for Lanie's work with clients, but in this situation her motivation was much higher, because the topic was of interest.

Contextual factors did influence motivation, but in differing ways for the higher and lower scorers. In relation to the CCFR, two of the three higher scorers were more motivated to engage in the learning tasks they had set for their CCFR. As described in Dimensions One and Two, this might be because the higher scorers were aware of themselves as learners, drawing on a range of data to identify their learning needs and determine their goals, ensuring interconnectivity between their self-assessments, goals and learning activities. This appeared to be the case for two of the three highest scorers, Janet and Doug, who both described how they found the CCFR useful as a professional development tool. Janet stated *"I just don't find the CCFR at all arduous"*, going on to say:

It's fairly explicit what you need to do. You need to reflect, you need to identify some gaps, and you need to identify some objectives to meet those gaps. You need to get on and do the activities and then you need to talk about or reflect on how that changed your practice.

For Janet, the process was clear, and equally she had the skills to work through the steps. Likewise Doug viewed the completion of his CCFR positively:

I've always viewed it as this is an opportunity to think about what it is that I need to do to be the best practitioner that I can...ongoing competence to me links with ongoing learning.

Doug was motivated to complete the activities in his CCFR, as it provided him with a structured process of thinking about what he needed to learn. Doug explained this as, “*I actually use the CCFR to make sure I do something about learning that particular thing [the identified learning need]*”, ensuring he sets goals that can be completed in order to have a sense of achievement. Somewhat different was Autumn’s experience, whereby having changed roles, she now perceived that some of the competencies were not relevant to her current role. Although she had sought help to make the transition, Autumn had not found the guidance useful, and she now saw her CCFR as something she was required to do. With this perspective, Autumn explained “*I'm really paying it lip service now*”, which meant she was less likely to engage in the learning activities identified in her CCFR.

In comparison, two of the three lower scoring participants, Ivan and Tony understood how the CCFR could be a valuable professional development tool. For Ivan, being required to complete the CCFR did not influence his motivation to engage in the learning experiences he had planned. Ivan stated that the CCFR was important, and a useful tool that “*I like to actually spend time thinking about it...not just putting down [objectives/activities] for the sake of it.*” Likewise, Tony also felt that the CCFR was useful, stating “*I do believe that it's a really useful tool...[but] it's a challenge for me to get the best use out of it.*” However, both Ivan and Tony found aspects of the CCFR challenging, with Ivan’s issues being more related to management of the process and Tony identifying a personal ongoing challenge of procrastination as one of the influencers on his ability to use the CCFR as a professional development tool. As part of the interview process, Tony realised (as did others) that he might gain more out of the CCFR, if he thought more carefully about choosing activities that matched his learning style. In

addition, Tony felt that he struggled with writing goals for some competencies as he perceived these as reflecting *“the future, thinking about the type of practitioner you want to be, and then the goal that you put there, is kind of your steps towards that.”* Planning forward was challenging for Tony as he felt that he had yet to find the area of occupational therapy that he felt really passionate about and therefore, because he wasn’t *“too sure of the destination yet, so don’t really know the path to get there...[nor] the objectives that are going to lead me towards that.”*

Lanie too identified the value of the CCFR seeing it as potentially valuable for structuring her learning. However, she also felt that completing the CCFR was challenging, in part because it did not match her thinking style or her personality style which is *“very in the moment.”* Lanie explained, *“it’s so hard to sit and commit and reflect and put it down because...I just don’t think like that...and to actually make it work, I’ve got to have enough pressure on to do any of that [referring to updating her CCFR].”* Lanie’s challenges with the CCFR were in determining her learning needs, when there was *“nothing glaring at the moment...there’s nothing pressuring me that I’m feeling unskilled at”*, thus she often created learning needs with associated objectives and activities because she knew that there had to be something under each competency, rather than identifying authentic learning needs with related objectives. As with some of the other lower and middle scorers, Lanie was challenged by having to create objectives for seven competencies. In addition, she had identified that her skills in writing achievable objectives and determining appropriate activities needed improvement, realising that in asking herself about *“why did I never get around to them [the learning activities] and it’s because they were very dry for me. I need to be really engaged in it and doing something with it [the learning].”* As with others, Lanie also found it difficult to understand the differences between what should be in her self-assessments, objectives and activities. However, one of the fundamental underlying issues influencing Lanie’s use of the CCFR as a professional development tool appeared to be her understanding of competency. Lanie described how identifying a knowledge or skill gap felt as though she was saying that she was not competent. Lanie explained: *“I wonder if part of it is, we’re employed in a role and we’re being paid to do the role and we’re expected to be at this level, and if we’ve got gaps in that level...what does that say?”* Identifying a lack of competence for Lanie was like being a new graduate again, a feeling she disliked. Interestingly, Lanie was not alone in holding this view of competence, and as

with other participants, holding this view did influence their use of the CCFR as a professional development tool.

Interestingly for the lower scorers, few workplace barriers were noted to be influential in entering or maintaining motivation for a learning task. Lanie identified that workload could be an issue, stating that the busy nature of her work, and the expectations of her role, meant that *“it’s like we almost don’t have time to stop and think about what it is we don’t know?”* In comparison, higher scorers did not state lack of resources as a reason to alter their goals. Rather they identified their learning needs, determined their goals, and drew on a range of learning strategies. For example, Autumn considered a number of different options for a specified learning goal; when the first option was not available, Autumn worked through her other options until she found one that worked, stating *“[you just] need to be a bit opportunistic... to make use of the best of what’s available.”* The higher scorers tended to both creative and strategic in finding the resources required, as Doug described *“think[ing] about the resources around me that I can access, and normally that boils down to money...so what is out there realistically that I can do for not much money.”*

All three lower scorers also used a range of learning resources or activities, although they did not necessarily identify whether they experienced a lack of resources, or how a lack might influence their entering motivation. However, Lanie did point out that there could be a significant amount of work involved in justifying requests for financial support to attend a specific workshop, which she tended to weigh up; was the workshop worth investing the time and energy applying for, and if not, then she would pass on the opportunity.

4.8.5 Summary of Dimension Three: Motivation

In summary, all participants in this study were able to describe how their values and affective states influenced their entering, and sustaining motivational levels for learning tasks. Although not specifically asked about how their values informed the decisions they made about their learning, these values were often articulated as the participants described recent learning experiences and their reasons for engaging in the learning activity.

Underpinning values varied across the participants, from wanting to provide a good service for their clients, through to having the knowledge and skills to justify their role in the team in order to not lose their professional identity, or because they were motivated to

achieve personal goals, or just simply because they expected to be stimulated and to grow through the learning experience. Beliefs about themselves as learners also influenced their entering and sustaining motivational states. Almost all participants identified that the learning experience needed to be interesting, in order to sustain their motivation to learn.

In thinking about ‘can I learn this way’, which influences entering motivation, most participants were aware of themselves as learners, whether that was being comfortable to be open about their knowledge and skills gaps, or being willing to challenge themselves in relation to their learning, as was the case for the higher scorers. Lower scorers tended to identify the potential to become complacent, and were less likely to create their own challenges, or they may create these, but find it difficult to sustain their motivation, especially if the learning challenge was harder than they had expected.

Contextual factors that could influence entering and sustaining of motivation included whether or not the participant felt they held the responsibility and had the freedom to determine their learning needs, goals and to select the relevant learning strategies. Entering motivation was often higher if the participant had determined the learning goal. However, this wasn’t always the case for some, who might engage in a learning experience because they were required to, finding that their interest grew as they engaged and could see the relevance to their interests. Interestingly, it was the lower and middle scorers who appeared more willing to ‘go with the flow’ of what was offered, making the most of the learning experience, rather than being in control of their learning.

Participants identified several factors related to the CCFR, which was in itself a contextual factor influencing motivation. For some participants a major influencer for engaging in the learning planned was related to the requirement to have a current objective and activity in each of the seven competencies. Higher scorers understood that the CCFR was a professional development tool to support their learning and used it in that manner. In comparison the lower, and some middle scorers, mostly struggled with how to make the CCFR work as a professional development tool, especially where they viewed it as a process to be complied with. Without careful thought to what was included, some participants, usually the lower to middle scorers, struggled to either get started, or to maintain their motivation to achieving set goals. In addition, for some of the lower and middle scorers, understandings of competence appeared to influence their ability to use the CCFR effectively, as to do so meant identifying knowledge or skills gaps, which these participants were more reluctant to do.

Workplace expectations were also influential in the levels of motivation experienced by the participants. Factors identified by some of the participants as barriers to motivation to engage in learning opportunities included lack of time, employer arrangements and employer expectations. In relation to employer expectations, lower scorers tended to identify learning goals or activities for their CCFR that would be acceptable to the employer, rather than those that might create the best opportunity for their learning. Finally, available resources could limit the types of learning opportunities and thus the motivation to engage in the learning experience. Interestingly, the higher scorers appeared to overcome these challenges in creative ways, whereas some lower scorer participants seemed less able, or less inclined to do so.

4.9 SUMMARY OF CHAPTER FOUR

This chapter presented the results gained through the analysis of the quantitative and qualitative data. In the first section of this chapter, the readiness of occupational therapists to be self-directed learners was determined. In order to have confidence in the findings, the internal consistency of the SDLRS-A was firstly demonstrated, with four factors identified being Self-Management, Self-Control, Desire for Learning and Expectation of Self, subsequently referred to as the subtests of the SDLRS-A. The mean score for the 173 participants was 162, and using the recommendation of M. J. Fisher et al. (2001) that a score of 150 or higher indicates readiness to be a self-directed learner, then over 80% of the occupational therapists in this study perceived themselves as being ready to be self-directed learners. Variables influencing readiness to be a self-directed learner included the number of years employed as an occupational therapist, the number of allied health students supervised, the number of years supervising allied health students and the number of occupational therapists supervised.

In the second section of the chapter, the results of the qualitative analysis of the 16 interviews were presented. Using Garrison's (1997) model as a framework to analyse the data collected, participant's descriptors of learning at, for, and through work also indicated that to a certain extent all participants were ready to be self-directed learners. Differences between the higher and lower scorers were more overt in the Self-Management dimension, than in the dimensions of Self-Control and Motivation, although differences were still identifiable. In addition, differences were identifiable between higher and lower scorers on the SDLRS-A and their use of the CCFR as a professional development tool, with key

influencers appearing to be beliefs or attitudes to learning, development of metacognitive awareness, and understandings of the need to demonstrate ongoing competence to practice. Finally, an aspect not included in Garrison's model that was evident in the participants' descriptors of their learning at, for, and through work was the thinking processes used by some participants when identifying their learning needs and determining their goals.

In the following chapter, the qualitative and quantitative findings from this study are further integrated and discussed. The research questions are answered and discussed in relation to previous studies, with recommendations made for practice and for further research.

CHAPTER FIVE: DISCUSSION

5.1 INTRODUCTION

Responding to a problematic situation arising from practice, the aims of this convergent parallel mixed methods study were to determine the extent of occupational therapists' self-directed learning readiness; the factors influencing readiness to be a self-directed learner; and whether or not a connection existed between occupational therapists' use of the CCFR as a professional development tool and self-directed learning readiness. These aims were derived from observations and anecdotal evidence of occupational therapists' perceived challenges with the CCFR, designed by the OTBNZ as a 'living tool for professional development'. In designing and implementing the tool, it is possible that the OTBNZ assumed registered occupational therapists have both the attributes for, and skills of, self-directed learning as documented in the profession's competencies and Code of Ethics, yet as discussed in Chapter Two, there is little research on which to base this assumption. Thus, the overarching research question for this study asked: Is there any connection between occupational therapists' use of the CCFR as a professional development tool and readiness to be self-directed learners?

To answer this question, it was necessary to first investigate the degree to which New Zealand occupational therapists were ready to be self-directed learners, as measured by the SDLRS-A. Secondly, in order to determine whether there was a connection between self-directed learning readiness and use of the CCFR as a professional development tool, 16 of the 173 occupational therapists who had completed the online questionnaire were interviewed, with questions designed to elicit explanations about the participants' descriptions of their learning at, for, and through work, and use of the CCFR. In integrating the qualitative and quantitative datasets, the factors influencing self-directed learning readiness and participants' use of the CCFR as a professional development tool were identified.

This chapter consists of three sections. In the first section, the readiness of occupational therapists to be self-directed learners, along with the factors found to be

influential are discussed and compared with previous research studies. In the second section, the unique contributions of this study to the understandings of occupational therapists' self-directed learning readiness are presented, along with the limitations of the study. Implications and recommendations for the OTBNZ, the occupational therapy profession and for academic programmes are given, concluding with recommendations for future research. The final section of this chapter presents the conclusion of the thesis.

5.2 OVERVIEW OF SIGNIFICANT FINDINGS

In this section the significant findings of this study are identified and discussed, with comparisons made with previous research. These findings relate to occupational therapists' readiness to be self-directed learners, along with the factors found to be influential in determining the degree of readiness identified.

5.2.1 Readiness to be a self-directed learner

Of the six research questions addressed in this study, two (Questions One and Four) were focused on readiness to be a self-directed learner, with the first asking what is the degree of self-directed learning readiness of New Zealand occupational therapists; and the second whether occupational therapists' descriptors of their learning at, for, and through work indicated self-directed learning readiness. Readiness was measured through the 173 participants' self-ratings on the SDLRS-A and the 16 interviewees' responses to questions derived from Garrison's (1997) Self-directed Learning Model. The significant findings from the qualitative and quantitative analyses are integrated and compared with findings from previous studies.

Using the SDLRS cut-off score of 150 as recommended by M. J. Fisher et al. (2001), over 80% of the participants in this study scored as ready to be self-directed learners, with participants tending to score higher on the subtests of Desire for Learning and Expectation of Self subtests, than those of Self-Control and Self-Management. In analysing the transcripts, higher scoring participants' responses indicated the presence of most, if not all attributes and skills described in Garrison's (1997) model, those in the mid-range had differing combinations of attributes and skills, whereas the lower scorers described being challenged in the management of their learning and/or lacked some of the attributes outlined in the model. In comparing across the lower, middle and higher scorers, the greatest difference in descriptors by interviewees occurred in the Self-Management

dimension, compared with the Motivation and Self-Monitoring dimensions. The relationship of these findings to previous research is discussed next.

5.2.1.1 Comparison of significant findings with previous self-directed learning readiness studies

As outlined in Chapter Two, there is almost no New Zealand based research investigating occupational therapists' readiness to be self-directed learners. Although new graduates were excluded, the finding in this study that most occupational therapists are ready to be self-directed learners is consistent with that of Nayar and her colleagues (2013), where new graduates were acknowledged by themselves and their colleagues to be well prepared to manage their learning, particularly in their ability to reflect on their practice in order to identify their ongoing learning needs. Similarly, in this study, higher scoring participants also described the ways in which they reflected either alone, in supervision, or in informal conversations with others, the outcomes of which were intentionally used by many of the middle to higher scoring participants when determining their learning needs and goals in their CCFR.

Although there is little New Zealand based research on self-directed learning readiness, the readiness of pre-registration health professional students has been measured in a number of international studies. Given that minor changes were made to several of the SDLRS statements for the purposes of this study, it was not possible to do an exact comparison, however it is worth noting that the mean total SDLRS-A score of 162 in this study was similar to the mean SDLRS score of 168 reported for practising nurses (Newman, 2003). In addition, the mean total score for this study was higher than the mean of 150 reported for first year nursing students in M. J. Fisher et al.'s (2001) original study, as well as the means of 150 and 155 reported in Smedley's (2007) first year and Yuan et al.'s (2012) first to fifth year nursing students respectively, and the means of 151 and 149 reported for first year medical (Abraham et al., 2011) and pharmacy students (Deyo et al., 2011). Therefore, although it was not possible to determine whether the difference in means between the occupational therapists in this study and the pre-registration health professional students was statistically significant, the findings do suggest that occupational therapists are equally as ready to be self-directed learners as their nursing colleagues and pre-registration health professional students. Of interest too, is the finding that 32 (19% of the participants in this study) occupational therapists scored less than 150 on the SDLRS-

A, which is lower than the mean scores reported for first year allied health students. This finding suggests that although many practicing occupational therapists have the attributes for, and skills of, self-directed learners, the OTBNZ cannot assume that all practicing occupational therapists have the capabilities required to utilise the CCFR as a professional development tool. Analysis of the lower scoring interviewees' responses on the SDLRS-A, along with their responses to the interview questions, provided some insight into why this may be.

In comparing the scores of the 16 interviewees, it was clear that while all participants scored consistently higher on the Expectations of Self subtest, those who scored less than 150, also scored lower either on the Self-Management and Self-Control subtests, or the Self-Management and Desire for Learning subtests. Thus while the lower scoring participants felt responsible, had high personal expectations and standards, were aware of their limitations and were open to new ideas and learning from their mistakes, they preferred to have others take control of their learning (i.e., externally driven) and in relation to Desire for Learning, disliked studying with some not being sure they could find information for themselves. Interestingly, the mean score for Expectation of Self was the highest scored of the four subtests, with the smallest standard deviation ($M = 4.47$, $SD = 0.34$). This higher score may be related to personal belief systems with participants understanding that they are answerable to the expectations of their employer and society which may have influenced the way in which they rated themselves on these items. Certainly, occupational therapists have identified that having high expectations of oneself is a hallmark of professional excellence (Aguilar et al., 2013; Courtney, 2005), and these expectations were evident in many of the participants' descriptions of how wanting to be the 'best occupational therapist' they could for the benefit of their clients, was what motivated them to keep learning. However, in relation to Self-Management, this group scored lower on both their skills of time management and being systematic in their learning, as well as the qualities of being self-disciplined and having high beliefs in their abilities.

The aspects of readiness to be a self-directed learner highlighted in the SDLRS-A scores were also evident in the interviews. The lower and some middle scoring participants tended to find the management of some or all of the steps of self-assessment, objective setting, activity choice and critical self-evaluation more challenging than the higher scorers, tending to only review and update their CCFR in the month that renewal of APCs

is required. Seemingly in alignment with their Self-Control and Self-Management subtest scores, some of the lower scorers were more likely to describe themselves as ‘going with the flow’, taking learning opportunities as they were presented, or as organised by others, and tending to identify learning opportunities as they arose, rather than identifying specific learning needs and planning in advance for how these could be met. The lower scorers were also less clear about the criteria they used for self-assessment in order to identify their learning needs, and/or used sources of external feedback compared with the higher scorers.

There are some similarities between the challenges identified by the lower scorers in their skills of managing their learning and/or their attributes related to self-control with previous research (Herold et al., 2005; Murray & Lawry, 2011; White, 2005), which found that occupational therapists felt challenged in how to plan for their professional development. While Herold et al., (2005) equated this with levels of confidence or self-efficacy (an attribute of a self-directed learner), and Murray and Lawry (2011) with the skill of knowing where to start; the findings of this study suggested that another reason may be related to one aspect of readiness to be a self-directed learner, being the ability to accurately self-assess one’s performance in order to identify learning needs. Based on the findings of this study, if the criterion for determining competence is not clear in the individual’s mind, or in the case of externally determined criteria such as the OTBNZ competencies, is not understood, then the individual may find it difficult to accurately self-assess their performance.

In addition, in relation to the CCFR self-assessment process, some participants (who tended to be the lower and middle scorers) acknowledged that they gave little time to this part of the process, tending to review and update at the point of applying for their APC, thus basing it primarily on their thoughts at that time, giving little consideration to any other data they had about their performance. If the step of self-assessment is hurried through, the findings of this study suggested that those occupational therapists who are less ready to be self-directed learners find it more challenging to identify their learning needs, and therefore to set relevant learning goals, which can impact entering-motivation levels that ultimately drive engagement in the planned-for learning. In comparison, the higher scorers appeared to give more time to this step, drawing on a range of data that is continuously gathered from multiple sources (Lysaght et al., 2001; Violato et al., 2009), which is then reflected on and matched against their own self-assessment, allowing for a more critical and therefore accurate assessment of their performance (Eva & Regehr,

2008), and thus the easy identification of learning needs. This finding is supported by Lowe et al.,'s (2007) investigation of occupational therapists' use of reflection in relation to their planned continuing education, where only some of the participants in their study described how they reflected in order to identify their learning needs.

The next step that follows on from need identification is that of goal setting, which for some lower scorers was also challenging. Again, little research has been undertaken on the processes occupational therapists use for setting learning objectives, which is somewhat surprising given the emphasis placed on this skill by regulatory authorities (e.g., Health & Care Professions Council, 2012; Occupational Therapy Board of Australia, 2012; OTBNZ, 2011). The findings of this study suggested that objective setting is fundamental to enabling the management of the learning process of the CCFR, with higher scorers ensuring that their goals were congruent with their self-assessment, related specifically to their learning activities and relevant for their personal goals, and/or for the focus of the service they were employed in. Based on the responses to the interview questions, objective setting could be a time consuming process, with the occupational therapist comparing their identified learning needs with the available learning experiences, keeping in mind factors such as the resources required, and the perceived usefulness of the learning experience. Therefore, objective setting appears more challenging for those who are unable or unwilling to give sufficient time to the thinking process required. Based on the responses of the participants, it appeared that when goals were written quickly and with little forethought, the relevance of the objective to the individual was questionable, and this then influenced both the entering level of motivation, and the motivation to monitor progress towards achieving the objective. Similarly, Strickland (2003) found that one of the factors influencing the development of continuing competence goals for occupational therapists, was their level of external locus of causality, and their perceptions of external regulation. In other words, as identified in this study, it appeared that the more the participant believed they were engaging in goal setting because they were mandated to do so, the less likely they were motivated to find the thinking space to create meaningful objectives for their CCFR.

One other finding related to goal setting was the ways in which the goals were written. Although not analysed in depth, the CCFR portfolios were reviewed to assist in the preparation of the interview questions. In doing so, it was noted that some participants tended to write goals related to work tasks to be completed, rather than as SMART

learning objectives as illustrated in Figure 1 (refer to page 7). When asked about why this might be, participants were not always aware that they had worded the objectives in this way, or why. In reviewing their goals, several participants (which tended to be the lower to middle scorers) noted that it would be helpful if they thought more carefully about wording the goal as a learning goal, rather than as a work task to be achieved. This confusion over the focus of the goal may relate to the issue identified by Tompkins and Paquette-Frenette (2010), as to whether a portfolio can be both a tool for learning and a measurement of competence, and may in part explain why goals were written in different ways by different participants. Exploring this perceived confusion would be worthy of further research in the future.

In the process of managing learning, the next step is to identify a learning activity that will enable the individual to achieve their goal. The area of learning strategy selection is one that has been more extensively researched in occupational therapy. Similar to previous research (G. Kelly, 2005; Lysaght et al., 2001; Pui et al., 2005), irrespective of their SDLRS-A score, participants in this study used a range of learning strategies that were both formal and informal in nature, and that were solitary or group based. Differences were notable between the lower and higher scorers, with higher scorers (where they had the autonomy to do so) choosing activities or strategies that aligned with their learning styles.

The reasons why occupational therapists select certain learning strategies has not previously been investigated, although Lysaght et al. (2001) did find, similar to the descriptions given by some participants (lower to middle scorers) in this study, that occupational therapists' preferences for learning strategies might be different to what they actually select. For some participants in this study, preferences for learning activities were sometimes shaped by what they believed was acceptable to their manager (as in what is seen as more credible), or to the profession (as in being evidence-based therefore needing to review the literature), or to what they perceived that the OTBNZ might find more acceptable.

Interestingly, despite recent New Zealand-based research exploring the use of communities of practice (Reed & Hocking, 2013), no participant in the current study described learning within a formal community of practice. However, similar to the findings of McKinstry (2005) and Rappolt and Tassone (2002), most participants did describe the learning that occurred on a daily basis through interactions with team members, colleagues

and clients. Although neither the relationship between learning method and impact on practice, nor the frequency of types of learning activities selected was explored in this study, most participants described using a combination of learning strategies to assist in their learning of the desired knowledge of skill, a finding that has not been identified in earlier studies.

Finally, the last stage of managing of the learning process that some lower scoring participants found challenging was that of critical self-evaluation, being the reflections about what they had learned, and whether or not the learning undertaken had made a difference to their practice. Based on the findings of this study, whereas all participants were able to provide more general descriptions of how they knew that learning had occurred, it tended to be the middle to higher scorers who were able to clearly articulate the criteria they used to determine that learning had occurred, with some acknowledging that this part of the CCFR was often the most enjoyable aspect, and where in updating their CCFR, they were likely to allocate the most time. Few occupational therapy specific studies were found investigating practitioners' use of reflection following a learning experience. Although, reflection on learning is considered to significant in assisting the implementation of new learning into practice, as Lowe et al. (2007) and Austin, Marini, and DesRoches (2005) discovered, not all health professionals have the awareness, motivation or ability to use reflection, nor value reflection. Although participants in this study were not specifically asked about the value of reflection, it was clear that those who created the space to reflect on their learning valued this highly, and thus found completing the last component of their CCFR relatively straightforward.

In summary, and as shown in the results chapter (Sections 4.6.5 and 4.7.3), higher scoring participants described using a cyclical process for their CCFR, often starting with their critical reflection on the objectives and activities set in the previous year, followed by updating or refreshing their self-assessments, and then identifying new objectives and the activities they intended to undertake throughout the following year. In engaging in this reflective cycle, this group of participants appeared to move easily between the various sections of the CCFR, seeing the obvious relationship between each. In addition, through consciously thinking about and applying the knowledge of themselves as learners, higher scorers:

- used a range of processes that enabled constant comparison between their own self-assessment and others' assessment of their performance, ensuring a conscious awareness of their ongoing learning needs;
- ably balanced their own learning goals with those of their employer, in order to demonstrate their ongoing competence to practice, taking into consideration available learning resources;
- confidently created or engineered learning experiences that ensured the most optimal learning environment for the achievement of their desired outcomes;
- had internally derived criteria that they used to measure their achievement of the desired learning outcomes; and
- were organised in how they managed the CCFR process.

In other words, although the majority of the participants were, according to the SDLRS-A scores ready to be self-directed learners, it was only some of the middle and the higher scorers who were able to apply this knowledge of themselves and their learning in order to effectively use the CCFR as a practical living tool for professional development.

5.2.2 Factors found to influence self-directed learning readiness

Questions Three and Six in this study focused on those factors that influenced readiness to be a self-directed learner, with the third question asking which demographic and occupational factors influenced self-directed learning readiness; and the sixth asking what influenced occupational therapists' use of the CCFR as a professional development tool. Key influential factors were identified through triangulating the quantitative and qualitative data. It should be noted that as the interview participants were selected on the basis of their total SDLRS-A score and gender, there were some differences in the demographic and occupational characteristics of this group and the larger sample of 173. However, in relation to those variables found to significantly influence the SDLRS-A total and subtest scores, the only difference was in the number of years employed, where the interviewee group had worked for between 5 and 19 years. In comparing the means of the total number of years worked between the interviewee group ($M = 10.94$) and the total sample ($M = 16.67$), the interviewee group were more similar to all practicing occupational therapists listed on the OTBNZ register ($M = 12.3$ years), but not quite as experienced as the total sample who volunteered for this study. However, the interviewee group were not

completely atypical, as in considering the total sample of 173 participants, more than half (57%) had worked between 5 – 19 years, allowing for some comparisons to be made.

As presented in Chapter Four, a number of factors were identified as being influential in supporting the development of the attributes for, or skills in self-directed learning. From the quantitative data analysis, the number of allied health students or occupational therapists supervised, the number of years allied health students have been supervised, and the number of years employed were all found to be significant, while therapists' age, experience of the CCFR, level of qualification, and number of years supervising occupational therapists were not. In addition from the qualitative data analysis, other factors influencing participants' use of the CCFR as a professional development tool appeared to be related in part to their beliefs about themselves as learners, their degree of metacognitive awareness, and their personal definitions of competence to practice.

5.2.2.1 Comparisons of significant findings with previous studies

While it appears that supervising students or other occupational therapists impacts on SDLRS-A scores, in that the scores tended to increase in relation to the number of people supervised, the reasons for this are not clear. One reason may be that those who are more ready to be self-directed learners are more likely to offer student placements, perhaps due to their desire to contribute to the education of the next generation of occupational therapists (Thomas et al., 2007). Another explanation is that in assisting others to learn, the supervising occupational therapist further develops their own attributes for, and skills of, self-directed learning. Certainly, several interviewees described how the supervision of others had, at times, acted as a prompt for their own reflections, especially in relation to their use of the CCFR as a professional development tool.

Although no specific studies were found to categorically support any connection between facilitating the learning of others, and further developing insight into one's own learning, previous research suggests a tentative connection. For example, Thomas et al. (2007) found that one of the highest ranked benefits by occupational therapists for supervising students was the opportunity to improve supervisory skills. Based on his own experience, Pereira (2008) lists some of these supervisory skills as encouraging students to be more self-directed in their learning through extending their learning goals, assisting to develop reflective thinking, and identifying their learning styles in order to maximise their learning potential; all characteristics of a self-directed learner as described by Higgs

(1993). Likewise, although researchers have also investigated the value of supervising colleagues from the supervising occupational therapists' perspectives (Gaitskell & Morley, 2008; Herkt & Hocking, 2010; Sweeney, Webley, & Treacher, 2001), no overt connections have been made between how assisting a colleague to grow as a learner might also enable the supervisor to further develop their own attributes for, or skills in self-directed learning. It is not clear why researchers have not explored these potential connections excepting that the profession may consider this connection to be self-evident (Rodger, Fitzgerald, Davila, Millar, & Allison, 2011), and thus has not yet caught the attention of researchers.

The second variable found to be significant from the quantitative data analysis was years of experience working as an occupational therapist, which confirms Strickland's (2003) findings that in relation to maintaining competence to practice, the longer occupational therapists worked, the more internally regulated they became. As there are so few studies of health professionals' self-directed learning readiness, it is not easy to determine if the findings of this study and Strickland's (2003) are anomalies, or a trend worthy of investigation. However, the work of King (2009) and her colleagues (King, Bartlett, et al., 2008) is useful to consider, as they have aimed through their research to provide knowledge about the "practical tools [used] to support the development of [professional] expertise, and [to] provide a vision for the professional development of all therapists" (King et al., 2007, p. 224). Unlike the findings of this study, King et al. (2008) found that years of experience as a paediatric therapist was not a strong indicator of professional expertise. Rather, expertise is thought to develop through the ongoing interaction between the individual, certain types of experiences and an environmental context that is supportive and growth-enhancing. Based on the findings of this study, it can be suggested that one of the individual-related factors might indeed be self-directed learning readiness, a factor not previously considered in other studies sourced.

It should be noted that other than participants' years of work experience and supervisory experience, a number of other factors have been reported in the literature as being influential in occupational therapists' engagement in ongoing professional development. These included therapists' age, geographical location, level of educational qualifications, and workplace support. Although Knowles suggested that attributes for, and skills of, self-directed learning develop over time (Merriam et al., 2007), and positive and statistically significant relationships have been found between age and level of internal regulation for continuing competence (Strickland, 2003), and age and total scores on the

SDLRS for nursing students and practicing nurses (Esposito, 2012; Kocaman et al., 2009; Smedley, 2007; Yuan et al., 2012), in this study occupational therapists' age was not found to have impacted on their mean SDLRS-A score. However, age did appear to be relevant for some participants in this study, who explained how as time progressed, they had become more aware of themselves as learners. These participants, who tended to be the middle to higher scorers, described how they believed that they had become more effective at selecting learning strategies that better matched their learning styles, or they had become more comfortable with openly acknowledging knowledge or skill gaps, and learning how to address these. Similar to the argument proposed by Regehr and Mylopoulos (2008) that practitioners learn about practice through practice, some of the participants in this study appeared to have learned about learning over time, through reflecting on their experiences as a learner. Thus, it may be that age and years of working experience may be correlated, and certainly as reflected by the higher scorers, having knowledge of themselves as learners that had developed over time, was something they consciously drew on when planning learning strategies which would enable them to achieve their CCFR goals.

In previous studies (Curran et al., 2006; Murray & Lawry, 2011; Pui et al., 2005) geographical location has been identified as a factor influencing access to professional development, particularly for rural therapists. However, this variable was not a significant factor in the present study, which may be due to the fact that the overwhelming majority of the participants lived in an urban area, with only 16% living outside of urban areas, or in rural areas that were not close to an urban area. However, the issue of access to potential learning opportunities was specifically raised by two of the three interviewees living in rural areas. These participants described how in developing their learning goals and identifying ways of meeting these, that their distance from an urban centre was a factor to be considered. Therefore, although location may not influence readiness to be a self-directed learner, it does pose challenges that require the occupational therapist to be creative in the creation of learning experiences that enable the meeting of learning needs. However, for lower scorers, being creative in finding learning experiences was a challenge, especially in relation to their CCFR.

Whereas achievement of higher educational qualifications has also been found to be a significant variable in some studies (Bridges et al., 2007; Esposito, 2012; Strickland, 2003), this variable was not found to be significant in the current study, despite 32% of the participants holding a postgraduate qualification. It was not clear why this was the case,

excepting that several of the individuals interviewed did relate their ongoing development as a self-directed learner in part to the outcomes of engaging in ongoing post-registration formal study. An explanation for the difference found between this study and those of Bridges et al., (2007), Esposito (2012) and Strickland (2003) may also be related to the self-directed learning scales used. Although Bridges et al., (2007) did use the SDLRS; this was a modified shortened version which does not allow for accurate comparisons. Therefore, the differences found between previous studies and this current study may have occurred because the scales used are measuring related, but different aspects, of readiness to be a self-directed learner.

Another variable that failed to reach statistical significance was the number of years completing the CCFR, included in this study as a factor because it was thought to be one that might yield an interesting response (Teddlie & Tashakkori, 2009). The CCFR framework is essentially the process of self-directed learning (refer to Figure 1, page 8), which, if updated regularly, provides occupational therapists with a supportive structure that promotes ownership of learning (Tompkins & Paquette-Frenette, 2010). Most participants interviewed had completed their APC application at least five or six times, yet no participant mentioned the CCFR as being useful for assisting to further develop themselves as a self-directed learner. Indeed, for several of the interviewees, participating in the interview appeared to be the first time that they became aware that the CCFR could be used as “a practical living tool for supporting professional development” (OTBNZ, 2011). Although a number of regulatory authorities (Health and Care Professions Council, 2012; Occupational Therapy Board of Australia, 2013; Tompkins & Paquette-Frenette, 2010) incorporate the use of a reflective or learning portfolio as part of the mandatory requirements for demonstrating ongoing competence to practice, no recent studies were found exploring how using a learning portfolio might aid the individual to further develop the attributes for, or skills of, self-directed learning.

Finally, although information about type and focus of employment was gathered in order to give a demographic profile of participants in this study, specific questions about the support of the employer were not asked in the online questionnaire as the need for workplace support, that is both financial and the provision of resources such as time, has already been determined (Curran et al., 2006; Cusick et al., 2010; Rappolt et al., 2002; Townsend et al., 2006) to be a factor that significantly influenced allied health practitioners' engagement in continuing professional development. Support of the

employer was viewed by many of the participants in this study to be essential, for example in relation to the provision of resources, such as time, or financial support which enabled the individual to achieve their identified learning goals, however, unlike previous research, not all participants expected that their employer would fully fund or support their learning. Interestingly, what does not appear to have been identified in previous studies is the influence an employer can have in shaping the learning needs, and/or learning activities identified by the individual.

In this study, the use of performance appraisals or self-assessment against aspects of job descriptions provided the evidence that those, who were more ready to be self-directed learners, used to identify learning needs. In comparison, those participants who were more externally controlled in relation to their learning tended to be less likely to specifically identify learning needs, tending to 'go with the flow', undertaking learning experiences that they were directed towards by managers or colleagues. Employer expectations could also be influential for some who believed that they needed to choose certain activities for their CCFR that they believed their employers would determine as being more credible or legitimate, rather than selecting those more relevant to their learning styles. The support and influence of the workplace is somewhat aligned with Billet's (2012) concept of relational interdependencies, where the workplace affords learning opportunities, but that individuals are selective about what they choose to engage in, and the arguments posed by Cusick, Convey, et al. (2009) and King (2009) that development of the allied health practitioner is both dependent on the individual taking responsibility for their learning, as well as the workplace providing ongoing support to enable the development of their employees.

Findings from the interviews also provide some insights into possible factors affecting participants' use of the CCFR as a professional development tool. The first two factors, beliefs about learning and metacognitive awareness relate to attributes of self-directed learning, while the third factor, understanding of competence appeared to influence participant's attitudes towards their CCFR as a professional development tool, as discussed in the following paragraphs.

Almost irrespective of their SDLRS-A score, or their use of the CCFR as a professional development tool or not, as outlined in Section 4.8.1, all interviewees described being motivated to continue to learn at, for and through work, in order to provide the best service they could for their clients. However, in reflecting on their learning, higher

scorers were more likely to exhibit the qualities of openness and a willingness to keep learning (refer to Section 4.8.4), fuelled in part by a ‘wanting, or needing to know’. This openness to ongoing learning matched the scores gained by these participants on the SDLRS statements such as “I need to know why” and “I have a need to learn”. In the interviews, higher scorers were tended to state that their ongoing development was primarily their responsibility, and connected with this sense of personal responsibility, expressed the belief that maintaining competence to practice through ongoing learning was important and right to do (refer to Section 4.8.4). According to Rivard Magnan (2010), these are all examples of personal commitment, which was found to be the most important predictor of engagement with professional development. The personal values or beliefs described by these participants are similar to, or the same as those:

- included in the definitions or listed attributes of a self-directed learner (Hiemstra, 1994; Mann & Gelula, 2003; O’Shea, 2003);
- outlined as attributes in the descriptors of health professional competence (Hocking & Rigby, 2002);
- outlined in Garrison’s (1997) Motivation dimension of the Self-directed Learning Model; and,
- measured across M. J. Fisher et al. (2001) subtests of Self-Control, Desire for Learning and Expectation of Self.

In addition, maintaining competence to practice is thought to be the occupational therapist’s greatest responsibility (Robinson, Tanchuk, & Sullivan, 2012).

Although theorists might agree about the attributes of self-directed learners, little occupational therapy research was found that specifically investigated the presence or absence of these attributes in occupational therapists. Rather, any reference to these attributes is usually only referred to within the context of the research focus or topic. For example, in investigating professional values, researchers such as Murray and Lawry (2011), and Aguilar et al.(2012, 2013) have shown that staying professionally current is considered to be essential. Likewise, King and her associates (2007) found that striving to be one’s best was a personal attribute that differentiated the expert and novice practitioners. However, none of these studies investigated self-directed learning attributes as a primary aim, nor did they particularly connect their findings with the self-directed learning literature. In addition, although leaders in the profession (e.g., Hinojosa, 2012; Hocking & Rigby, 2002; McKinstry et al., 2008) continue to argue for the need for

occupational therapists to demonstrate their ongoing competence to practice, researchers have failed to investigate the potential relationship between being a self-directed learner and competence to practice, despite the recognition that ensuring competence to practice is essentially a continuous learning process (Hocking & Rigby, 2002). Thus, the findings of this study go some way towards filling this identified gap.

The second factor identified through analysis of interview transcripts, is that compared with the lower scorers, many of the middle to higher scorers appeared to utilise the CCFR as the professional development tool it was designed to be, based on an in-depth knowledge of themselves as learners, which was used to good effect. Being able to think about, and apply the knowledge of self as a learner is referred to in the nursing, workplace learning and educational literature as metacognition, and is included by Garrison (1997) in the Self-Monitoring dimension of his model. Metacognition refers to “both knowledge about cognition, and...how one uses that knowledge to regulate cognition” (Munby, Versnel, Hutchinson, Chin, & Berg, 2003, p. 94), and has been described as the self-communication about “task demands and cognitive strategies a person engages in before, during and after performing a task” (Kuiper, 2002, p. 78), which “provide[s] the knowledge, awareness and strategies to critically assess the learning process” (Akyol & Garrison, 2011, p. 184).

Many of the participants in this study were able to give instances of using metacognitive processes such as drawing on knowledge of self, gained through previous experiences to inform future learning, or taking control of their learning processes (Akyol & Garrison, 2011; Kuiper & Pesut, 2004), although the lower scorers tended to need more prompting in order to access this knowledge of themselves. In comparison, it was the higher scoring participants who appeared more aware of themselves as learners. It appeared that their ongoing self-initiated reflections were captured in ways that meant they could easily access this knowledge of themselves, as and when they needed it. In comparison, lower scorers were less aware, needing to think longer and more deeply about their answers to the interview questions which aimed to explore metacognitive processes participants used in order to plan their learning. The lower scorers often hesitated before answering such questions, saying for example, *‘that’s an interesting question, I haven’t really thought about that’*, whereas the higher scorers quickly answered such questions, seemingly based on “an awareness and understanding of self within their environment” (McManus, 2011, p. 235).

Although metacognition is a topic that occupational therapy researchers have investigated in relation to therapeutic interventions for clients, little empirical research was found investigating metacognitive processes used by occupational therapists for their learning at, for, and through work. Rather, as with the attributes of self-directed learners, the phenomenon of metacognition only tends to be alluded to studies. For example, King (2009) referred to the need for employers to provide opportunities for staff to develop ‘soft competencies’ such as self-monitoring and self-reflection, and Cusick, Convey, et al. (2009) recommended the development of reflective skills to aid professional development decisions, yet neither study identified these skills as being metacognitive. Similarly, Lowe et al. (2007) investigated occupational therapists’ use of reflection prior to, during and after continuing education, but also failed to situate this within the field of metacognition. Exceptions to this are two doctoral dissertations. Firstly, Strickland (2003) situated her study within a metacognitive framework investigating the relationship between setting of continuing competence goals and self-regulation, where goal setting was the method through which occupational therapists organised their knowledge and skill seeking behaviours. Secondly, Dale (2001) in collecting a range of qualitative data from graduate occupational therapy students, reported that the self-awareness can be facilitated over time through a hierarchical sequence of activities facilitated by academic staff.

This lack of reference to metacognition in the occupational therapy literature is somewhat interesting, given other professions such as nursing have demonstrated the value of focusing on the development of metacognition, arguing that self-regulatory and motivational processes strongly influenced the occupational goals individuals set for themselves (Kuiper, 2002). Metacognition is also considered essential in enabling commitment to lifelong learning, an essential attribute needed in the increasingly complex healthcare environment (Kuiper, 2002; Kuiper & Pesut, 2004). It is not clear why occupational therapy researchers should choose to research some aspects, yet not situate their research within the growing knowledge base of metacognition, excepting that as Rodger et al. (2011) suggested, perhaps the knowledge of ourselves as educators, or in the case of this study, knowledge of ourselves as learners is considered to be self-evident. Interestingly, many of the participants in this study responded in similar ways, suggesting that learning is something that happens all the time, therefore they rarely pay conscious attention to their learning until they experience a problem in the learning experience, or an event or experience stimulates reflection about themselves as a learner.

A third factor that appeared to influence the use of the CCFR as a professional development tool was participants' understanding of the concept of ongoing competence. Although participants were not asked to define competence, in analysing their responses to the question about what they thought about when writing their CCFR self-assessments, it became clear that some participants tended to hold a slightly different perspective on competence, which appeared to influence their understanding of how the CCFR could be used as a professional development tool. In determining what to include in their self-assessments, most participants gave examples of using multiple sources of feedback, which was matched against their own internal assessments of competence. This information was used to inform or identify their learning needs, from which objectives could be identified. Whereas the higher scorers often included the outcomes of these collaborative confirmatory processes (Garrison, 1997) in their CCFR self-assessments, some participants (not always the lower scorers) were more wary of openly reporting or expressing their knowledge and skill gaps to others. These participants reasoned that to do so, especially in the CCFR, was 'risky' insofar as the OTBNZ might deem this to be a lack of competence, which could lead to further investigations of their performance. Thus these participants did not appear to view competence as ongoing and contextual, needing to be continually addressed, rather, whilst they acknowledged there are times they needed to develop a skill or to increase their knowledge, they did not believe that it was necessary to determine knowledge or skill gaps for all seven competences every year. With this viewpoint, participants thought carefully about how to word their self-assessments, choosing only to disclose that which they felt safe for others to read. In other words, in updating their CCFR, these participants did not feel comfortable to share their knowledge and skill gaps in a portfolio that would be read by others.

In exploring occupational therapists experiences of formal supervision, Herkt and Hocking (2010) identified a similar behaviour of non-disclosure explaining that some supervisees do this where they did not trust their supervisor, or the supervisory process thus "safeguard[ing] their sense of professional competence" (p. 32). Similarly, Bogo, Paterson, Tufford, and King (2011) found that being judged negatively by managers can lead to allied health professionals being reluctant to bring up concerns. Similarly, participants in this study thought carefully about how they worded their self-assessments to ensure that if audited by the OTBNZ, they would be perceived to be competent. Thus for these participants, self-assessments were not always accurately reflective of existing

knowledge or skill gaps, meaning that goals were not as relevant or meaningful as they should be, and the planned learning activity was therefore less likely to be completed. Essentially for these participants, the CCFR self-assessments, goals and activities documented may bear little resemblance to their real learning needs, and thus their CCFR lacked relevance and was not as effective in supporting their learning, as originally intended by the OTBNZ. While some of these participants were not necessarily the lowest scoring on the SDLRS, and indeed their descriptions of their learning at, for, and through work indicated that they were motivated learners, who felt responsible for their learning, and were able to manage their learning, this was not reflected in their approach to their CCFR. This finding suggests that while there is for some a connection between self-directed learning readiness, and use of the CCFR, this may not be the only factor influencing occupational therapists' use of the CCFR as a professional development tool.

As with attitudes to learning and metacognitive awareness, previous studies have not investigated how practicing occupational therapists conceptualise competence in any depth. Although researchers have compared the similarities and differences between international occupational therapy competency documents (Rodger et al., 2009) and occupational therapists' conceptualisation of professional excellence (Courtney, 2005), professional currency (Murray & Lawry, 2011), professional confidence (Holland, Middleton, & Uys, 2012) or professionalism (Robinson et al., 2012), no studies were found exploring occupational therapists' conceptualisations of competence, nor how this might be a factor that influences engagement in planned learning experiences. It appears that this is yet another area of occupational therapists' professional practice that is considered self-evident, that is, practitioners intuitively understand what it is meant by the term competence. However, as discussed in the studies cited above, it should not be assumed that occupational therapists have an innate understanding of such concepts as illustrated in this study. Participants' understandings of competence did influence their perception of the value of the CCFR as a professional development tool to support their ongoing maintenance to practice, a tentative finding that is worthy of further investigation.

In summary, factors found to significantly influence the total SDLRS-A score and the Self-Management subtest scores were the number of years employed and the number of allied health students supervised, whereas the factors found to significantly influence Self-Control subtest scorers were years employed and experience in supervising allied health students and occupational therapists. Therefore it would appear that years of experience

and supervisory experience are indeed influential, with years of experience working as an occupational therapist supported to some extent by the descriptions of the middle to higher scoring participants. In addition, findings from the interviews suggest that factors such as geographical location, employer expectations, and for some, life experience are also influential in the extent to which occupational therapists are ready to be self-directed learners. Similarly, the factors of beliefs about oneself as a learner, the level of metacognitive awareness, and personal definitions of competence were influential in whether or participants approached their CCFR as a professional development tool, or a mandated requirement to be reviewed once yearly, thus having little connection or relevance to their everyday work as an occupational therapist.

5.3 CONTRIBUTIONS OF THE STUDY

Given the current legal and ethical context of practice, the findings of this study are not only significant for the profession of occupational therapy in New Zealand, but also internationally. Society has demanded that the practicing occupational therapist be competent in their practice of occupational therapy, able to provide high-quality, low risk services for those accessing their services (McKinstry et al., 2008; Murray & Lawry, 2011). In an environment that is ever-changing, occupational therapists need to engage in a lifelong process of ongoing learning, updating and refining their knowledge and therapeutic skills (Allen et al., 2005). The overarching research question of this study emerged from this context, wherein the OTBNZ developed a process that occupational therapists were required to use, in order to demonstrate their ongoing competence to practice. To demonstrate competence, occupational therapists are required by the OTBNZ to be responsible for their ongoing learning, using a mandated process based on processes of self-directed learning. In designing this process, it is possible that the OTBNZ assumed that all registered occupational therapists would have the attributes for, and skills of, self-directed learning. However, as shown in the literature review, there is little evidence on which to base this assumption. Thus, the research question asked in this study was: “Is there any connection between occupational therapists’ use of the CCFR as a professional development tool, and readiness to be self-directed learners?”

The findings of this study show that this question can be answered in the affirmative, in that while 82% of the 173 respondents were rated on the SDLRS-A as being ready to be self-directed learners, 18% were not. The analysis of the interview transcripts

and the SDLRS-A scores further highlighted that for the lower scorers, skills in the management of their learning, along with a desire and willingness to take control of, and be responsible for their learning aligned with their descriptions of what influenced their learning at, for, and through the workplace, and their use of the CCFR as a professional development tool. Thus it is possible to state in the affirmative that for some occupational therapists, there is indeed a connection between their use of the CCFR as a professional development tool and their self-directed learning readiness. This is a unique finding, in that, as demonstrated through the literature review and in the earlier sections of this discussion, no other studies were found that sought to investigate the relationship between occupational therapists' actions in relation to their learning, and whether or not they actually have the necessary skills and attributes to carry out the actions. Rather previous studies focused on mandated requirements, asking the question what impacts on occupational therapists' or allied health professionals' ability to meet the regulatory authority mandated requirements (Lysaght et al., 2001; Tassone & Heck, 1997) or what workplace settings needed to implement in order to encourage and support the ongoing development of their employees (Cusick, Convey, et al., 2009; Novak & McIntyre, 2010; Rappolt et al., 2002; Townsend et al., 2006). Thus these studies have focused predominantly on what is required in the environment to enable effective learning, not as this study has done, which is to determine that there is value in also considering the individual, and their self-directed learning readiness. As noted by Rivard Magnan (2010) in her doctoral study of professional commitment and the enactment of professional development, "further research must look beyond structural characteristics of professions and of work settings in order to gain a more comprehensive understanding of the [individual-related] factors affecting professional development" (p. 129). The findings of this current study suggest that one of these individual-related factors could be readiness to be a self-directed learner.

A second unique contribution of this study relates to the validation of the SDLRS (M. J. Fisher et al., 2001) scale through its use with a population which differs somewhat from that of pre-registration nursing students it was originally designed for. To the best of the knowledge of this author, no studies were found where the readiness of occupational therapists to be self-directed learners was measured. Therefore, this is not only the first study that has aimed to measure self-directed learning readiness of this professional group, but the first study to use the SDLRS which was originally designed for nursing students.

As with previous studies of medical, pharmacy, nursing students and nurses (Abraham et al., 2011; Deyo et al., 2011; M. J. Fisher et al., 2001; Smedley, 2007; Yuan et al., 2012), the SDLRS proved to be a reliable tool, and even with the slight adjustments made to several of the statements, internal consistency did reach acceptable levels for research purposes. Although further research is required to determine the stability of the four factors identified in this study as being Self-Management, Self-Control, Desire for Learning and Expectations of Self, the SDLRS-A does appear to be a valid tool for measuring occupational therapists' readiness to be self-directed learners. As such, this tool holds promise for ongoing use in research, but also as a tool for occupational therapists and their supervisors to use as a way of gaining insight into what might be influencing an individual's ability to utilise the CCFR effectively as a tool for professional development.

A third unique contribution of this study relates to Garrison's (1997) Self-directed Learning Model, which was originally proposed in order to address the cognitive and motivational gaps omitted in other models of self-directed learning. As far as can be ascertained in the searches of recent literature, this current study appears to be the first where Garrison's (1997) descriptors of the behaviours of highly self-directed learners, organised under the three dimensions of Self-Management, Self-Monitoring and Motivation have been used to develop interview questions, and also converted into a deductive coding framework for analysis of the interviews. Compared with previous occupational therapy related studies which have tended to consider only the steps of managing learning, such as those proposed by Knowles (Knowles et al., 2005), the value of using Garrison's model in this study enabled a shift from the previously primarily fragmented approach taken to investigate occupational therapists' professional development. Thus, rather than looking only at one aspect of the self-management of learning, such as which types of learning activities occupational therapists select for their professional development, the participants in this study were asked to describe how they managed their learning from the starting point of self-assessment through to the reflection on the learning that occurred, and why they managed in this way.

Similarly, for motivation, the focus taken in this study was to understand what influenced entering and sustaining motivation to task, which previous researchers had tended to consider only as an external factor in relation to what the workplace needed to do in order to support occupational therapists' engagement in professional development, rather than internal factors that might shape motivation. Finally, insight was gained into

how occupational therapists might self-monitor themselves as learners, that is, the extent to which they were aware of themselves as learners, and how they might apply this knowledge of self in using their CCFR as a professional development tool. Considering occupational therapists' metacognitive skills is a focus that has attracted very little attention in the occupational therapy literature, yet was enabled in this study through the application of Garrison's model.

A fourth unique contribution of this study relates to how Garrison's (1997) conceptualised self-directed learning. As noted in the literature review, it is somewhat unfortunate that Garrison proposed the model, but has not continued to develop this further. The Self-directed Learning model is often quoted in the self-directed learning literature, yet it is only recently that researchers (e.g., Deyo et al., 2011; Esposito, 2012; Huynh et al., 2009; Young, 2013) started to use the model as a conceptual framework for their studies. Only one study was found where the authors had specifically drawn from Garrison's earlier writings on control and critical thinking, as well as other self-directed learning theorists, in order to develop a scale to measure aptitude for learning (Abd-El-Fattah, 2010).

Although testing Garrison's model was not one of the aims of this study, as found in this study and also previously identified by researchers in other disciplines (Esposito, 2012; Young, 2013), the Self-directed Learning Model (Garrison, 1997) does appear to be relevant for learners outside of a formal educational setting. While this model did provide a useful framework for analysis of the interviews, an area not identified by Garrison (1997), but consistently raised in the interviews in this study was the processes occupational therapists used to identify their learning needs. This omission may have occurred because Garrison assumed that individuals attending a formal learning experience have in effect identified a general learning need, and that the 'teacher' has already formulated the overarching learning goal, hence in Self-Management the focus is on how the goals, learning methods and support, and outcomes are continuously and collaboratively negotiated between teacher and student. However, with more autonomy in relation to their learning as health professionals, and the requirement of the CCFR to self-assess, participants in this study described processes used to assess for and determine their learning need. This finding not only added to the understandings of the processes occupational therapists use to identify their learning needs, but equally suggests that Garrison's Self-Management dimension could be extended to include descriptors of how

self-directed learners identify their learning needs. Although this study has shown that occupational therapists' descriptors of how they managed their learning, and the learning processes they used did, in the main, align with Garrison's descriptors, further research to validate the coding framework developed for this current study would be valuable, with findings from such studies either validating or further adding to the existing constructs.

5.4 LIMITATIONS OF THE STUDY

Several limitations of this study have been identified. The first relates to the scale used to determine self-directed learning readiness. The SDLRS was originally designed for pre-registration nursing students and has had very limited use in research with health professionals in practice. Face and construct validity were evaluated and, based on the advice of the first author of the instrument, slight amendments made to ensure a better 'fit' with occupational therapists in practice. In order to increase the reliability of the findings, internal consistency was determined which led to the identification of a different number of factors consisting of slightly different items, compared with previous studies. Therefore, although internal consistency did reach acceptable levels for research purposes, it should be noted that this is first study to use the SDLRS-A with practicing occupational therapists and thus further validation is required.

The second limitation relates to Garrison's (1997) model. As outlined in Section 3.5.6, this model was originally developed with the formal learning setting in mind, although it has been adopted for use in research studies in non-formal learning settings (e.g., Esposito, 2012; Young, 2013). However, at the time of data collection for this study, no previous research was found where Garrison's (1997) model had been operationalised into a framework suitable for analysis of interview data. While every care was taken in developing the codes and descriptors for the analysis as explained in Section 3.5.6.1, it is recognised that others may have interpreted Garrison's (1997) descriptions somewhat differently, which may have led to slightly different findings than those presented in this study. Further studies utilising this model would assist in the further operationalisation of the constructs presented by Garrison in his original article.

The third and final limitation considered is that of the number of participants (16) interviewed. While these 16 participants did represent the range of lower to higher scoring participants on the SDLRS, inclusion of more participants could have potentially

strengthened the findings. However, given the parameters of a doctoral study, it was not possible to interview more, and in addition as discussed in Section 4.5, the composition of these 16 participants was similar to that of the total sample participating in the study. Therefore, although the smaller number of participants could be perceived to be a limitation in relation to the strength of the findings, it must be noted that this study appears to be the first that has aimed to investigate the relationship between occupational therapists' descriptions of their actions, and their self-directed learning readiness. Further studies using a larger sample of occupational therapists is recommended. Ideally this sample would include new graduates as well as experienced occupational therapists, along with those with those who have and have not supervised others is recommended. Extending the study to other allied health professionals would be of value, as would extending the study to other countries with similar and different regulatory requirements.

5.5 IMPLICATIONS AND RECOMMENDATIONS

Implications from the findings of this study have direct practical relevance for the OTBNZ, occupational therapists and their supervisors/mentors as well as for academic institutions.

5.5.1 Implications of the findings for the OTBNZ

There are a number of implications from this study for the OTBNZ. The first relates to the design of CCFR. As outlined in the Foreword and Chapter One, the OTBNZ opted to embed a process of self-directed learning into the CCFR as the mechanism for demonstrating ongoing competence to practice. In doing so, the CCFR was intended to be used as a practical living tool for professional development, and also as the source of information used for audit of competence to practice. Given the expectations outlined in the Code of Ethics and competencies, it may have appeared self-evident to the OTBNZ that practitioners would be able to complete the CCFR effectively, but this does not appear to hold true for all occupational therapists. In addition, as noted by several of the participants, having an online portfolio which is accessed by the auditor for review, and a tool for managing professional development can be confusing. In knowing that they will be audited on a regular basis, some participants chose carefully what to include, which meant that their portfolio often lacked meaning, and was therefore not perceived as useful. The findings of this study suggested that those participants who were able to confidently and

competently use their CCFR as a professional development tool were more likely to be ready to be self-directed learners.

Following the reviews of the HPCA and the OTBNZ competencies in 2013, should the CCFR continue to be the method used by New Zealand occupational therapists to demonstrate their ongoing competence to practice, then the OTBNZ would do well to consider ways in which the profession can be assisted to understand how the CCFR can be used as a practical living tool for professional development, as the source of information for audit. More effective ways may include updating the CCFR Practitioner Handbook, highlighting that the processes of self-assessment, objective and activity setting, and critical reflection are essentially those used by self-directed learners. A somewhat surprising observation from the interviews was the number of participants who had not realised that the CCFR process is essentially underpinned by the process of self-directed learning. In being made aware, some participants identified the changes they intended to make in the near future. Therefore, a recommendation for the OTBNZ is that information about readiness to be a self-directed learner should be included in any teaching materials used by the OTBNZ. The role of the CCFR in the audit process should also be considered.

In addition, it is recommended that OTBNZ staff responsible for addressing occupational therapists' questions regarding the CCFR ensure they are knowledgeable about self-directed learning. Being aware of this important attribute could potentially enable OTBNZ staff to assist occupational therapists to question whether any of the issues raised in relation to their CCFR, might be related to their readiness to be a self-directed learner. It is also recommended that the OTBNZ consider adopting the SDLRS-A as a scale that occupational therapists can use (with New Zealand norms) as a mechanism for reflecting on their readiness to be a self-directed learner. Guidance regarding how to interpret the scores gained would be essential, and could be enhanced with the addition of case studies and examples from occupational therapists in practice.

A third implication for the OTBNZ is related to the technical design of the CCFR. Although the design of the CCFR was not specifically addressed in the interviews, in describing the challenges experienced, some participants did note how the design impacted on their ability to effectively use the CCFR. In addition, many had not realised that the CCFR was in effect a cycle of self-directed learning. In considering the design of the CCFR and the cycle of self-directed learning, several issues were identified.

In its current form it is not possible to view all components of the process easily on the one screen, which for some may have contributed to their lack of awareness that the CCFR is essentially a cycle of self-directed learning.. Presently, the user views and edits the self-assessment on one screen, however, this information is no longer available as a ‘visual cue’ when the user moves to entering their objectives and activities, thus the process of ensuring that the objectives and activities emerge from, and are connected with, the self-assessment is visually fragmented. Similarly, when the user returns to enter critical reflections about their learning, they first need to reflect on the learning gained from the activity before completing the critical reflection on the objective. Although the process appears logical, the design of the template interferes, in that when reflecting on the activity, both the objective and activity are viewable together enabling the user see the relationship between the two, whereas the view of the critical reflection on the activity is lost at the point the user moves to reflect on their objective.

Likewise, the user is also unable to use their self-assessment as a visual cue at any point in the process as this can only be located by going to the self-assessment screen, nor can they easily see the potential relationship between what they have written for the critical reflections and their self-assessments; an important step to ensuring that any learning gained from previous activities is used to inform current self-assessment against the competencies. Similarly, although the process of self-assessment undertaken should lead to the identification of a learning need, there is no obvious visual cue to alert the occupational therapist to the value of framing their knowledge or skill gap into a learning need, before determining their learning objective and activity. For those occupational therapists lacking the knowledge of, or skills in self-directed learning, this fragmentation appears to hamper planning for their learning, as they need to ‘flick’ backwards and forwards across a number of screens in order to retrieve what they have already documented.

It is recommended that the OTBNZ consider a review of the software to find ways of decreasing the fragmentation of the view. For example, pop-ups could enable the user to view what they have completed at any part of the process ensuring the maintenance of the ‘whole’ of their thinking process, and thus avoid cluttering of the screen that may otherwise occur if all four components (self-assessment, objective, activity and critical reflection) for each competency was shown on one screen. Pop-ups may also be of value for reminding the user of the expectations of what should be included in each component, perhaps with examples attached to stimulate thinking. These visual cues may also assist the

occupational therapist to understand that the process they are using is in effect a cycle of self-directed learning, and thus focus their attention towards themselves as learners, and away from seeing this process as yet compliance task.

5.5.2 Implications of the findings for individual members of the profession

The outcomes of this study have implications for all practicing occupational therapists, but especially so for those who are supervisors or managers of other occupational therapists, and for those occupational therapists who find completing their CCFR to be an onerous task, perceiving it to be mandated requirement as opposed to a professional responsibility to demonstrate ongoing competence to practice.

The first recommendation for members of the occupational therapy profession is that they need to consider whether the explanation offered in this thesis, is in fact, a tenable explanation. This would require those occupational therapists who currently give a range of reasons as to why they find the CCFR to be challenging or frustrating, to honestly question their reasoning, considering whether or not their experiences with the CCFR could in fact be due to the extent to which they are ready to be a self-directed learner. One of the tools that might be of use to this group would be the SDLRS-A, the results of which could serve as point of reference for reflection about oneself as a learner. One of the very interesting findings in this study related to the comparison between higher and lower scorers and their knowledge of themselves as learners. Having well developed metacognitive skills appeared to be a key influencer in how the participants in this study described their learning at, for, and through work, and their use of the CCFR as a professional development tool. It is recommended that for those occupational therapists who currently find completing the CCFR challenging, that they seek ways of gaining insight into themselves as learners, learning how to make good use of these insights when using their CCFR. This learning could be gained through formal courses, but equally working with a skilled supervisor and using a range of tools that might include the SDLRS-A, could be an effective way of enhancing metacognitive awareness.

In addition, those with enhanced metacognitive awareness were aware of the ways in which they learned best and tended, where they could, to create the right learning environment to enable their learning, for example, although they may attend a course which required them to absorb information primarily through listening, they described returning to the workplace and discussing their learning further with a colleague or in

supervision, or perhaps completing some follow-up reading. Conversely, some participants described adding selecting learning activities that were not congruent with their learning style, but were ones thought to be more acceptable to their employer or the OTBNZ. For those occupational therapists that struggle with determining learning activities for their CCFR, it is recommended that they find ways being able to confidently justify to others the value of being able to learn in ways most suited to their learning style. For example, for some occupational therapists, being funded to spend time ‘following’ another expert occupational therapist would be of more value to their learning, than for example, being funded to attend a professional conference.

Of those participants interviewed, many described the value of their supervision sessions as providing a place where they could reflect on their performance, using their supervisor as a sounding board. For others, supervision was valuable when their supervisor challenged their thinking, which encouraged them to think more deeply about their practice. It has been suggested that to be effective, the supervisor should take the role of a facilitator supporting the supervisee to reflect, in order to learn from their practice (Carroll, 2009; Cusick, Convey, et al., 2009). Based on the findings of this study, it is recommended that supervisors may find it useful to consider how they support their supervisees to be effective managers of their learning. Scales such as the SDLRS-A may be of use where, for example, the supervisee is struggling to maintain their CCFR. An understanding of the factors that might influence readiness to be a self-directed learner, such as metacognitive awareness, would also be of use to supervisors, who could draw from this knowledge in order to enhance the supervisee’s awareness of themselves as a learner.

5.5.3 Implications of the findings for academic institutions

Literature about self-directed learning readiness in the occupational therapy profession is scarce, with more emphasis given to researching pre-registration occupational therapy students as opposed to practicing occupational therapists, suggesting that the profession is aware of the need to ensure graduands are able to meet the expected levels of competence related to their ongoing learning. As noted previously in the research of professional commitment (Rivard Magnan, 2010) and self-regulatory processes (Strickland, 2003) of occupational therapists, academic institutions not only have a role in ensuring that students graduate with the requisite knowledge and skills to practice as an

occupational therapist, but are also responsible for ensuring the fostering of the ‘soft competencies’ (King, 2009) such as self-awareness through reflection.

Based on the findings of this study, it is recommended that occupational therapy programmes should include opportunities for students to develop the skills to reflect on their attributes for, and readiness to be self-directed learners. Although it is acknowledged that this occurs to some extent, for example, through the requirement for students to use tools such as learning contracts when on fieldwork placements (Matheson, 2003), it is also important that students have the opportunity to develop their metacognitive skills, as well as to continue to develop the skills of managing their learning. Use of scales such as the SDLRS (M. J. Fisher et al., 2001) is recommended, with the results being used by students as a basis for ongoing reflections, not only on the skills they need to be a self-directed learner, but those attributes that they may wish to foster or further develop. This learning should be encouraged both on campus, but also during fieldwork placements. In order to scaffold the learning experience for the students, it is recommended that supervisors (who are practicing occupational therapists) review their current understandings of self-directed learning. Enhancing their own awareness may enable them to further assist their supervisees to continue to develop their metacognitive awareness of themselves as learners.

Finally, in transitioning to new graduate status, students in their final year should be assisted to further refine their reflective skills, not only in relation to their clinical reasoning, as is generally the focus in any occupational therapy programme, but also to aid decisions about their ongoing professional development as an occupational therapist as recommended by Cusick, Convey, et al. (2009). In the final preparations provided for students, it is recommended that content about ways to accurately self-assess using multi-source feedback is incorporated, and that students have the opportunity to develop their ability to cycle through the process from self-assessment to learning need identification, goal setting, activity selection and critical evaluation and back to self-assessment again. In this way, newly graduated occupational therapists will be better equipped to understand themselves as learners, being able to use the CCFR effectively as a professional development tool, with the aim that they fully understand the value of this tool in supporting their ongoing professional development as an occupational therapist.

5.6 RECOMMENDATIONS FOR FUTURE RESEARCH

Given that this study appears to be the first that has demonstrated the connection between occupational therapists' use of the CCFR as a professional development tool and their readiness to be self-directed learners, a number of recommendations for future research are made. The first recommendation is for this study to be replicated using larger samples, and in different countries. For example, changes have recently been made to the requirements that need to be met by Australian occupational therapists in order maintain their registration to practice (Occupational Therapy Board of Australia, 2012). Practitioners are required to maintain a CPD record that includes goals, learning activities, outcomes and implications for practice, not unlike that expected in the CCFR. Through replication with a population such as Australian occupational therapists, the reliability and validity of the SDLRS-A as a measure of self-directed learning readiness could be further evaluated, along with testing of the operationalisation of the theoretical constructs proposed in Garrison's (1997) Model of Self-directed Learning.

The second recommendation relates to the finding that those who supervise allied health students or occupational therapists tend to have higher SDLRS-A total and/or subtest scores suggesting a potential connection. What was not clear in this study is whether those occupational therapists offering supervision, do so because they have the attributes for, and skills of, managing their own learning which they then use to good effect with their supervisees, or whether in supervising others, the supervisor then further develops themselves as a self-directed learner. Further studies are recommended, with the aim of determining what the personal and professional gains are for the supervisor of occupational therapists and allied health students, rather than the supervisee. As part of this, the contributions of readiness to be a self-directed learner could also be examined.

The third recommendation relates to the increasing interest by the professional community in first conceptualising, and then framing for the purposes of research and to inform practice, understandings of concepts such as professionalism (Aguilar et al., 2013; Robinson et al., 2012), professional confidence (Holland et al., 2012), professional resilience (Ashby, Ryan, Gray, & James, 2013) professional excellence (Courtney, 2005), professional currency (Murray & Lawry, 2011) and professional expertise (King, Currie, et al., 2008). In each of these studies, the value of being a self-directed learner is often identified, but to a certain extent is expressed in ways that suggest that the authors have assumed that members of the profession are confident and competent self-directed learners,

however as shown in this study, this assumption does not necessarily hold true. Further studies in each of these areas could be strengthened by considering whether self-directed learning is an influencing variable. For example, further research could build on the model of development of professional expertise by King (2009), exploring whether occupational and physiotherapists deemed to be expert are more likely to score higher on a measure of self-directed learning readiness such as the SDLRS-A, and if so, how might self-directed learning readiness contribute to, or be an outcome of the development of expertise?

The fourth recommendation relates to occupational therapists' understandings of competence. One of the major influencers of occupational therapists' use of the CCFR as a professional development tool was related to the individual's understanding of competence. Just as previous studies have explored aspects such as professional currency (Murray & Lawry, 2011) and professional expertise (King, Currie, et al., 2008), so too should the profession's understandings of competence be elicited. Outcomes from this research could be used to further investigate the relationship between readiness to be a self-directed learner, understandings of professional competence, and use of, for example, the CCFR as a professional development tool.

The final recommendation for future research relates to exploring ways to enhance occupational therapists' understandings of how the CCFR can be used effectively as a professional development tool. Similar to the studies using communities of practice to enable collaborating and learning together in order to develop practice knowledge and skills (Reed & Hocking, 2013), further research could investigate the effectiveness of interventions. Given that the findings of this study identified that the effective use of the CCFR required metacognitive awareness, then the focus of such an intervention could include activities and tasks that assist participants to better understand themselves as learners. The learning from this type of study could assist the OTBNZ to develop effective ways of developing the professions' understandings of the relationship between use of the CCFR as a professional development tool and self-directed learning readiness. Additionally, findings from such a study could be shared with supervisors and those taking the role of third-party sign-off, who could utilise this when providing feedback to their colleagues on their CCFRs.

5.7 CONCLUSION

The introduction of mandatory requirements for engagement in ongoing learning in order to demonstrate ongoing competence to practice raised challenges for some members of the occupational therapy profession in New Zealand. Although the OTBNZ developed the CCFR with the aim that it would become a 'living tool for professional development', anecdotal evidence suggested that not all occupational therapists were using the CCFR in this way. Essentially, successful use of the CCFR required the user to have the attributes for, and skills of, self-directed learning, yet there is little evidence in the literature to support the assumption that occupational therapists exhibit these qualities. The purpose of this study was to investigate if there was any basis for the explanation that some may find the CCFR process challenging because they are less ready to be self-directed learners than their peers. The aims of the study were to investigate the extent to which occupational therapists are ready to be self-directed learners, the factors that influence readiness, and whether or not there is a connection between the use of the CCFR as a professional development tool, and readiness to be a self-directed learner.

To address the purpose and aims of the study, the study design, underpinned by the pragmatist philosophy, used was a convergent parallel mixed methods design with the quantitative phase consisting of an online questionnaire, and the qualitative phase consisting of a semi-structured interview, in part based on the review of the interviewee's CCFR. The overarching research question for the study asked: 'Is there any connection between occupational therapists' use of the CCFR as a professional development tool and readiness to be self-directed learners? Based on the analysis of quantitative and qualitative data, the question was answered in the affirmative, in that for the majority of the participants in this study, a connection did appear to exist.

In triangulating the quantitative and qualitative data gathered in this study, it was possible to gain greater insights into the complex phenomena of self-directed learning readiness, allowing for the unnoticed to be noticed, assumptions to be questioned and insights to be gained. In exploring the connection between use of the CCFR as a professional development tool and readiness to be a self-directed learner, this study has focused attention not only on what occupational therapists do in relation to their learning, but provided insight into what influenced the use of the CCFR as a professional development tool. The influencers included beliefs or attitudes to oneself as a learner, metacognitive awareness, and understandings of competence, along with experience in

supervision of allied health students and occupational therapists, and years employed. Other outcomes of the study included the development of the SDLRS for use by occupational therapists, demonstrating the validity and reliability of the scale as a measure of readiness to be a self-directed learner, and further support for the validity of Garrison's (1997) Model of Self-directed Learning. In addition, an extension to the model was identified, being the need to include descriptors related to the processes used to identify learning needs. The ways in which occupational therapists did this were identified in this study.

Finally the findings of this study have important implications for the profession, and the regulatory authorities, given that it is one of the first of its kind to examine the connection between occupational therapists' 'doing' of the learning process using the CCFR as a professional development tool and self-directed learning readiness. Previous research of the occupational therapy profession has failed to consider the multi-faceted phenomena of self-directed learning in its totality; rather the focus has predominantly been on components of the self-directed learning process such as what motivates occupational therapists to engage in professional development, or the barriers or enablers that influence engagement in professional development activities. Similarly, considering how personality dispositions or attributes might influence readiness to be a self-directed learner has been limited primarily to examining what influences engagement in learning at, for, and through work, especially where ongoing professional development has been mandated by the regulatory authorities.

As outlined in the Foreword and Chapter One of this thesis, the aim of this research was not to find the absolute truth, but rather to firstly pose an explanation other than those commonly given by occupational therapists when expressing their frustrations with the CCFR, and secondly to have the evidence to support this explanation. In doing so, this thesis has followed the recommendation by Rivard Magnan (2010), an occupational therapy researcher, to look beyond those external factors that influence engagement in ongoing learning, instead seeking to gain a more in-depth understanding of the individual-related factors that shape engagement, and that of Law (2010) who called for the profession to better understand "the 'doing' of the learning process" (p. 15). In closing, it is acknowledged that there may well be multiple explanations for the frustrations occupational therapists experience with CCFR, including the 'clunkiness' of the OTBNZ website, that employers do not provide the time or resources, or that this is yet another task

to be fitted into already busy lives, however, for some occupational therapists, the findings of this study show that the issue actually lies in their readiness to be a self-directed learner.

“When you are a Bear of Very Little Brain, and you Think of Things, you find sometimes that a Thing which seemed very Thingish inside you, is quite different when it gets out into the open and has other people looking at it.”

— A.A. Milne, Winnie-the-Pooh

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APPENDICES

Appendix A:

Extract of Competencies for Registration as an Occupational Therapist (Occupational Therapy Board of New Zealand, 2000).
Competencies 5-7 continue on the next page.

	1	2	3	4
COMPETENCY	Implementation of Occupational Therapy	Safe, Ethical, Legal Practice	Culturally Safe Practice	Communication
OUTCOME: the entry level practitioner will:	Facilitate & enable occupations for people through engaging their needs, preferences & capacities in the context of their environment to optimise ability & functional independence.	Act, & justify actions, in compliance with ethical, legal, professional & safety requirements.	Provide a service that takes into account the socio cultural values of the client/tangata whaiora, family/whanau & significant others.	Use a range of communication skills to establish & maintain effectual therapeutic & working relationships.
PERFORMANCE CRITERIA:	<ul style="list-style-type: none"> 1.1 Establish the need for, & the role & function of, occupational therapy in partnership with the client/ tangata whaiora. 1.2 Negotiate mutually agreed, prioritised goals. 1.3 Acknowledge client/tangata whaiora values, beliefs, attitudes & practices. 1.4 Use current theory, evidence, & sound clinical reasoning to inform best occupational therapy practice. 1.5 Identify contra-indications & consequences of intervention. 1.6 Demonstrate understanding of perspectives of occupation as a core modality. 1.7 Use meaningful occupations to achieve, maintain, or enhance performance components, skills, habits, & roles of the client. 1.8 Identify opportunities to use the client's /tangata whaiora actual occupation & environment to enhance occupational therapy interventions. 1.9 Identify the effect of environmental factors on the client's/tangata whaiora function & dysfunction. 1.10 Demonstrate understanding & uses of the occupational therapy process. 1.11 Select, analyse, structure, synthesise, 	<ul style="list-style-type: none"> 2.1 Comply with the Health Practitioners Competence Assurance Act 2003. 2.2 Comply with the Code of Ethics for Occupational Therapists in NZ (2004). 2.3 Comply with all other relevant legislation, regulations, codes (eg Health & Disability Code of Rights, & Privacy Code), service standards, & professional guidelines. 2.4 Attend to safety of client/tangata whaiora, self, & others. 2.5 Respect privacy & maintain confidentiality. 2.6 Recognise when privacy & confidentiality cannot be upheld & act appropriately. 2.7 Recognise when there is a conflict of interest & refer client/tangata whaiora on to an appropriate service or support. 2.8 Provide occupational therapy services that recognise principles of social justice. 2.9 Provide occupational therapy services that enable & empower clients/tangata whaiora & enhance their participation. 2.10 Professionally present, record & report information. 2.11 Comply with basic health & safety procedures (eg First Aid, CPR) relevant to setting. 	<ul style="list-style-type: none"> 3.1 Demonstrate understanding of the complexity of culture. 3.2 Recognise the multiple realities & identities people bring to the practice context eg, gender, ethnicity, religious belief, sexual orientation, ability, life stage. 3.3 Demonstrate understanding of power dynamics in therapeutic contexts & foster opportunities for clients/tangata whaiora to maximise self advocacy skills. 3.4 Demonstrate awareness of the cultures of occupational therapy & their potential impact on the person. 3.5 Identify personal significant cultural values, beliefs, attitudes, & prejudices & understand their potential impact. 3.6 Recognise own level of cultural safety, consult & refer on where indicated. 3.7 Identify & safely respond to client /tangata whaiora values, beliefs, attitudes & practices. 3.8 Recognise & respect the uniqueness of the individual in the context of their community. 3.9 In consultation with the client/tangata whaiora, identify & work in partnership with resources of famil/whanau. 	<ul style="list-style-type: none"> 4.1 Use a range of communication skills. 4.2 Adapt style & method of communication to suit the individual client/tangata whaiora. 4.3 Assist the client/tangata whaiora to identify & communicate his/her own needs. 4.4 Identify cultural differences & their potential impact on communication. 4.5 Facilitate the teaching-learning process in a variety of occupational therapy settings. 4.6 Responsibly share knowledge. 4.7 Communicate all relevant information to colleagues & consumers in a timely manner. 4.8 Develop effective & co-operative relationships within teams (including multidisciplinary teams) & with other workers & agencies. 4.9 Assess the effectiveness of own communication. 4.10 Demonstrate effective conflict management techniques. 4.11 Present concepts & information clearly using inclusive, unambiguous, gender neutral language.

5

Management of Self & People

Manage performance & monitor personal resources to ensure performance is professional, collaborative & supportive of service & team goals & colleagues.

- 5.1 Function autonomously & work collaboratively with others involved in service delivery to ensure best outcome for client/tangata whaiora.
- 5.2 Participate in regular individual or peer supervision in a manner which supports ongoing development.
- 5.3 Comply with current NZ Association of Occupational Therapists Standards of Practice.
- 5.4 Work within recognised roles, functions & parameters of occupational therapy.
- 5.5 Articulate, negotiate, & demonstrate the role & function of an occupational therapist within a team.
- 5.6 Identify the role of support staff & work collaboratively.
- 5.7 Recognise abilities in colleagues & support them in developing those abilities.
- 5.8 Provide appropriate support & guidance to staff & allocate tasks where authority has been delegated.
- 5.9 Manage workload, complete tasks, & meet responsibilities in a timely & goal directed manner.
- 5.10 Demonstrate professional behaviour & presentation appropriate to the context.

6

Management of Environment & Resource

Manage the environment to contribute positively to the client's/tangata whaiora experience & their ability to participate, & ensure effective use of resources.

- 6.1 Develop & maintain a safe human & non-human environment, with particular attention to management of risk.
- 6.2 Practise within the required standards, policies & procedures of the work area.
- 6.3 Demonstrate awareness of service priorities & objectives.
- 6.4 Adhere to local protocol regarding resource management & utilisation.
- 6.5 Demonstrate basic understanding of issues of equitable distribution of resources.
- 6.6 Comply with the local recording, reporting, & data collection systems.
- 6.7 Demonstrate an understanding of the principles & processes of quality improvement.
- 6.8 Manage change effectively.
- 6.9 Demonstrate an awareness of the impact of social & political trends on occupational therapy services.
- 6.10 Demonstrate understanding of socio-political (or governmental) & organisational decision-making & policy-making processes.
- 6.11 Promote occupational therapy.

7

Continuing Professional Development

Seek & use opportunities to continually develop professional knowledge & practice.

- 7.1 Use & contribute to resources that develop self & the occupational therapy profession.
- 7.2 Identify own professional abilities & attitudes, strengths, & limitations, & how these affect performance & the service provided.
- 7.3 Use reflective practice to set goals, utilise resources, & access information to gain the skills & knowledge required in a specific setting to ensure continuing competence.
- 7.4 Use professional literature as a resource to keep up-to-date with occupational therapy practices & developments.
- 7.5 Update & review knowledge of occupational therapy theories, techniques, technology & outcomes.
- 7.6 Utilise opportunities for mentoring in relation to career development.
- 7.7 Actively participate in local performance development & review processes.
- 7.8 Demonstrate an understanding of research processes & the interpretation of results.
- 7.9 Contribute to the occupational therapy body of knowledge by sharing findings with others, both formally & informally.

Appendix B:

Excerpt from Practitioners' CCFR for Competency 1: Implementation of Occupational Therapy for 2012 and 2013 showing new and completed self-assessments, objectives and activities.

Competency 1: Implementation of Occupational Therapy Self Assessment (2013):

International Relationship model

This year I am continuing to teach second year students for a short block on Sensory Processing. As part of this, I have to create three workshops - one of which I determined was to focus on the notion of who was the client. Having decided this was important to do, I realised when I planned the content that I actually wasn't sure how to relate this notion of 'who is the client' outside of the context of school-based services. In thinking this through for adult services, I did some reading of the Enabling Occupation 2 text, and then stumbled into the International Relationship Model by Renee Taylor which was a brand new model for me. However, as I started to read the key concepts I realised this had real potential for understanding how the relationship can influence the client's progress towards achievement of their objectives. I decided that I needed to understand this model better, in order to identify key concepts that could be shared with students in this workshop.

Objective:

Describe the key concepts of the IR Model including the application of the model alongside Winnie Dunn's Sensory Processing Model

Target Date: May 2013

Activity: IR Model 1. Review chapters on the Intentional Relationship Model.

Target Date: March 2013

Self Assessment (2012):

Teaching of assessments

This year I am taking two new courses - one on assessments, the other on frames of reference. Both of these are well developed Year 2 courses. It has been a number of years since I have taught the content/topics that are covered in these one semester courses. For the assessment course, I need to refresh my knowledge of some of the assessment tools - particularly those tools related to MOHO and Canadian Model of Occupational Performance. For the frames of reference course, I need to refresh and bring myself up to date on the MOHO and the Canadian Model of Occupational Performance.

Objective:

I will become confident in the administration of the COPM and the OCAIRS to the level required to be able to respond to student questions in the Assessment Course.

Target Date: 30/6/2012

How Achieved? I did review the COPM but not the OCAIRS.

Critical Reflection: Both of these assessments were introduced to the students in the Assessment Course. The learning experiences for the students meant that they did most of the thinking about how to administer the assessment. I'm not sure I became confident in the administration, but I did realise that I have the skills to determine where to look in a manual to find out how to administer, and also how to read the instructions quickly in order to answer students questions.

Activity:

COPM Review the COPM manual and 2 - 3 of the most recent articles focused on reliability and/or validity.

How Achieved? Reviewed the COPM manual.

Critical Reflection: I have not ever used the COPM in practice, so it was interesting to look at how this assessment was constructed, the underlying theoretical concepts and how it is administered and scored. The students raised some interesting questions about the structured nature of the assessment. What I did learn was that the COPM is also an outcome measure - something I hadn't been aware of before I think. Would I use it in practice - I'm not sure especially as most of my experience has been working with children in schools but I am pleased that I got to teach this particular tool to students as it increased my knowledge of what the tool assesses and therefore who it might be useful for.

Appendix C:

Ethics Committee Letter of Approval



10/045

Academic Services
Manager, Academic Committees, Mr Gary White

23 March 2010

Professor K Lai
College of Education
Division of Humanities
145 Union Street East

Dear Professor Lai

I am writing to let you know that, at its recent meeting, the Ethics Committee considered your proposal entitled "**Occupational therapists' ability to manage a mandated self-directed learning process**".

As a result of that consideration, the current status of your proposal is:- **Approved**

For your future reference, the Ethics Committee's reference code for this project is:- **10/045**.
The comments and views expressed by the Ethics Committee concerning your proposal are as follows:-

While approving the application, the Committee would be grateful if you would respond to the following:

The Committee was concerned that if the therapists do not measure up they will be reported to the board. Instead, the Committee would prefer if the student researcher discussed the issues with the supervisor (Professor Lai) and a course of action worked out from there. The student's role, while undertaking the study, is as a researcher rather than as a practitioner. This confusion of roles also raised the question of a potential conflict of interest for the student researcher. Please comment on how this can be managed.

Please provide the Committee with copies of the updated Information Sheet and Consent Form, if changes have been necessary.

The Committee expects that these comments will be addressed before recruitment of participants begins. Please note that the Committee is always willing to enter into dialogue with applicants over the points made. There may be information that has not been made available to the Committee, or aspects of the research may not have been fully understood.

Approval is for up to three years. If this project has not been completed within three years from the date of this letter, re-approval must be requested. If the nature, consent, location,

procedures or personnel of your approved application change, please advise me in writing.

Yours sincerely,

A handwritten signature in cursive script that reads "Gary Witte".

Mr Gary Witte

Manager, Academic Committees

Tel: 479 8256

Email: gary.witte@otago.ac.nz

c.c. Professor H May Dean College of Education

14 April, 2010

Dr Gary Witte
Manager, Academic Committees
University of Otago
Dunedin

Dear Gary

Re 10/045 Occupational therapists' ability to manage a mandated self-directed learning process.

Thank you for your letter of 23 March regarding the above study. The issue of occupational therapists being concerned about whether or not they measure up was one which we considered at some length in the design of the study. The original wording in the proposal, information form and consent form was that recommended by the Occupational Therapy Board of New Zealand (OTBNZ) to myself as the student researcher.

On receiving your letter regarding the Committee's concern, I forwarded this to the OTBNZ requesting further guidance. The OTBNZ Chief Executive responded with the attached letter identifying why it is difficult for me to remove myself from my practitioner role. However, the OTBNZ has found a way forward by noting that all occupational therapists who would volunteer for this study have recently completed the recertification process and thus any issues of incompetence in all likelihood would have already been identified. Thus the Chief Executive is now in agreement with the recommendation of the committee, that in the highly unlikely event that I find through either review of the participant's portfolio or through their interview, that there is 'risk of harm' then in the first instance, I will raise this with my supervisor Professor Kwok-Wing Lai. I have provided copies of this letter to Professor Lai and discussed the alterations to the information and consent form. He advised me to contact you directly.

The information and consent forms have been amended to align the committee's recommendation. They are attached as documents (with track changes) for the review of the committee.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Merrolee Penman', with a large, stylized initial 'M'.

Merrolee Penman, MA(Educ), NZROT
Doctoral Candidate

cc: Professor Lai

Appendix D:

Email invitation.

Call for participants – The Continuing Competence Framework for Recertification (CCFR) – a process of self-directed learning

Thank you for taking the time to read this invitation to participate in a research study. My name is Merrolee Penman, and I am an occupational therapist, lecturer and am also enrolled in a doctorate at the University of Otago. I'm hoping that you would be interested in being involved in my research study. Let me tell you a little about it so that you can think about whether to accept the invitation to participate.

One of the tasks we all do before reapplying for our Annual Practising Certificates is to go to the Occupational Therapy Board of New Zealand (OTBNZ) website to check and update our CCFR. The steps of recording our self-assessments, objective setting, activity selection and critical reflection are the same taken by *self-directed learners*. After talking with a number of OTs, I realised that many of us, (including myself at the outset) didn't understand that the OT Board process required us to be self-directed learners. In reviewing the occupational therapy literature, I found that our profession does not know a lot about how we manage our learning. I strongly believe that we need to know more about "why we do, what we do" especially in relation to the CCFR as it is one of the key legislative means by which our ongoing competence to practice is measured.

By participating in this research, you will help me to better understand occupational therapists' self-directed learning and you hopefully will also gain more insight into yourself as a self-directed learner. Collectively, this information could also be very helpful for the OTBNZ so that they can assist occupational therapists to effectively manage the CCFR process, and for AUT University and Otago Polytechnic as they ensure that their graduates are self-directed learners capable of managing the CCFR.

Initially, I am inviting all occupational therapists who currently work in NZ, and who have held a New Zealand APC since April 2009 or earlier to participate. If you accept this invitation, I will ask you to complete an online or paper-based self-directed learning survey. This survey will give you an indication of your strengths in self-directed learning.

From this group, I will be inviting a range of people (based on their survey results) to look more in-depth at how they manage the self-directed learning process in the CCFR. This will occur over one or two phone or face-to-face interviews using the individual's CCFR online portfolio and results from their self-directed learning survey.

Please do not volunteer for this study if you have been supervised by me or used me as your third party sign-off in either 2009/2010 or 2010/2011. I would not like to jeopardize our existing professional relationship.

If you are interested in participating in the study, then please email (penme583@student.otago.ac.nz) or call or text me on (021 735 239) and we can talk about the study and/or I can forward you the information form and consent form.

This study has received ethical approval from the University of Otago Ethics Committee (Reference Number: 10/045).

Appendix E:

Information and consent form for Phase 1 of the study

Reference Number: 10/045

23 March 2010

Occupational therapists self-directed learning – Stage 1

INFORMATION SHEET FOR PARTICIPANTS

Thank you for showing an interest in this project. Please read this information sheet carefully before deciding whether or not to participate. If you decide to participate we thank you. If you decide not to take part there will be no disadvantage to you of any kind and we thank you for considering our request.

What is the Aim of the Project?

As you may be aware, in 2005 the Occupational Therapy Board of New Zealand (OTBNZ) implemented the process by which we demonstrate our ongoing competence to practice. Although not defined as such by the OTBNZ, the process we use is actually one of self-directed learning.

The aim of this study is to better understand how occupational therapists manage the self-directed process mandated by the OTBNZ, in particular how we go about it and what influences our ability to manage the processes to ensure our ongoing competence. This research is being undertaken as part of requirements for the Doctor of Education research programme. This research is being undertaken by Merrolee Penman, NZROT under the supervision of Professor Kwok-Wing Lai as supervisor.

What Type of Participants are being sought?

It is important to have occupational therapists that are familiar with the Continuing Competency Framework for Recertification. To ensure this, you could volunteer for this study if you:

- have held an Annual Practicing Certificate (APC) for at least 2009/2010 and 2010/2011, if not longer
- are currently living in New Zealand
- are willing to complete self-directed learning scale with the understanding that you may be invited to participate in the second stage of the research.

You should not volunteer for this study if you:

- are a new graduate occupational therapist
- are an occupational therapist who has previously been registered in New Zealand but not held an APC for two or more years

- are an occupational therapist who has previously been registered outside of New Zealand, and whose New Zealand APC is dated from 2009/2010 onwards
- have in the last two years (2009/2010 and 2010/2011) either been supervised by or used Merrolee Penman as a third party sign-off as part of the application for an Annual Practising Certificate. You should not volunteer for the study as our professional relationship may be jeopardised.

What will Participants be Asked to Do?

There are two stages to this project. Should you agree to take part in this first stage, you will be asked to complete a questionnaire about being a self-directed learning learner, as well as provide some information about yourself. You can choose to do this online or paper-based. This will take approximately 15 - 20 minutes to complete.

Some people will also be invited into the second stage of the project which will involve one to two interviews related to the content of your online portfolio.

It is not anticipated that you will find completing the questionnaire stressful; rather the results may give you further insight into how you manage your own learning.

Please be aware that you can decide not to take part in either the first stage of the project or the second (if invited) without any disadvantage to yourself of any kind.

Can Participants Change their Mind and Withdraw from the Project?

In this first stage you may withdraw from participating in the project before completing the online or paper-based self-directed learning scale.

What Data or Information will be Collected and What Use will be Made of it?

The data you enter for the questionnaire will be collated and analysed to determine the extent to which New Zealand occupational therapists are self-directed. The demographic data will be used to describe the sample and to determine the degree to which this sample is representative of all New Zealand registered occupational therapists. All identifying data will be removed and replaced with research codes.

Data collected will be stored in a locked steel filing cabinet in the researcher's workplace. Any external hard-drives or USB or other portable devices used to store electronic data will be password protected and when not in use stored in the locked steel filing cabinet. Only Merrolee Penman and her supervisor(s) will have access to the data collected.

The results of the project may be published and will be available in the University of Otago Library (Dunedin, New Zealand) but every attempt will be made to preserve your anonymity. The results of the project may also be presented at national and international professional conferences. You will be informed when the presentations will occur.

You are most welcome to request a copy of the summary of the results of the project should you wish.

At the end of the project any personal information will be destroyed immediately except that, as required by the University's research policy, any raw data on which the results of the project depend will be retained in secure storage for five years, after which it will be destroyed.

Reasonable precautions will be taken to protect and destroy data gathered by email. However, the security of electronically transmitted information cannot be guaranteed. Caution is advised in the electronic transmission of sensitive material.

What if Participants have any Questions?

If you have any questions about our project, either now or in the future, please feel free to contact either:-

Merrolee Penman
School of Occupational Therapy
Education
Otago Polytechnic
Private Bag 1910
Dunedin 9054
Telephone Number: 03 479 6043

or Professor Kwok-Wing Lai
University of Otago College of
Telephone Number: 03 479 8806
Email: wing.lai@otago.ac.nz

Email: penme583@student.otago.ac.nz

This study has been approved by the University of Otago Human Ethics Committee. If you have any concerns about the ethical conduct of the research you may contact the Committee through the Human Ethics Committee Administrator (ph 03 479 8256). Any issues you raise will be treated in confidence and investigated and you will be informed of the outcome.



23 March 2010

Occupational therapists' self-directed learning
CONSENT FORM FOR
PARTICIPANTS

I have read the Information Sheet concerning this project and understand what it is about. All my questions have been answered to my satisfaction. I understand that I am free to request further information at any stage.

I know that:-

1. My participation in the project is entirely voluntary;
2. I am free to withdraw from the project up until submitting the self-rated self-directed learning questionnaire (by mail or online) without any disadvantage;
3. Personal identifying information will be destroyed at the conclusion of the project but any raw data on which the results of the project depend will be retained in secure storage for five years, after which they will be destroyed;
4. The results of the project may be published and will be available in the University of Otago Library (Dunedin, New Zealand) but every attempt will be made to preserve my anonymity. I will be informed of any presentations that may occur.

I agree to take part in this project.

.....

(Signature of participant)

.....

(Date)



This study has been approved by the University of Otago Human Ethics Committee. If you have any concerns about the ethical conduct of the research you may contact the Committee through the Human Ethics Committee Administrator (ph 03 479 8256). Any issues you raise will be treated in confidence and investigated and you will be informed of the outcome.

Appendix F:

Part 1 of the online questionnaire. Highlighted text indicates questions worded exactly as the Occupational Therapy Board of New Zealand to enable comparison.

Self-Directed Learning of Occupational Therapists – Stage 1

Your professional history

Questions in this section provide information about your occupational therapy history.

1. What is the total number of years you have worked as an occupational therapist?

2. What is the highest occupational therapy related degree that you currently hold?

- New Zealand Registration
- Diploma
- Bachelors
- Postgraduate Certificate
- Postgraduate Diploma
- Masters
- Doctorate
- Other, please specify

3. The CCFR (Continuing Competence Framework for Recertification) was first introduced in 2004. Since that date, which of the following years have you applied for an APC (Annual Practicing Certificate)?

- | | |
|------------------------------------|------------------------------------|
| <input type="checkbox"/> 2005/2006 | <input type="checkbox"/> 2006/2007 |
| <input type="checkbox"/> 2007/2008 | <input type="checkbox"/> 2008/2009 |
| <input type="checkbox"/> 2009/2010 | <input type="checkbox"/> 2010/2011 |

Your employment

Questions in this section provide information about your current employment.

4. Describe your current employment by selecting one or more of the following:

- | | |
|--|---|
| <input type="checkbox"/> Hospital/health service/DHB | <input type="checkbox"/> Private practice (self-employed) |
| <input type="checkbox"/> School (education) | <input type="checkbox"/> Private insurer |
| <input type="checkbox"/> Justice | <input type="checkbox"/> Industry/commerce |
| <input type="checkbox"/> Tertiary education provider (polytechnic, university) | |
| <input type="checkbox"/> Government department/Crown Agency (e.g., ACC) | |
| <input type="checkbox"/> Specialist cultural service | |
| <input type="checkbox"/> Non-government organisation (e.g., private rest home) | |
| <input type="checkbox"/> Community/Not-for-Profit organisation | |
| <input type="checkbox"/> Other, please specify: | |

5. What is the focus of your primary employment?

- | | | |
|--|--|---|
| <input type="checkbox"/> Physical Health | <input type="checkbox"/> Mental Health | <input type="checkbox"/> Educational/Vocational |
| <input type="checkbox"/> Developmental | <input type="checkbox"/> Recreational | <input type="checkbox"/> Educational/health promotion |
| <input type="checkbox"/> Systemic (e.g., groups, communities, organisations) | | |
| <input type="checkbox"/> Other, please specify: | | |

6. Are you employed full-time? If no, then move to question 7.
Select this option if you either have more than one employer, or contract to more than one client and your total work hours are 37.5 hours **or more** per week.

- | | |
|------------------------------|-----------------------------|
| <input type="checkbox"/> Yes | <input type="checkbox"/> No |
|------------------------------|-----------------------------|

7. Are you employed part-time?
Select this option if you either have more than one employer, or contract to more than one client and your total work hours are 37.5 hours or less per week.

Yes No

8. If you answered yes to Question 7, what are your total weekly average hours of work?

Your experience in supervision of others

Questions in this section provide information about your experience in supervising others.

9. Have you supervised allied health students? If yes, please indicate approximately how many?

1-5 6-10 11-15
 16-20 more than 20
 I have supervised students, but I am unsure of how many
 I have not supervised any students

10. If you have supervised allied health students, over how many years have you provided this supervision?

1-5 6-10 11-15
 16-20 more than 20 years
 I have not supervised any students

11. Have you supervised other occupational therapists? If yes, please indicate approximately how many?

1-5 6-10 11-15
 16-20 more than 20
 I have supervised other occupational therapists, but I am unsure of how many
 I have not supervised any other occupational therapists

12. If you have supervised occupational therapists, over how many years have you provided this supervision?

1-5 6-10 11-15
 16-20 more than 20 years
 I have not supervised any occupational therapists

Information about yourself

Questions in this section provide personal data about yourself.

13. Please indicate your geographical location by giving your home postcode below:

14. Which ethnic group do you identify with:

- | | | |
|--|---|--|
| <input type="checkbox"/> Decline to answer | <input type="checkbox"/> NZ European/Pakeha | <input type="checkbox"/> Maori |
| <input type="checkbox"/> British/Irish | <input type="checkbox"/> Dutch | <input type="checkbox"/> Polish |
| <input type="checkbox"/> Greek (incl. Greek Cypriot) | <input type="checkbox"/> South Slav | <input type="checkbox"/> Italian |
| <input type="checkbox"/> German | <input type="checkbox"/> Australian | <input type="checkbox"/> European |
| <input type="checkbox"/> Cook Island Maori | <input type="checkbox"/> Tongan | <input type="checkbox"/> Niuean |
| <input type="checkbox"/> Tokelauan | <input type="checkbox"/> Fijian | <input type="checkbox"/> Other Pacific |
| <input type="checkbox"/> Asian NFD | <input type="checkbox"/> South East Asian NFD | <input type="checkbox"/> Filipino |
| <input type="checkbox"/> Vietnamese | <input type="checkbox"/> Other South East Asian | <input type="checkbox"/> Chinese |
| <input type="checkbox"/> Khmer/Kampuchean/Cambodian | | <input type="checkbox"/> American/Hispanic |
| <input type="checkbox"/> Sri Lankan | <input type="checkbox"/> Japanese | <input type="checkbox"/> Korean |
| <input type="checkbox"/> Other Asian | <input type="checkbox"/> Middle Eastern | <input type="checkbox"/> Indian |
| <input type="checkbox"/> African (or cultural group of Africa) | | <input type="checkbox"/> Other |
| <input type="checkbox"/> Greek (incl. Greek Cypriot) | <input type="checkbox"/> South Slav | <input type="checkbox"/> Italian |

15. Which age band are you in?

- | | | | |
|--|---|---|---|
| <input checked="" type="checkbox"/> Under 25 | <input checked="" type="checkbox"/> 26-35 | <input checked="" type="checkbox"/> 36-45 | <input checked="" type="checkbox"/> 46-55 |
| <input checked="" type="checkbox"/> 56-65 | <input checked="" type="checkbox"/> Over 65 | | |

And finally for this section - please select your gender:

- | | |
|---------------------------------|-------------------------------|
| <input type="checkbox"/> Female | <input type="checkbox"/> Male |
|---------------------------------|-------------------------------|

Appendix G:

Part 2 of the online questionnaire.

Self-Directed Learning Readiness Scale (Fisher, Tague & King, 2001)

The following is a bank of items perceived to reflect the attributes, skills and motivational factors required of self-directed learners. Self-directed learners are defined in terms of the amount of responsibility the learner accepts for their learning, with readiness for learning being present in all individuals to some extent (Fisher, Tague & King, 2001). This scale has been adapted the purposes of this study by the researcher.

Please evaluate each item regarding the degree to which the item measures a characteristic of yourself as a self-directed learner. Consider the items in relation to **how you approach your learning**, as opposed to how you would rate yourself in your day to day occupational therapy work.

Circle **1** if you “strongly disagree” that the item measures a characteristic of yourself

2 if you “disagree” that the item measures a characteristic of yourself

3 if you are “unsure” if the item measures a characteristic of yourself

4 if you “agree” that the item measures a characteristic of yourself

5 if you “strongly agree” that the item measures a characteristic of yourself

(SD = strongly disagree, D = disagree, U = unsure, A = agree, SA = strongly agree)

ITEM	SD	D	U	A	SA
1. I solve problems using a plan	1	2	3	4	5
2. I prioritise my learning needs	1	2	3	4	5
3. I do not manage my time well	1	2	3	4	5
4. I have good skills for managing my learning	1	2	3	4	5
5. I set strict time frames for achieving my learning	1	2	3	4	5
6. I prefer to plan my own learning	1	2	3	4	5
7. I am systematic in my learning	1	2	3	4	5
8. I am able to focus on a problem	1	2	3	4	5
9. I need to know why	1	2	3	4	5
10. I critically evaluate new ideas	1	2	3	4	5
11. I prefer to set my own learning goals	1	2	3	4	5
12. I learn from my mistakes	1	2	3	4	5
13. I am open to new ideas	1	2	3	4	5

ITEM	SD	D	U	A	SA
14. When presented with a problem I cannot resolve, I will ask for assistance	1	2	3	4	5
15. I am responsible	1	2	3	4	5
16. I like to evaluate what I do	1	2	3	4	5
17. I have high personal expectations	1	2	3	4	5
18. I have high personal standards	1	2	3	4	5
19. I have high beliefs in my abilities	1	2	3	4	5
20. I am aware of my own limitations	1	2	3	4	5
21. I am confident in my ability to search out information	1	2	3	4	5
22. I do not enjoy studying	1	2	3	4	5
23. I have a need to learn	1	2	3	4	5
24. I enjoy a challenge	1	2	3	4	5
25. I want to learn new information	1	2	3	4	5
26. I enjoy learning new information	1	2	3	4	5
27. I set specific times for my learning	1	2	3	4	5
28. I am self disciplined	1	2	3	4	5
29. I like to gather the facts before I make a decision	1	2	3	4	5
30. I am disorganised	1	2	3	4	5
31. I am logical	1	2	3	4	5
32. I am methodical	1	2	3	4	5
33. I evaluate my own performance	1	2	3	4	5
34. I prefer to set my own criteria on which to evaluate my performance	1	2	3	4	5
35. I am responsible for my own decisions/actions	1	2	3	4	5
36. I can be trusted to pursue my own learning	1	2	3	4	5
37. I can find out information for myself	1	2	3	4	5
38. I like to make decisions for myself	1	2	3	4	5
39. I prefer to set my own goals	1	2	3	4	5
40. I am not in control of my life	1	2	3	4	5
41. I often review the way occupational therapy practice is conducted	1	2	3	4	5
42. I need to be in control of what I learn	1	2	3	4	5

Appendix H:

Information and consent form for Phase 2 of the study

Reference Number: 10/045

18 September 2011

Occupational therapists self-directed learning – Stage 2

INFORMATION SHEET FOR PARTICIPANTS

Thank you for showing an ongoing interest in this project. Please read this information sheet carefully before deciding whether or not to participate. If you decide to participate we thank you. If you decide not to take part there will be no disadvantage to you of any kind and we thank you for considering our request.

What is the Aim of the Project?

The Occupational Therapy Board of New Zealand (OTBNZ) implemented a process in 2005 for demonstrating our ongoing competence to practice. Although not defined as such by the OTBNZ, the process we use is actually one of self-directed learning.

The aim of this study is to better understand how occupational therapists manage the self-directed process mandated by the OTBNZ, in particular how we go about it and what influences our ability to manage the processes to ensure our ongoing competence. This research is being undertaken as part of requirements for the Doctor of Education research programme. This research is being undertaken by Merrolee Penman, NZROT under the supervision of Professor Kwok-Wing Lai as supervisor.

What Type of Participants are being sought?

You have been invited to be part of this second stage of the research because you have completed the self-directed learning questionnaire. In this second stage, we are seeking participants who have rated themselves as highly self-directed, moderately self-directed, or who may believe they are not very self-directed. Your demographic information such as gender, ethnicity, and experience as a supervisor or geographical location may also have contributed to your selection. We are aiming to have a diverse group in this stage to make sure we gain a range of viewpoints about how occupational therapists manage the process of self-directed learning.

What will Participants be Asked to Do?

In Stage 2, you will give permission to the OTBNZ to provide Merrolee Penman with a summary of your online portfolio in a word document. You can decide whether this summary will be from all seven competencies or just some. The summary will include all current and archived self-assessments, objectives, activities, and critical reflections for the period 2005 – 2011 (depending on when you first applied for your APC).

You will also be asked to take part in a semi-structured interview which will be approximately 1 – 1½ hours in length. A second interview may be arranged if additional information is required. You may choose to share additional information from your online portfolio with Merrolee during this interview(s).

It is not anticipated that you should find the interview(s) harmful or stressful; rather the results of the self-directed learning questionnaire and participating in the interview may give you further insight into how you manage your own learning. However, you must be aware that if in reviewing your online portfolio summary that there is reason to believe that you are practising unsafely i.e., that your practice poses risk of harm for the client/consumer, then Merrolee Penman will raise the issue and determine the possible course(s) of action with her supervisor Dr Kwok-Wing Lai. Please be aware that you can decide not to take part in the second stage of this research project without any disadvantage to yourself of any kind.

Can Participants Change their Mind and Withdraw from the Project?

You may withdraw from participating in the project at any point without any disadvantage to yourself of any kind.

What Data or Information will be Collected and What Use will be Made of it?

Data from your online portfolio summary will be provided by the OTBNZ in a word document for analysis. The OTBNZ will only provide the data for the competencies you select on the consent form. Merrolee will forward your consent form to a nominated administrator at the OTBNZ. This person will sign a declaration that information about who has volunteered for this stage of the project will remain confidential to that person only and will not be made available to any OTBNZ Board Members, OTBNZ Auditors, other OTBNZ staff or any other practitioners.

The online portfolio summary will be compiled by this administrator at OTBNZ. You can also choose to request a copy of this summary be sent to yourself by the OTBNZ. If there is any data you do not want used, you can ask Merrolee Penman to delete this from her copy of the summary. I will provide written confirmation that I have done this.

All identifying data will be removed from this summary and replaced with research codes. This data will be used to provide information about your self-assessments, the types of goals set, the activities you choose, and the learning you have gained from the process. This information will be used, along with the information from the self-directed learning questionnaire to develop the questions for your interview(s).

Depending on your location and timing, the interview(s) will be carried out by phone or face to face. The questions to be asked will be forwarded to you before the interview to allow you time to consider your answers. This project involves an open-questioning technique. The general line of questioning includes questions about your self-assessment, for example, what did you base this on, your goals and activities, for example, how do you develop the goals you did and why did you choose the activities you did, and your reflections, for example, was this a meaningful learning experience for you or not and why? The precise nature of the questions which will be asked have not been determined

in advance, but will depend in part on the analysis of your self-directed learning scale, information in your online portfolio, and on the way in which the interview develops. Consequently, although the University of Otago Human Ethics Committee is aware of the general areas to be explored in the interview, the Committee has not been able to review the precise questions to be used.

In the event that the line of questioning does develop in such a way that you feel hesitant or uncomfortable you are reminded of your right to decline to answer any particular question(s) and also that you may withdraw from the project up until the point that the data has been collated across participants, without any disadvantage to yourself of any kind.

Each interview will be recorded using a digital recorder and transcribed with identifying data removed and replaced with research codes. Any notes made during the interview will have all identifying data removed and replaced with a research code. Interviews will be transcribed, with any professional transcribers asked to sign a confidentiality form.

Data collected will be stored in a locked steel filing cabinet in the student researcher's workplace. Any external hard-drives or USB or other portable devices used to store electronic data will be password protected and when not in use stored in the locked steel filing cabinet. Only Merrolee Penman and her supervisor(s) will have access to the data collected.

The results of the project may be published and will be available in the University of Otago Library (Dunedin, New Zealand) but every attempt will be made to preserve your anonymity. The results of the project may also be presented at national and international professional conferences. You will be informed of when the presentations will occur.

You are most welcome to request a copy of the summary of the results of the project should you wish.

At the end of the project any personal information will be destroyed immediately except that, as required by the University's research policy, any raw data on which the results of the project depend will be retained in secure storage for five years, after which it will be destroyed.

Reasonable precautions will be taken to protect and destroy data gathered by email. However, the security of electronically transmitted information cannot be guaranteed. Caution is advised in the electronic transmission of sensitive material.

What if Participants have any Questions?

If you have any questions about our project, either now or in the future, please feel free to contact either:-

Merrolee Penman

School of Occupational Therapy

Otago Polytechnic

Telephone Number: 03 479 6043

Email: penme583@student.otago.ac.nz

or Professor Kwok-Wing Lai

University of Otago College of Education

Telephone Number: 03 479 8806

Email: wing.lai@otago.ac.nz

This study has been approved by the University of Otago Human Ethics Committee. If you have any concerns about the ethical conduct of the research you may contact the Committee through the Human Ethics Committee Administrator (ph 03 479 8256). Any issues you raise will be treated in confidence and investigated and you will be informed of the outcome.



20 September 2010

Occupational therapists' self-directed learning

CONSENT FORM FOR

PARTICIPANTS

I have read the Information Sheet concerning this project and understand what it is about. All my questions have been answered to my satisfaction. I understand that I am free to request further information at any stage.

I know that:-

1. My participation in the project is entirely voluntary;
2. I am free to withdraw from the project at any time up without any disadvantage;
3. Personal identifying information on digital audio files will be destroyed at the conclusion of the project but any raw data on which the results of the project depend will be retained in secure storage for five years, after which they will be destroyed;
4. This project involves me giving consent for the OTBNZ to compile a summary document of my online portfolio. This document will include all 7 competencies (unless I stipulate otherwise below). It will include all current and archived self-assessments, objectives, activities and critical reflections from 2005 – 2011 (or from the year I first applied for an APC).
5. This project involves an open-questioning technique for the interview(s). The general line of questioning includes questions about my self-assessment, for example, what did I base this assessment on, my goals and activities, for example, how did I develop the goals I did and why did I choose the activities I did, and my reflections for example, was this a meaningful learning experience for me, or not, and why? I understand that although the precise nature of the questions which will be asked have not been determined in advance, that I will be given an idea of the questions before the interview to help me prepare for the interview. I know that the questions asked will depend in part on the analysis of my self-directed learning scale, information from my online portfolio, and on the way in which the interview develops.

In the event that the line of questioning develops in such a way that I feel hesitant or uncomfortable I may decline to answer any particular question(s) and/or may withdraw from the project without any disadvantage of any kind.

6. If Merrolee Penman, in reviewing the summary document believes that there may be reason to believe that I am practising unsafely, then the issue and possible courses of action will be raised by Merrolee with her supervisor.
7. I will be able to check any direct quotes made by myself that are included in the final publication. If I believe these quotes will identify me, then I will have the right to edit or ask for them to be removed.

8. In acknowledgement of the time I will commit to this study, Merrolee Penman will be offering all volunteers a maximum of two one-hour individual professional development sessions which I can use to increase my knowledge of the self-directed learning process. I understand that these will be timed to occur after the study has been collected and may be face to face or via other electronic mediums.
9. The results of the project may be published and will be available in the University of Otago Library (Dunedin, New Zealand) but every attempt will be made to preserve my anonymity. I will be informed of any presentations that may occur.

I agree to take part in this project.

- I agree for the OTBNZ to provide Merrolee Penman a summary document of all seven competencies in my online portfolio

OR

I agree for the OTBNZ to provide Merrolee Penman with a summary document including only those competencies ticked below:

- Competency 1: Implementation of occupational therapy
- Competency 2: Safe, ethical, legal practice
- Competency 3: Culturally safe practice
- Competency 4: Communication
- Competency 5: Management of self and people
- Competency 6: Management of environment and resource
- Competency 7: Continuing professional development

.....

(Signature of participant)

.....

(Date)



This study has been approved by the University of Otago Human Ethics Committee. If you have any concerns about the ethical conduct of the research you may contact the Committee through the Human Ethics Committee Administrator (ph 03 479 8256). Any issues you raise will be treated in confidence and investigated and you will be informed of the outcome.

Appendix I:

Interview template used for guided interview. Questions in italics are those tailored specifically for this participant.

Interview Template

Question 1:

Think back over the last year; tell me about something that you needed to learn for your work as an OT and how you went about learning it?

How did your learning change your practice?

OR How do you manage the learning – if you were starting with the process of learning something new – what would you do?

Let's talk about the CCFR

Question 2

I'm interested in the processes you use for self-assessment? When you complete this part of the CCFR what are you thinking about – or what are you drawing on? What data do you use to determine what areas you think you are competent in, and those that you need to continue to focus on?

Do you work on your CCFR on your own – or with anyone else? What process do you use to 'frame' the self assessments – what do you think about as you are writing them?

I note that you don't always update these yearly – is there any reason for this? (e.g., Implementation of Occupational Therapy Self-Assessment the same for years 2005 through to 2008)

Implementation of OT – self-assessment focuses on research skills/knowledge – why is this? Why didn't you frame your self-assessment around the knowledge of COPM for your research project which would have fitted the implementation of OT category?

Question 3

When you write your objectives – what are you thinking about? Does this thinking help you determine the activities you will do? How do you connect between your self-assessments and your objectives?

Your objectives seem to stay on the same focus – e.g., Treaty of Waitangi for the competency Culturally Safe Practice, review of HPCA for the competency of Management of Self and People. Why is this? Do you find them easy/difficult to write? I notice that your objectives are often rolled from year to year without changing – why is this?

Question 4

What kinds of learning opportunities do you look for – what are good learning experiences for you? Do you have any specific criteria you apply when determining whether or not to engage in a planned learning experience?

You have very few activities identified? Why is this? Of the activities you do have identified, many are either discussion based or attend courses/workshops? Why is this do you think?

Question 5

The last section is self-reflection. How do you go about writing these? What are you thinking about when you fill this section in?

I see you often use your self-reflections to inform your self-assessments – is this deliberate – do you find it helpful? Your reflections often show what you have learned – do you ever reflect on the process of learning that you have engaged in? Why, why not?

Other questions:

1. *As your self-assessments/objectives stretch over a number of years often without alteration – would you say that you have learnt something in these areas through experiential or incidental learning that isn't reflected in the CCFR?*
2. Do you think about how it is you learn when you think about organising learning for yourself? If yes – what do you know about yourself? If no, do you know why you haven't spent much time thinking about your learning?
3. How do you know you have learned something? How do you define learning? What are your thoughts about learning and demonstrating competence?
4. Do you value the learning that has been planned or the learning that is more serendipitous? – is one more valuable than the other – or is there different learning from each?
5. What keeps you motivated to achieve an objective you have set in the CCFR
6. Is there a strong motivation to keep track of your CCFR – why /why not?

Appendix J:

Geographical location classification

Statistics New Zealand (n.d.) published an experimental classification designed to classify urban and rural areas. Rural areas are defined by the distance from and the need to travel to an urban area for employment.

Urban areas	Rural areas
<p>Main urban area</p> <ul style="list-style-type: none"> represent the most urbanised areas in New Zealand very large and centred on a city or main urban centre minimum population of 30,000 	<p>Rural area with high urban influence</p> <ul style="list-style-type: none"> a significant proportion of the resident employed population work in a main urban area
<p>Satellite urban community</p> <ul style="list-style-type: none"> 20% or more of the usually resident employed populations' workplace address is in a main urban area 	<p>Rural area with moderate urban influence</p> <ul style="list-style-type: none"> a significant, but not exclusively, main urban area influence large percentage of the resident employed population work in a minor or secondary urban area or a significant percentage work in a main urban area
<p>Independent urban community</p> <ul style="list-style-type: none"> less than 20% of the usually resident employed population's workplace address is in a main urban area 	<p>Rural area with low urban influence</p> <ul style="list-style-type: none"> rural area with a strong rural focus majority of the population works in a rural area with the remainder employed in a minor urban area
	<p>Highly rural/remote area</p> <ul style="list-style-type: none"> minimal dependence on urban areas in terms of employment, <p>or,</p> <ul style="list-style-type: none"> has a very small employed population

Appendix K:

Total variance in the SDLRS-A explained by the 12 components with eigenvalues greater than 1 using Principal Components Analysis.

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	8.760	20.858	20.858	8.760	20.858	20.858
2	3.523	8.387	29.245	3.523	8.387	29.245
3	2.217	5.277	34.522	2.217	5.277	34.522
4	2.045	4.869	39.391	2.045	4.869	39.391
5	1.681	4.003	43.394	1.681	4.003	43.394
6	1.635	3.893	47.287	1.635	3.893	47.287
7	1.454	3.461	50.748	1.454	3.461	50.748
8	1.383	3.292	54.040	1.383	3.292	54.040
9	1.254	2.985	57.025	1.254	2.985	57.025
10	1.236	2.942	59.967	1.236	2.942	59.967
11	1.142	2.719	62.686	1.142	2.719	62.686
12	1.119	2.665	65.351	1.119	2.665	65.351
13	.971	2.312	67.663			
14	.924	2.199	69.862			
15	.876	2.086	71.948			
16	.840	2.000	73.948			
17	.824	1.963	75.911			
18	.773	1.840	77.750			
19	.683	1.626	79.376			
20	.678	1.613	80.989			
21	.604	1.438	82.427			
22	.576	1.372	83.799			
23	.567	1.350	85.149			
24	.516	1.229	86.378			
25	.505	1.203	87.581			
26	.472	1.125	88.706			
27	.456	1.086	89.792			
28	.435	1.036	90.828			
29	.402	.956	91.785			
30	.383	.912	92.697			
31	.367	.874	93.570			
32	.332	.791	94.362			
33	.313	.745	95.106			
34	.302	.720	95.826			
35	.292	.695	96.521			
36	.287	.683	97.204			

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
37	.256	.610	97.814			
38	.240	.572	98.387			
39	.212	.505	98.892			
40	.194	.462	99.354			
41	.153	.363	99.718			
42	.119	.282	100.000			

Extraction Method: Principal Component Analysis.

Appendix L:

Weightings of each item of the SDLRS-A on the first four components using a varimax rotation

	Component			
	1	2	3	4
28.	.748			
7	.725			
32	.697			
30	.645			
4	.602			
5	.595			
3	.557			
1	.551			
31	.521			
2	.446			
27	.445		.436	
19	.402			
8	.393			
10	.361			
29				
40				
11		.774		
39		.751		
34		.706		
6		.587	.303	
38		.581		
42		.538		
35		.420		.409
33		.419		
41		.356		
26			.697	
23			.686	
25			.668	
37			.608	
21			.516	
22			.504	
24			.441	.326
36	.414	.308	.441	
9			.401	
15				.603
17				.573
18				.553
14				.517
12				.491
16				.484
20				.443
13				.440

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 7 iterations.

Appendix M:

SDLRS-A Subtest items

Self-Management	Self - Control	Desire for Learning	Expectation of Self
1. I solve problems using a plan	6. I prefer to plan my own learning	9. I need to know why	12. I learn from my mistakes
2. I prioritise my learning needs	11. I prefer to set my own learning goals	21. I am confident in my ability to search out information	13. I am open to new ideas
3. I do not manage my time well	33. I evaluate my own performance	22. I do not enjoy studying	14. When presented with a problem I cannot resolve I will ask for assistance
4. I have good skills for managing my learning	34. I prefer to set my own criteria on which to evaluate my performance	23. I have a need to learn	15. I am responsible
5. I set strict timeframes for managing my learning	35. I am responsible for my own decisions/actions	24. I enjoy a challenge	16. I like to evaluate what I do
7. I am systematic in my learning	38. I like to make decisions for myself	25. I want to learn new information	17. I have high personal expectations
8. I am able to focus on a problem	39. I prefer to set my own goals	26. I enjoy learning new information	18. I have high personal standards
10. I critically evaluate new ideas	41. I often review the way occupational therapy practice is conducted	37. I can find information out for myself	20. I am aware of my own limitations
19. I have high beliefs in my abilities	42. I need to be in control of what I learn		
27. I set specific times for my learning			
28. I am self-disciplined			
30. I am disorganised			
31. I am logical			
32. I am methodical			
36. I can be trusted to pursue my own learning			

