Re-Thinking Assessment:
A Dynamic Approach to Assessment for Practitioners
Working in Education

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Abstract

Understanding learners, determining *how* they learn, *what* hinders their learning, and *how* to bring about change are critical aspects of practitioners' assessments when supporting young people who access learning support. Practitioners working for the Ministry of Education continually evaluate current and new assessment approaches to improve their ability to understand and effect change for learners. This research introduced a group of practitioners to a structured dynamic approach to assessment, using the RE*Think* framework through a professional learning and development workshop. Such an approach to assessment is principled, ethically responsible and culturally responsive, and one that enables practitioners to investigate change in a young person's learning in context.

The methodology of this research takes a socio-constructivist approach, grounded in qualitative inquiry. The theoretical and analytical framework of cultural-historical activity theory (CHAT) was used for its responsiveness to the multi-dimensional and situatedness of the research activity, for exploring individual practices of assessment and investigating the challenge of changing or adapting assessment practice. The results foreground the essence of change within and across practitioners' assessment practices and the systems within which they work. It highlights how a dynamic approach to assessment has the potential to build educator capability, manipulate the activity through analysis, develop a young person's cognitive and metacognitive skills using games, and increase practitioner knowledge of the cognitive and metacognitive skills embedded within the key competencies of the *New Zealand Curriculum*. This research points to the importance of developing practitioners' assessment literacy to enable them to make informed decisions about their assessment practice, to move beyond given and 'typical' assessment tools, and afford them the opportunity to grow their competence and confidence to advocate for alternative options.

This study concludes that a dynamic approach to assessment is an alternative or complementary approach, and has the potential to be transformative for practitioners, educators, and young people in Aotearoa New Zealand.

Acknowledgements

Over the past five years, this thesis has been my personal Mt Everest and, like all great expeditions, completion has only been made possible by the unstinting encouragement and assistance of many…

I have been honoured to have as Guides my Supervisors, Associate Professor Mandia Mentis and Professor Roseanna Bourke, who mapped this journey with me from the beginning, walked alongside me, and whose mediation scaffolded my learning through many challenges. They opened new horizons for me to explore and, although this thesis is written, showed me there is always another mountain out there.

I am grateful to my colleagues who want to know more about this study - ours is truly a relationship of ako; Therese, for her valued cultural supervision, dynamic conversations, and guidance in tikanga Māori; and Branka - my study buddy - who consistently shows interest in my work. I am humbled by educators like Carolyn, who initially set me on this path with her "*so what?*" questioning of assessments, and my research participants who generously shared their insights and enthusiasms for this project.

My life has been enriched by extraordinary people. They have contributed to my love of learning: as a young student, Professor Annette Combrink paved the way for a lifetime of study; Professor Louis Falik and Dr Lea Yosef's mediation of Feuerstein's *LPAD* (*Learning Propensity Assessment Device*) during training was inspirational; and, since I first met her 20 years ago, Mandia Mentis has continued to stimulate my "thinking" with her knowledge and commitment to the practice of dynamic assessment. Her teaching reminds me that:

> *We pass through this life but once. Few tragedies can be more extensive than the stunting of life, few injustices deeper than the denial of an opportunity to strive or even to hope, by a limit imposed from without, but falsely identified as lying within* (Gould, 1996, pp. 60–61).

So I am privileged beyond measure to have had the love and support of my parents: my father, Brian, who believed in education, and my mother, Wilma, who believed in me. Despite that IQ score which predicted I would possibly struggle to finish school, her naturally brilliant mediation gave me the courage to live fully, and the skills to follow my dreams.

A special "thank you" to my tolerant Support Crew: Paul, Louise, and my (heart) family. They have alternated between sounding excited that I have "almost finished" writing my "book", to looking bemused when I haven't. Each one – Megiti, Alfred and Russell, Tanya and Graham, James and Jannelle, Lisa, and all the grandchildren - has remained understanding when I have been out of touch, and disappeared to study over years of weekends.

And finally, I owe an enormous debt of gratitude to my husband, Stan. You have watched over me, supported my studies over many years with endless cups of tea, and I know you are wondering when it's all going to end. Well, Stan, now it has, and with the New Year comes New Beginnings. Now is *our* time to sit in the evenings, and plan climbing our next mountain, together.

Ehara taku toa i te toa takitahi, ēngari taku toa he toa takatini.
Success is not the work of one, but the work of many.

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Glossary of Terms

ako   The concept of ako means both to teach and to learn. ([LINK](#))

He Pikorua   The practice framework that guides Ministry of Education practitioners and support staff within the Learning Support Delivery Model ([LINK](#))

Ka Hikitia   The Māori Education Strategy. ([LINK](#))

Kaitakawaenga   Māori Liaison Advisor ([LINK](#))

korurangi   Korurangi is used in this study as an adapted version of a sociogram with whānau as support systems. ([LINK](#))

mediation   A term used by Feuerstein to describe the teaching-learning process where the mediator (teacher/parent) deliberately interprets the environment for the learner

mokopuna   Grandchild or descendent

taonga   Treasure - prized, resources, ideas, techniques

Te Ao Māori   The Māori world ([LINK](#))

Tuakana-teina   A buddy system where a more expert tuakana (brother, sister or cousin) helps and guides a younger or less expert teina ([LINK](#))

whānau   An extended family or community of related families who live together in the same area

Chapter 1

Introduction

In a world that is ever-changing, Sternberg (2020) writes: "Real life today requires students to develop adaptive intelligence that enables them to tackle messy problems with unclear solutions" (p. 37). As young people now require skills for future positions in the workforce and careers that do not yet exist, educators grapple with knowing *how* best to teach the 21st-century skills needed to make young people "future-fit" (OECD, 2020, p. 11). This foregrounds the tensions between the content of learning, and *how* young people learn. Teaching to a curriculum is no longer sufficient. Knowing *how* to teach young people how to learn has become an imperative. The role of practitioners who support young people and educators in the education system, therefore, needs to change and this includes the process of assessment. This thesis explores an assessment process that is complementary to existing assessments, and that has the potential to meet such needs of educators and young people. This is a dynamic approach to assessment: a fluid and interactive process to bring about change for learners and educators that is collaboratively negotiated (Feuerstein et al., 2015; Haywood & Lidz, 2007; Murphy & Maree, 2006).

While the *need* to change, the *challenge* to change, and the *freedom* to change is critical for educational change and reform, this thesis recognises organisational constraints, acknowledges individual apprehension of change, but also celebrates the opportunities presented by change for young people, educators, and practitioners. This thesis documents the journey when practitioners, working with young people in the Aotearoa New Zealand education system, were introduced to a dynamic approach to assessment using a framework called RE*Think* as an alternative and/or complementary approach to assessment. The RE*Think* approach provided a different way to assess that could be used in addition to, and in support of, other assessment tools as one part of the assessment puzzle. This study analysed the perceptions and learning of 16 participants who work for the Ministry of Education, their experiences, and challenges of change.

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Rationale for the Study

This research was motivated by my current position as a psychologist working in a government education organisation. My role includes ongoing assessment of children and young people, using an evidence-based and collaborative approach to work with other practitioners in assessment. As a psychologist, I contribute specific knowledge in child development, learning, motivation, and assessment. This requires "[undertaking] specialist assessments integrating theory and current best practice to develop direct therapeutic interventions, to contribute to collaborative multidisciplinary interventions and learning programmes, to make resourcing recommendations and to develop and provide training for teachers and parents" (Ministry of Education, 2011b).

Assessment is integral to this role. Within the Ministry of Education (2011a), the principles incorporated within the "Position Paper: Assessment (Analysis and Reporting) in Special Education" (2011a) [hereafter referred to as the "Position Paper"] is that assessment "should be:

- culturally appropriate and take into account the language background of the child;
- planned, purposeful, systematic, useful, ecological and collaborative;
- undertaken across key settings, including observations and information from parents, educators and the child or young person's functioning across curriculum areas;
- presented from a strengths-based perspective; and
- as unobtrusive as possible" (p. 3).

As shown in Figure 1.1 below, assessment progresses "as a sequence of progressive filters" (Ministry of Education, 2011a, p. 3), with Level 1 seen as the least intrusive approach, and Level 3 as the most intrusive. Although the Ministry's *principles* of assessment align with my philosophy of practice, tensions emerge when I use assessments related to my profession as a psychologist that challenge my practice ethically, and do not fully provide answers to referral questions.

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Figure 1.1

The Progressive Assessment Filter (Ministry of Education, 2011a, p. 3)
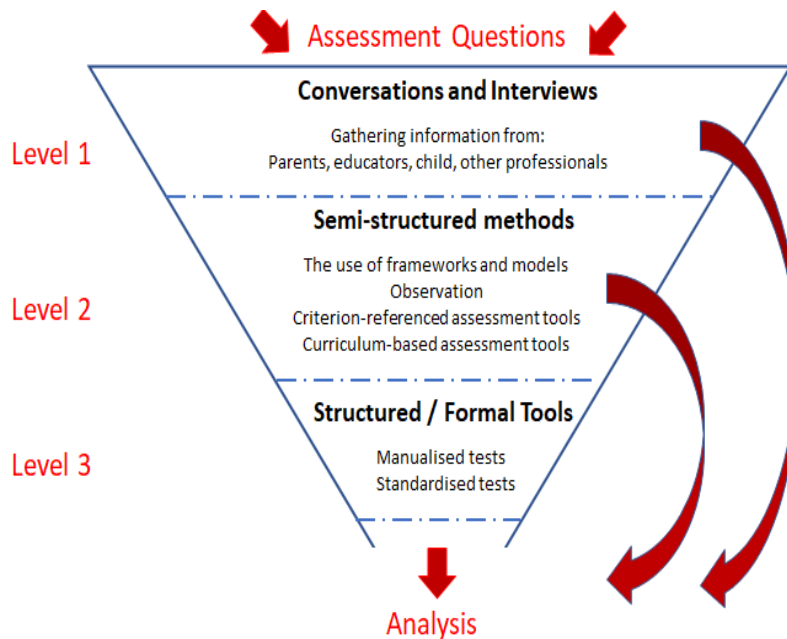
Standardised tests produce scores that are either criterion-referenced or normative to: rank cognitive abilities relative to peers at a particular point in time; largely tell an educator *what* a learner knows; detail how well young people respond within a controlled environment; reveal patterns of strength and weakness; and offer results that can inform recommendations for intervention (Kaufman et al., 2016). However, while such results guide *what* intervention is required, they do not fully answer *how* to intervene or teach young people – the question most frequently asked by educators, family and whānau. The, at times, rigidity of protocols in a one-to-one setting does not reflect the cognitive and metacognitive demands of a classroom in the real world, and scores may be harmful when they underestimate a young person's skills and abilities. Causation effects, as distinct from correlation, are difficult to determine especially in situations where anxiety and a fear of failure impact on learner performance. Indeed, psychometric testing "has been criticized for reinforcing pre-established pessimism, for not going beyond a mere labelling of dysfunctions, for lack of giving proper advice as how to change the child's learning, for not doing justice to the child's potential" (Cotrus & Stanciu, 2014, pp. 2616–2617).

Within education, therefore, the focus of assessment has seen a shift from the predominantly positivist paradigm of standardised assessments, to assessment processes that increasingly foreground partnerships in assessment with learners that are dialogic and ecological (Bourke & Dharan, 2015; Bourke & Mentis, 2014; Guerin, 2015). Based on observation of the learning-teaching interaction, conversation and learner self-report, assessments within the socio-constructivist paradigm view development as socially situated and knowledge as co-constructed with others, be it with an educator, family and whānau. Assessments typically include narrative assessment and functional behaviour assessment (FBA). While it is acknowledged that these assessments address some of the questions regarding the environmental factors that impact on a young person's learning, and that standardised assessments contribute to an understanding of *what* a learner knows, the *why* and *how* questions of learning remain.

In searching for answers, my first response was to reflect on my own practice and why I was not obtaining the outcomes I believed were needed to bring about change for young people. Not finding the answers in my existing kete [basket, collection] of assessments, I became an accredited assessor in dynamic assessment using *The Dynamic Assessment of Cognitive Modifiability Learning Propensity Assessment Device* (*LPAD*) (Feuerstein et al., 2015). This training not only transformed my practice but inspired this research. Dynamic assessment is much more than a tool for assessment – it is "an alternative way of thinking about assessment" (Cotrus & Stanciu, 2014, p. 2616) – and this discovery demanded considerable re-thinking of my own assessment practices.

There is no single definition of dynamic assessment. Instead, it is used as an umbrella term for assessment that (a) has as core the belief in young people's potential to change and learn; (b) studies learning processes, intervening and observing the learner's response to intervention; (c) recognises motivation and affect in the assessment process; and (d) acknowledges the role environment and culture play in cognitive development and assessment (e.g. Feuerstein et al., 2015; Haywood, 2012; Haywood & Lidz, 2007; Mentis et al., 2008; Murphy, 2007).

Appreciating the value of this approach for young people, educators, family and whānau, one of the aims of this research became making a dynamic approach to assessment accessible for those practitioners who understand that standardised assessments have their place on the continuum of assessment paradigms, but who are searching for that "missing piece" in their practice and from their repertoire of assessments.

This research investigates the existing range of practitioners' assessment practices, and what their assessments "can tell us about" (Schneider & Flanagan, 2015, p. 335) the young people referred for support. This research further aims to determine whether practitioners can perceive the value of a dynamic approach for assessment and bring about change in their practice.

Background to this Research

A study of assessment begins with considering Alfred Binet's story, given it captures a microcosm of the history of psychoeducational assessment and foreshadows the tensions evident in the ensuing shifting paradigms of assessing cognition and understanding learning. Approached by the Minister of Public Education in France to identify children in primary school who required the support of Special Education, Binet devised a test to assess higher cognitive abilities. Critiqued as a "hodge-podge of diverse tasks related to everyday problems of life" (Gould, 1996, p. 386), this test aimed to abstract a single score to identify learning potential and a young person's mental age. However, Binet ultimately found that a single score could not represent the complexity or diversity of intelligence and, viewing intelligence as malleable rather than a fixed or stable entity, he couldn't hierarchically rank young people according to perceived ability: "Intelligence is not a unique, indivisible function, a particular essence, but it's made up of the cooperation among all the minimal functions of discrimination, observation, retention, etc., whose plasticity and extensibility have been verified" (Binet, 1909/1973, as cited in Esping & Plucker, 2015, p. 159). Therefore, recognising the limitations of quantitative measures of intelligence, Binet asserted the value of his tests lay in the *qualitative* information gained that could intentionally be used to

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support young people's learning. Nonetheless, Binet's tests continued to be used as a *quantitative* measure of intelligence, which contradicted his original intent.

These concerns have echoed through the passing decades, leading Gould (1996) to describe the distortion of Binet's efforts as "one of the great tragedies of twentieth-century science" (p. 386). Four key issues and unintended consequences arose: (a) intelligence was reduced to a single score (Spearman's g - general intelligence), and the individual was lost in factor analysis: "a statistical solution for a psychological problem" (Jones & Thissen, 2007, p. 15); (b) intelligence was deemed to have a hereditary and biological basis of fixed abilities, and seen to be static and permanent; (c) a single score was open to abuse and misuse in the educational sector, as seen in the practices of streaming students; and (d) the score became a self-fulfilling prophecy, where low educator expectation led to stunted student learning – a phenomenon now commonly known as the Pygmalion Effect (Rosenthal & Jacobsen, 1968; Szumski & Karwowski, 2019).

Two main paradigms of psychological assessment have since developed: the quantitative and qualitative paradigms. Embedded within the quantitative paradigm, theorists such as Spearman, Thurstone, Thorndike, Cattell, Horn and Carroll developed a structural theory of cognitive abilities which, as a static entity, can be measured using psychometrics (Kaufman et al., 2016). From this perspective, learning is dependent on an already existing level of cognitive development, and the development of cognition occurs without external influence (Cole et al, 1978; Kozulin, 2013). Within the qualitative paradigm, theorists – such as Bronfenbrenner, Piaget, Feuerstein, Luria and Vygotsky – view the development of cognition as a process dependent on development, education and the meaningful, social interaction with others, situated within a socio-cultural and historical context (Cole et al., 1978; Kozulin, 2013).

Over the years, tensions between the two paradigms have resulted in robust disagreements regarding the construct of "intelligence" and assessment of cognitive abilities. Most recently, traditional and standardised tests of cognition are closely aligned with the Cattell-Horn-Carroll (CHC) framework of intelligence, which has become the theoretical basis for almost all standardised IQ tests, including the *Wechsler*

Intelligence Scale for Children (WISC). However, from the halls of the *WISC* developers, Susan Raiford (as cited in Kaufman, et al., 2016) is quoted as saying it is no longer acceptable to provide only scores from assessment. The increasing dissatisfaction with the practice of psychologists using standardised assessments to 'test and place' young people is now seen as largely irrelevant when identifying and supporting those who require learning support (McCloskey et al., 2012; Reschly & Ysseldyke, 2002). Schneider & Flanagan (2015) argue that "the individual, not the theory, is the bottom line: Although classifying tests can be fun, it is a stale enterprise when it becomes an end in itself ... What matters is what each test can tell us about individuals" (p. 335).

Therefore, there is increasing recognition that theories which are more functional in nature should contribute to a measure of intelligence that is most clinically and educationally useful. Sternberg (2020) suggests that while general intelligence tests measure an individual's "knowledge base, memory and abstract-analytical skills" (p. 40), these have little long-term relevance for young people or their teachers as they do not transfer well into the real world. As Wechsler (1939) cautioned:

> the kind of life one lives is itself a pretty good test of a person's intelligence. When a life history (assuring it to be accurate) is in disagreement with the "psychometric", it is well to pause before attempting a classification on the basis of tests alone. Generally, it will be found that the former is a more reliable criterion of the individual's intelligence (cited in Kaufman et al., 2016, p. 6).

Therefore, how *well* individuals function in society is relevant: the ability to change, learn, adapt and respond to changing demands in life situations (Feuerstein et al., 2015; Sternberg, 2020). This ability is contingent on many variables, including cognitive abilities, learning history, attitudes, motives, work habits, use of strategies (Feuerstein et al., 2015) and processes, such as "working memory, attention and executive functions" (Kaufman et al., 2016, p. 13).

And individuals are at the heart of practice for a considerable number of practitioners, being psychologists, special education advisors (SEA), speech-language therapists (SLT) and resource teachers: learning and behaviour (RTLB), who work for the Ministry of Education and Learning Support.

Time for New Approaches

Despite the diversity of application and used more widely in the United Kingdom than in New Zealand, dynamic assessment has not been embraced by practitioners as expected (Beckmann, 2014; Elliott et al., 2018; Stringer, 2018). Therefore, further research on the use of dynamic assessment in practice should be explored (such as the research done by Stacey, 2016), including its relevance for the Early Years (Hussain, 2017). Despite the considerable body of literature and research on dynamic assessment completed internationally by researchers such as Deutsch (2017), Feuerstein et al. (2010), Haywood and Lidz (2007), Kozulin (2013), Mentis et al. (2008), Murphy (2007) and Tzuriel (2000), comparatively few studies (Bisschoff, 2019; Hodges, 2013; Howie, 2011, 2020) have been undertaken in New Zealand given this form of assessment has not been foregrounded.

Although there is increasing interest in dynamic assessment as a domain-specific form of assessment, such as reading and developing literacy (Bisschoff, 2019), I argue that assessment of cognition and metacognition has considerable relevance for young people, educators, family and whānau, evidenced in the literature on 21st-century learning (such as Bereiter & Scardamalia, 2012), and identified as the unrecognised challenges facing educators of young people with diverse learning needs (Education Review Office, 2018). The concept of "learning" in this study, therefore, focuses on the learning of general cognitive and metacognitive skills across developmental domains. This includes developing social, emotional, and behavioural self-regulation skills as embedded within the key competencies of the *New Zealand Curriculum* (Hipkins et al., 2014).

This research explores the implementation and outcomes of a dynamic approach to the assessment of cognition and metacognition, introducing the RE*Think* framework. Investigating changes in young people's learning through the reciprocal interaction of teaching and learning, this approach proposes to extend the typical assessment role of the here-and-now. Assessment, therefore, is future-focused. I argue that this shift for practitioners working with young people in Aotearoa New Zealand needs to be strengthened.

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A dynamic approach to assessment analyses the reciprocal interaction of learning and teaching in context, focuses on the power of play in assessment, and foregrounds the *where to next?* question. This research examines the learning and experiences of practitioners assessing change in cognition and metacognition using games, and investigates whether this form of assessment is relevant for practitioners as members of a young person's Inclusive Learning Community. As practitioners working with young people from a range of cultural backgrounds and diverse learning needs, an imperative for this research is to challenge the linear model of assessment practice. This research develops and introduces an approach that creates a dynamic interplay between assessment, learning and teaching to respond to cultural and social imperatives to examine *how* young people learn.

This research aims to provide practitioners with an assessment framework that is relevant and educationally useful, informing the changes needed for learning and teaching. Based predominantly on Feuerstein et al. (2015) and Vygotsky's work, this study also draws on the work of Haywood and Lidz (2007), McCloskey and Perkins (2013), and Lauchlan and Carrigan (2013). This thesis offers practitioners a contextualised dynamic assessment framework, named RE*Think*, that employs practitioners' skills of conversation, observation and collaboration to (a) assess mediator-learner interaction, where the mediator may be family, whānau, educator or practitioner; (b) analyse activities or tasks; (c) co-construct an understanding of a learner's cognitive and metacognitive skills; and (d) use the key competencies of the *New Zealand Curriculum* as a starting point for assessment, a structure for metacognitive analysis, to bridge outcomes, and inform intervention into the home, school and community environments.

Assessment outcomes have the potential to inform Individual Education Plans (IEPs) developed *for* young people. A dynamic approach to assessment *with* young people creates possibilities (a) for the development of agency reflecting "the interrelated world we live in and the importance of students' active role in their education as individuals and in mutually supportive relationships with others" (Education Review Office, 2019, p. 12); and (b) to develop young people's confidence and resilience as protective factors

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to prevent disengagement from education (Marulis, 2014).

However, despite decades of Inclusive Education policies and practices, increasing numbers of young people have disengaged from education. This has led to the Education Review Office (2015) recommending improved assessment practices, for educators to monitor learners' progress, and to analyse achievement information to identify effective teaching-learning practices in Aotearoa New Zealand. This research explores whether a dynamic approach as an alternative and/or complementary approach to assessment has the potential to contribute to such knowledge co-constructed with young people, to offer educators the support they deserve to expect from practitioners, and an assessment process that can be framed in terms of the key competencies of the *New Zealand Curriculum*.

Throughout this thesis, the terms *complementary* and *alternative* are used, signifying that this assessment process can be used alongside other assessments, either in addition to or, in place of other assessment. Based on Figure 1.1, this research explores whether a dynamic approach to assessment offers practitioners an alternative and/or complementary approach against which they can evaluate their own quantitative and qualitative approaches, and whether the tools they use can answer the *why* and *how* questions of learning (see Figure 1.2 below).

Figure 1.2

Positioning a Dynamic Approach to Assessment Within Existing Assessment Practices
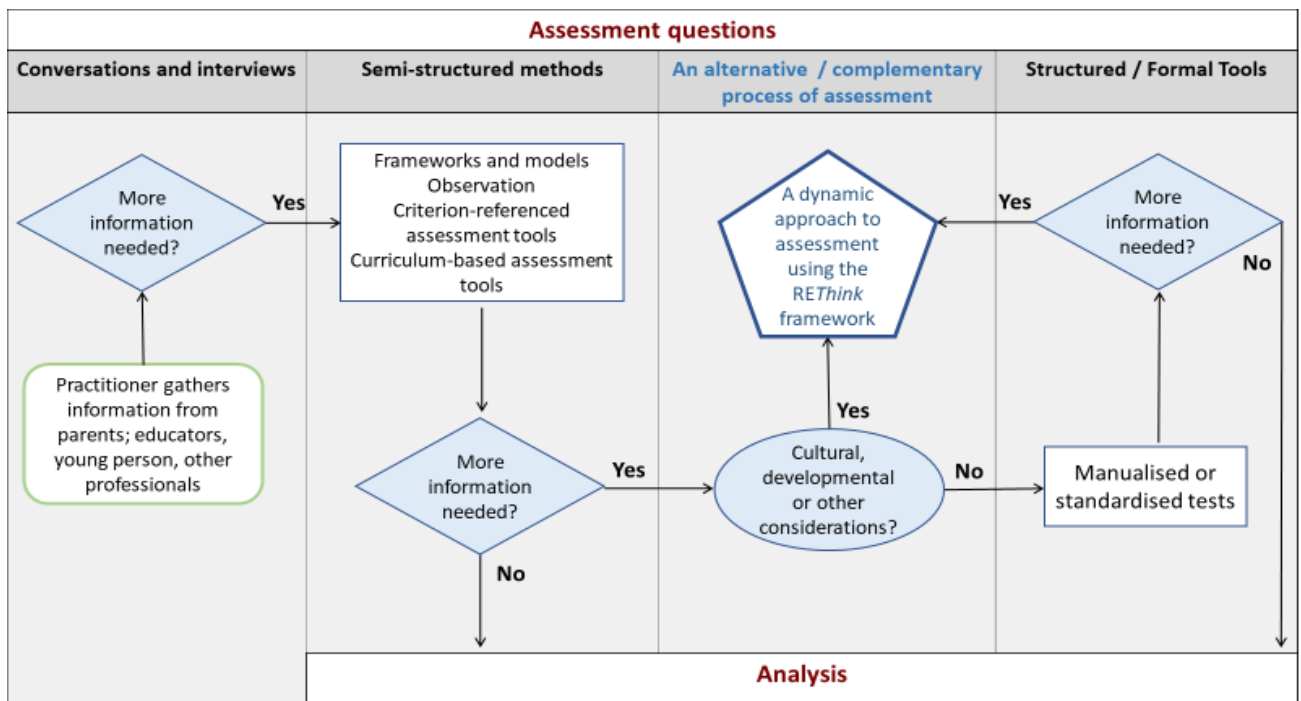
As research based in the socio-constructivist paradigm and on identified gaps in the literature, four research questions were posed:

1. What were practitioners' perceptions and experiences of assessment prior to learning about a dynamic approach to assessment?

2. Did knowing about a dynamic approach to assessment enhance practitioners' understanding of cognitive and metacognitive assessment, learning and teaching in their work with young people and educators?

3. Were games useful to practitioners as a tool for a dynamic approach to assessment?

4. Did learning about a dynamic approach to assessment bring about changes in practitioners' approach to assessment?

Summary

This thesis submits that a dynamic approach to assessment is particularly relevant for practitioners in Aotearoa New Zealand given its culturally-responsive and strengths-based philosophy. This chapter positions assessment in practice and describes the shifts in assessment priorities and educational imperatives. Assessing cognition and metacognition are key to developing 21st-century skills, and this thesis argues for a

dynamic approach to assessment as assessment for the future, using games as an authentic tool for assessment.

Chapter 2 provides a literature review examining how cultural, historical and philosophical forces shape education and assessment in Aotearoa New Zealand, the assessment of cognitive and metacognitive skills, and dynamic assessment in practice. Chapter 3 serves as a specific bridging chapter to the methodology chapter (Chapter 4). In Chapter 3 a contextualised, relevant and educationally useful assessment framework, called RE*Think*, is introduced. This framework potentially provides answers to the *why*, *how* and *where to next* questions in assessment. Presented to participants of this research at a workshop named *A Game-Changer for Assessment*, this RE*Think* framework aimed to operationalise a dynamic approach to assessment and serve as a potential catalyst for change in practice.

Chapter 4 details the process of research, situated within the socio-constructivist paradigm. Using qualitative inquiry and cultural-historical activity theory (CHAT), data gathered through semi-structured interviews and questionnaires were analysed using thematic analysis and activity systems analysis with CHAT. The ethical considerations that guided this process and the strategies employed to enhance research rigour are further detailed and discussed. Chapter 5 examines the findings in three parts: Part 1 identifies participants' existing perceptions and experiences of assessment; Part 2 analyses practitioners' reflections of learning a new process of assessment using the RE*Think* framework; and Part 3 explores the opportunities and the challenge of change in practice for participants in their learning about a dynamic approach to assessment.

In Chapter 6, the findings of this research are discussed. Using cultural-historical activity theory (CHAT), discussion follows the need for an alternative approach to assessment in education, framing further analysis of the use of a dynamic approach to assessment and games as a tool for assessment for its relevance for practitioners, young people and educators. Chapter 7 concludes the thesis, revisiting the research questions. Key findings and implications for practice are discussed, limitations identified and recommendations for future research proposed.

Chapter 2

Literature Review

This chapter provides an overview of assessment in Aotearoa New Zealand, positioning assessment in practice and the contribution practitioners working for the Ministry of Education aim to make in their work with educators and young people. With increasing focus on the 21st-century skills young people need as future learners, the potential that a dynamic approach to assessment brings to assessing these skills is presented, using games as a tool for assessment and the key competencies of the *New Zealand Curriculum* as analysis and framework for outcomes. This research aims to contribute to existing frameworks of practice for practitioners as a collaborative assessment process of the educator-learner interaction. Using the outcomes of such assessment may serve to enhance understanding of young people's skills and guide intervention, thereby contributing relevant and meaningful information to the team that works with young people on their journey to becoming confident and motivated learners and, ultimately, contributing members in their communities.

Positioning Assessment in Practice

Described as a complex and multifaceted process, assessment has consistently been an integral part of education (Swaffield, 2008), traditionally used to understand and support young people's learning and to monitor their progress (Archer, 2017). Increasing awareness of the influence of culture on teaching and learning (Bevan-Brown, 2006; Bishop et al., 2014; Bishop & Berryman, 2006; Macfarlane, 2009) and the inherent questions of "power, politics and prejudice" (Corcoran, 2017, p. 30) of knowledge creation have led to an understanding that assessment is inextricably linked to time and space, and practices invariably reflect practitioners' values. Tensions are created when assessment practices diverge from societal expectations (Drummond, 2008), and suffer from flawed pressures of accountability (Archer, 2017).

When Mitchell (2010) stated, "In many ways, special education is a microcosm of education more generally and, indeed, of society as a whole" (p. 15), he foregrounded the education of young people with diverse needs as an activity situated within the context of society. While it is beyond the scope of this thesis to detail the socio-political developments that have occurred throughout the history of Special Education in Aotearoa New Zealand, it is important to note that, as a foundational document, practitioners have obligations to Te Tiriti o Waitangi/The Treaty of Waitangi (1840), which has been interwoven through all the policies, frameworks and codes that guide professional practice.

Relevant Documents, Policies, Frameworks and Codes of Practice

When this research commenced in 2016, practitioners working for the Ministry of Education were guided by organisational practice documents, such as the "Position Paper" (2011a), "Specialist Service Standards" (2015a), the "Behaviour Practice Framework" (2012) and "Communication Practice Framework" (2013b). Policies and frameworks which informed these documents included "Success for All - Every School, Every Child" (Ministry of Education, 2010) and "Ka Hikitia: Accelerating Success 2013-2017" (Ministry of Education, 2013a). Since commencing this research, frameworks of practice have changed with the restructuring of the Ministry of Education. However, although this research occurs within a particular context, time and space, it would be an oversight not to refer to the current 2021 policies and frameworks as they build on previous documents and, therefore, remain pertinent to this discussion and research outcomes.

Currently, the policies of the "Child and Youth Wellbeing Strategy" (Department of the Prime Minister and Cabinet, 2020), "Ka Hikitia - Ka Hāpaitia (The Māori Education Strategy)" (Ministry of Education, 2021b), and the "Learning Support Action Plan: 2019–2025" (Ministry of Education, 2019) have the following four key features regarding young people's education in common: (a) placing young people at the centre, agencies, family, whānau, and the community have a collective responsibility to ensure that young people thrive in an environment where "identity, language and culture matter for Māori learners" (Ministry of Education, 2021b); (b) recognising that the

government has an obligation of care to young people as culturally-situated taonga [treasure], free from discrimination and safe from racism, early intervention is key. Young people's rights are respected in an inclusive environment by ensuring that young people have access to the right resources at the right time; (c) establishing young people's sense of belonging in their school communities and promoting their wellbeing facilitates young people's engagement with their learning, enabling them to participate in, and contribute to their educational community, te ao Māori [Māori worldview], Aotearoa New Zealand and internationally; and (d) building on young people's strengths and developing educators' capabilities to teach learners with diverse learning needs ultimately equip young people to successfully navigate transitions into school, and out into the wider world.

Frameworks that operationalise these policies include the "Learning Support Delivery Model (LSDM)" (Ministry of Education, 2018) and "He Pikorua" (2021a), and the implications are far-reaching. All young people, situated within the cultural context of their whānau, have the right to co-construct knowledge in partnership with others to enable their engagement in education through individually tailored strengths-based support that is culturally responsive.

These policies inform the practice of practitioners, such as speech-language therapists (SLT), psychologists, special education advisors (SEA) and resource teachers: learning and behaviour (RTLB). Working alongside Learning Support (Ministry of Education), resource teachers: learning and behaviour (RTLB) are fully registered teachers. They are governed by their "Code of Professional Responsibility" and "Standards for the Teaching Profession" and adhere to the following key principles which guide their practice: focusing on "student potential", finding "teaching and learning opportunities" and meeting "the needs of all students within an inclusive schooling environment" (Ministry of Education, 2017a). While speech-language therapists (SLT) are not governed by a Professional Board, the New Zealand Speech-language Therapists' Association offers guidelines and principles of ethical practice (New Zealand Speech-language Therapists' Association, 2005).

Psychologists are held accountable and guided by the *Code of Ethics* (New Zealand

Psychologists Board, 2012) to inform "ethical decision-making" (p. 1), using the principles of respect for the dignity of people, the value of integrity in relationships, the care for social justice and the responsibility to society. There are clear links between the Professional Boards guiding practice and the Ministry of Education, which advocate for the right of young people to be active participants in any decisions made that affect them, and to be treated with respect. Psychologists have a further duty to prevent or correct discriminatory practices regarding social and cultural diversity, recognise the "vulnerable status" of young people (p. 18) and to "do no harm" (p. 13). This has relevance for assessment practices and psychologists are cautioned when using "diagnostic labels": "Labels about [children/young people's] current level of skills or emotional maturity can stereotype them and impede their future capacity to mature" (p. 14).

Furthermore, the New Zealand Psychologists Board guides psychologists in their selection of assessment tools to ensure that they are culturally appropriate and relevant. When working with young people who are Māori, the principles of partnership, participation and protection must be interwoven through their practice. In support of psychologists, the Board has regularly updated guidelines on the use of psychometric testing and cultural safety, such as the "Guidelines on the Use of Psychometric Tests" [updated, 2015], "Guidelines on Using Psychometric Tests" [updated, 2020], the "Cultural Competencies" [2011, currently under review]. However, although psychologists are accountable to the Professional Board, more importantly and like all practitioners, they are accountable to those they serve.

The responsibility that practitioners carry in their support of young people, educators, family and whānau, therefore, is significant as they work to ensure that their practice is educationally useful, emotionally and psychologically safe, ecological, evidence-informed, collaborative and inclusive.

The Education Sector's Commitment to Inclusion

New Zealand has endorsed Inclusion in the Education and Training Act (2020), the Human Rights Act (1993), and the New Zealand Disability Strategy (2001). With binding

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obligations to the United Nations Convention on the Rights of the Child (1989; ratified in New Zealand in 1993), the United Nations Convention on the Rights of Persons with Disabilities (2006; ratified in New Zealand in 2008), and recognising the United Nations Declaration on the Rights of Indigenous Peoples (2010), the policy framework of Inclusion has been formalised within the New Zealand education system (Powell, 2012; Selvaraj, 2015), and included as one of the principles of the _New Zealand Curriculum_ (Ministry of Education, 2007).

The Ministry of Education (2020a) affirms that inclusive education is "founded in the Education and Training Act 2020, which states: 'people who have special education needs[1] (whether because of disability or otherwise) have the same rights to enrol and receive education at state schools as people who do not'". This means that children and young people learn best when they feel accepted, enjoy positive relationships with their fellow learners and educators, and are able to be active, visible members of their learning community. Inclusive education means all children and young people are made welcome by their schools and achieve through being present, and engaged by participating, learning and belonging.

However, researchers question how successful Inclusion has been in Aotearoa New Zealand (Barback, 2018; Hornby, 2015; Hornby et al., 2013). Although inclusion in rural areas mostly happened as part of the fabric of the community, the system has grappled with formalising Inclusion (Farrell, 2010, Kauffman & Hornby, 2020). Possibly due to the lack of resources to support educators, young people, family and whānau (Leadbetter, 2011; Moran, 2014) and the inherent contradictions between policy and practice (Hornby 2012), the documented journey of inclusion in mainstream schooling for young people with diverse learning needs has not been easy (Guerin, 2015; McIntyre, 2013).

While young people are able to attend the school of their choice, the challenge continues for educators to "deliver a rich, engaging curriculum in an adaptive and personalised

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[1] Throughout the literature, the diversity of young people's needs is described in various ways, including "special education needs", "diverse learning needs", etc. In this research, the term, "young people with diverse learning needs" is used to indicate and include the wide range of diversity among young people in all aspects of their development: physically, emotionally, socially and cognitively.

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way … [that] builds collective curiosity, intelligence, inquiry and critical thinking to engage all learners in meaningful learning" (Ministry of Education, 2020a). The New Zealand Government (2019) has a strong practice-based policy in place where Learning Support and the Ministry of Education assist young people with diverse learning needs. As part of this mandate, the Ministry encourages schools to develop an inclusive learning community.

However, getting a young person in the classroom (Education Review Office, 2015) and placing them in the centre of a network of support with educators and whānau, does not necessarily guarantee an inclusive learning community. Inclusion is a philosophy, an attitude that drives the culture of a school (Mentis et al., 2005). McCann (2015) draws attention to the fact that inclusionary practices "implicitly acknowledge that the status quo is exclusive". She argues for consideration of the origin of inclusion rather than focusing on the end result, and her challenge to "build *with*, not *for* [emphasis added]" others finds resonance with Article 12 of the United Nations Convention on the Rights of the Child.

New Zealand ratified the United Nations Convention on the Rights of the Child (UNCRC) in 1993 and is subsequently obligated to enable children's rights throughout Government policies and practices. The New Zealand Government reports to the United Nations on their progress on inclusion (Government of New Zealand, 2015; Moran, 2014). As a leading advocate for children's rights, Lundy (2007) argues that of the 54 UNCRC Articles (all of which have relevance), Article 12 is pertinent affording the voice of the child, and ultimately with regards decision-making in education:

> There is a need for a greater awareness of the fact that respecting children's views is not just a model of good pedagogical practice (or policy making) but a legally binding obligation. As a minimum, those working in the education sector need to know that Article 12 exists, that it has legal force, and that it applies to all educational decision making (p. 930).

Locating the young person within the interaction of assessment, which has a direct influence on their learning and experiences in education, Lundy's (2007) research has particular relevance for this study. Lundy (2019) argues that young people are not "*the*

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experts but that they do have important expertise that must be included in the decisions that affect them" (p. 40). She offers a model for conceptualising Article 12 - which is young people's right to be heard - to consist of four individual elements of Space, Voice, Audience and Influence. These elements are interrelated and dynamically follow a chronological process which may be cyclical, illustrated in Figure 2.1 [emphasis added using colour], and further discussed below.

Figure 2.1

Conceptualising Article 12 of the UNCRC (Lundy, 2007, p. 932)

Notes.

The right to express a view and be heard consists of having

- *"*Space: Children must be given the *opportunity* [emphasis added] to express a view" (Lundy, 2007, p. 933). However, this space should be (a) safe, where children can contribute without fear of consequence (Article 19); and (b) inclusive, where their voices can be heard without fear of prejudice (Article 2).
- "Voice: Children must be facilitated to *express* [emphasis added] their views" (Lundy, 2007, p. 933), through whichever medium enables them to express their views, or has the ability to best involve them in activities (Article 13), such as games.

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The right to have views given due weight requires

- "Audience: Their view must be *listened* [emphasis added] to"; and
- "Influence: Their view must be *acted* [emphasis added] upon, as appropriate [emphasis added]" (Lundy, 2007, p. 933). Article 5 requires adults to actively listen, provide guidance and support; and, Article 3, to assess and act in the best interests of the young person.

Whilst this model is focused on education in the broadest sense, it is relevant for practitioners who work in an inclusive education system (MacArthur & Rutherford, 2016), and which is based on "He Pikorua" principles of being "mokopuna [grandchild, descendent] and whānau-centred, collaborative, culturally affirming, strengths-based and inclusive" (Ministry of Education, 2021a). Messiou (2019) advocates for an approach that involves more than a conversation, submitting that a collaborative dialogue between young people and educators about learning and teaching makes learning more meaningful. Capturing "student voice" has potentially become tokenistic, "often mentioned, but rarely recognised in decisions" (Bourke, 2019, p. 70).

Despite the growing body of literature that recognises the importance of the Rights of the Child in the classroom and schooling environment (Jiang et al., 2014), assessment which impacts on young people's learning and Children's Rights are seldom considered together (Elwood & Lundy, 2010; MacArthur & Rutherford, 2016). Lundy (2007) argues for an integrated approach to the implementation of a rights-based approach to education and assessment, which plays an important role in the decisions that are made regarding young people's education: "There is a need for psychologists to provide insights into children's capacity, sociologists to document the social impacts of compliance and non-compliance, and educationalists to identify the educational benefits and most effective practices within schools" (pp. 940–941).

Yet it is *how* psychologists provide insight into children's "capacity" that has the potential to threaten inclusion. Farrell and Venables (2008) identify how practitioners often experience pressure from the teaching profession to locate the problem *within* the young person. Furthermore, with the increasing numbers of young people diagnosed with medical, mental health concerns and psychiatric disorders, a paradox exists within

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schooling environments where "diagnostic knowledge" (Hamre et al., 2018, p. 655) and "the pathologising of learners with labels that suggest that [young people] are in some way deficient or likely to prove problematic" (Rose, 2018, pp. 12–13) legitimise educators' feelings that they are not qualified to teach these young people (MacArthur & Rutherford, 2016), thereby potentially creating opportunities for exclusion within inclusive classrooms.

Stringer (2008) offers a practical and ethical definition for inclusion in practice:

> The way in which I define inclusion, then, has been shaped by an imperative to comprehend individual differences in learning, reduce the obstacles to learning that confront many individuals, and consider how best to promote the learning of all children, not just those who are seen to be having difficulties in learning (p. 128).

This research aims to provide practitioners with a framework and a dynamic approach to assessment that may capture the diversity of young people's voices and their rights through the learning-teaching interaction inherent in assessment. It aims to contribute insights into children's capacity that incorporate the principles of the Rights of the Child in practice and facilitate inclusion in terms of young people's learning and abilities (MacArthur & Rutherford, 2016; Stringer, 2018), rather than promote pathology and disability.

Shifts in Assessment Priorities and Educational Imperatives

In Aotearoa New Zealand the emphasis on compulsory education is that it is inclusive, culturally responsive, individualised, strengths-based, where young people are engaged in their learning community, and the community's "collective knowledge, wisdom and experiences" are utilized (Ministry of Education, 2020a). Tensions exist when psychology interacts with education and the values on which assessments are based are incompatible with the socio-cultural context in which assessment is practiced, what is measured by assessment, and the process of assessment (Baird & Black, 2013; Guerin, 2015; Hick, 2008).

Westernised assessments designed to measure intelligence are useful for diagnostic purposes, but they are not necessarily culturally appropriate, or designed to assess the skills required by either a curriculum or for life-long learning. Assessment that measures static knowledge or content alone is also no longer sufficient. Assessment aligned with an education system trying to meet the demands of a dynamic, complex and ever-evolving society is needed to develop young people as "future-fit" (OECD, 2020, p. 11) 21st-century learners (Kirschner & Stoyanov, 2020; McEachen, 2017; OECD, 2018).

This research focuses on the thinking skills learners need to *use* acquired knowledge, solve problems and be creative in culturally authentic environments using authentic activities. McEachen (2017) writes that

> Real-time assessment keeps a finger on the pulse of current levels of learning and directs future learning in areas identified for improvement. Evidence that provides an understanding of where learners are and how they can progress is the foundational block on which learning is designed, implemented and measured (p. 4).

The shifts in paradigm in educators' assessment practices mirror those of practitioners working with diverse learners where "The primary purpose of assessment is to improve students' learning and educators' teaching" (Ministry of Education, 2007, p. 39), largely due to the increasing influence of cultural-historical and socio-constructivist theories in education.

Shifting Paradigms in Educators' Assessment Practices

Paradigms of assessment in Aotearoa New Zealand's classrooms have shifted over the past decade due to a number of factors, among which include the government's mandate that the achievement levels of all young people have to be raised with evidenced documentation of outcomes (Ministry of Education, 2013a). Connor (2013) writes that

> As a result, New Zealand's school curriculum has moved from a standardized system to a personalized system: Teachers plan lessons according to the needs of

the individual classroom student, and individual evaluations reflect learning
according to students' skill development and progress (p. 157).

Furthermore, educating young people to develop 21st-century thinking skills has
required educators and practitioners to undertake a further shift in teaching. The role of
the educator has shifted from imparting knowledge, to one where they work *with* young
people, harness their strengths, and build knowledge together (Bolstad et al., 2012;
Hargraves, n.d.). Formative assessment has the potential to explore the actions of
educators and of learners, through which young people's sense of agency may be
developed with increased confidence. One such assessment approach is Assessment *for*
Learning. Developing young people's metacognitive skills and ability to use these skills
are one of the foundations on which Assessment *for* Learning is built (Irving et al., 2011;
Mutch, 2012).

However, recognising that implementing Assessment *for* Learning is challenging has
necessitated a change for educators in practice: working from a siloed approach where
young people are educated from a strong pedagogical base, to collaborating with "other
people who can provide specific kinds of expertise, knowledge or access to learning
opportunities in community contexts" (Bolstad et al., 2012, p. 5). Yet, despite educators
reporting to want support for young people, Canning (2017) found in her research that
educators in New Zealand reported little understanding of what psychologists could
offer, and this is possibly not without reason.

Shifting Paradigms for Practitioners

The Ministry of Education and Learning Support have not only had several iterations of
restructuring since their inception, but a paradigm shift in assessment practice has also
occurred (Bourke & Dharan, 2015; Hornby, 2014; Mitchell, 2015). In their research on
assessment practices in New Zealand, Bourke and Dharan (2015) found that assessment
practices are increasingly dialogic and ecological, and "skills of communication and
collaboration through interviewing and observations are replacing traditional ones
involving psychometric measures in education" (p. 370). This creates opportunities for
psychologists and others to work alongside learners, whānau and educators in different

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and dynamically collaborative ways, following a holistic, ecological approach which places the learner within the contexts of culture and the diverse environments of their home, school, community and society (Bourke & Mentis, 2014). This has led to an increased search for, and use of, alternative or complementary forms of assessment to standardised assessments. Currently, such frameworks include culturally informed assessments, narrative assessment, ipsative assessment and functional behaviour assessment (FBA).

A number of culturally-informed assessment frameworks are available to all practitioners, such as "Te Whare Tapa Whā" (Ministry of Health, 2017a), *Te Whāriki / Early Childhood Curriculum* (Ministry of Education, 2017b), "Te Pikinga ki Runga" (Macfarlane, 2009), "The Educultural Wheel" (Macfarlane, et al., 2012), "Te Wheke" (Ministry of Health, 2017b), the "Meihana model" (Pitama, et al., 2007). These assessment frameworks consider the young person in context, taking a comprehensive ecological approach and holistic perspective of development, also focusing on the relational aspects of young people's well-being and how these manifest in different environments.

Narrative assessment is based on the premise that it is possible to 'narrate' learning, rather than 'measure' it (Bourke & Mentis 2014). For this approach, the use of learning stories focuses on a young person's learning and social behaviour, capturing their interactions within environments, during activities, among peers and educators (Ministry of Education, 2009). Strings of learning stories capture learner progress, making it possible to link a child's performance to an earlier assessment and note the ongoing progress for that child. While narrative assessment was initially designed to be used with children who perform within Level 1 of the *New Zealand Curriculum* (Morton et al., 2012), it is also an assessment approach used in some primary and secondary schools. Although these assessments provide detailed information about a young person's skills and strengths (i.e., *what* a learner can do), and used as a form of ipsative assessment, they take a limited view of *how* to support learning.

Hughes (2011) defines ipsative assessment as assessment which measures a learner's current progress against his or her own prior achievement, rather than in comparison

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with peers' progress (i.e., learning, *ipse* from the Latin meaning *of the self*). Ipsative assessment has been greatly neglected as a form of assessment and not prioritised in practice, although it often occurs naturally and authentically without formal identification. Being able to engage productively in ipsative assessment means the goals of the child are foregrounded, and the assessor's role is to support the young person to help them work towards, assess and recognise their own progress (Bourke & Mentis, 2014; Hughes, 2011). Ipsative assessment is also included in the *Narrative Assessment Guide for Teachers* (Ministry of Education, 2009).

Functional behaviour assessment is another approach widely used across education as the "preferred diagnostic procedure for identifying the factors which will need to be changed during any intervention" (Church & Education Department Team, 2003, p. 3) and seen to be one of the "most effective tools for understanding and intervening in challenging behaviour" (Ministry of Education, 2012, p. 9). It focuses on antecedent triggers and consequences that may be increasing or maintaining inappropriate behaviour, *what* a student does, and the environmental contexts *within which* behaviour occurs. A functional behaviour assessment (FBA) has been foregrounded as a preferred approach for three key reasons as it is (a) "used in the context of behaviour work because of its support in the research literature" (Ministry of Education, 2012, p. 20); (b) a valid method of data collection regarding environmental factors; and (c) explores the dynamic interplay between student-student, student-educator, or even student-task. However, functional behaviour assessment (FBA) takes a limited view of *why* a student may be displaying severely challenging behaviour beyond a specific context.

Further research, therefore, needs to challenge the one-dimensional and linear model of assessment practices by developing and introducing an approach that creates a dynamic interplay between assessment, learning and teaching to answer the *why* and *how* questions of learning, and to reframe "the disabled body along the lines of capacity, potential, interconnection and possibility" (Goodley, 2017, p. 45).

Assessing 21st-Century Skills of Cognition and Metacognition

Across paradigms in education, there is increasing agreement that assessment should

be learner-centred and functional. With the focus in education on developing young people's 21st-century skills, the related aspects of cognition and metacognition have become increasingly important (Drigas & Mitsea, 2020). With the plethora of definitions and constructs for metacognition in the research literature, this section explores the existing confusion of constructs, the relevance for education, and the assessment methods available to practitioners.

The concept of metacognition can be traced back to Plato and Socrates (Norman et al., 2019), but has only relatively recently regained prominence in the field of education. Despite Flavell (1979) proposing that metacognition was a "promising new area of investigation" (p. 906) with the move away from a purely behavioural view that learning occurs through reaction to external control and stimuli, to learning being constructed by a thinking being (Hacker et al., 2009), researching "thinking about how we think" (Sternberg & Sternberg, 2017, p. 210) has been diverse and contentious.

"Thinking", the science of cognition and neuroscience has increasingly permeated the fields of psychology and education and, therefore, it is necessary to explore whether (and/or how) the concepts of metacognition and executive functions overlap. Although there is considerable debate in the literature regarding metacognition and executive functions, both share a number of key features. Borkowski et al. (2000) and Jansiewicz (2008), for example, note that while these concepts are interconnected, they serve different functions. Dimmitt and McCormick (2012), McCloskey and Perkins (2013) view both terms as synonymous or overlapping constructs.

Therefore, for the purposes of this study, the term "metacognition" will be used throughout this thesis due to its situatedness within education, and the literature on "executive functions" incorporated to inform this research.

A Confusion of Constructs: What is Metacognition?

Were there a collective noun for the construct of metacognition, it would have to be a "confusion" of constructs. The overwhelming number of diverse constructs of metacognition in the literature defy attempts at consolidation (Azevedo, 2020): at its

best, metacognition is described as an "umbrella term" (Norman et al., 2019, p. 403) as the concepts of cognition and metacognition do not represent single traits, but a complexity of interrelated constructs (Feuerstein et al., 2002; McCloskey & Perkins, 2013); at its worst, metacognition is viewed as "not only a monster of obscure parentage, but a many-headed monster at that" (Brown, 1987, p. 105).

Nonetheless, it is widely agreed that metacognition predominantly plays "closely intertwined" (Norman et al., 2019, p. 403) roles in monitoring and regulating (or controlling) cognition (Dimmett & McCormick, 2012; Hacker, et al., 2009), which require:

- metacognitive knowledge of one's own cognitive abilities and strategies, including the declarative (*what?*), the procedural (*how?*), and the conditional knowledge of strategy use (*when?*);
- metacognitive strategies and skills used to control cognition; and
- metacognitive experience, which refers to affect and the judgements made during an activity, and more recently linked to "attitudinal and motivation factors" (Feuerstein et al., 2015, p. 28) and self-efficacy (Efklides, 2009, 2011; Flavell, 1979; Norman et al., 2019).

While metacognition mostly occurs automatically (or implicitly), it also involves explicit and conscious awareness of the thinking that underlies thinking (Frith, 2012): "a level of consciousness not just about what is being learned but also about how it is being learned and an awareness of having learned it" (Dimmitt & McCormick, 2012, p. 157). Therefore, understanding the impact of metacognition, motivation and the sense of self-efficacy on individual effort and learner agency is particularly important for learning (Dimmitt & McCormick, 2012; Efklides, 2011; Meltzer, 2010), for managing human interaction and problem-solving. This also involves the ability to analyse an environment or situation, task or activity for their metacognitive requirements (Flavell, 1979; Feuerstein et al., 2015; Haywood & Lidz, 2007), formulate or regulate a response (behaviour) and evaluate the consequences of actions taken (Conn et al., 2018; Norman et al., 2019).

The ability to self-regulate learning and behaviour, however, is reflective of the

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metacognitive strategies used and a young person's cognitive skills. While there is general agreement regarding the roles of metacognition, there is considerable diversity regarding which strategies and skills are needed in the community and classroom. With the boundaries between neuroscience and education increasingly blurred, numerous interdisciplinary texts have entered the body of research literature, such as *Executive Function in the Classroom* (Kaufman, 2010), and *Promoting Executive Function in the Classroom* (Meltzer, 2010). As an example of overlap, Kaufman (2010), defines executive skills as "those elements of cognition that allow for the self-regulation and self-direction of day-to-day and longer term functioning" (p. 2). Grouping skills under "metacognitive" and "social/emotional regulation" strands (p. 4), he includes executive skills such as goal-setting, planning/strategizing, sequencing/ordering, task initiation, organisation of materials, working memory, set shifting, etc. (refer pp. 3-8) as they manifest in the classroom. Similar skills also appear in the *Behavior Rating Scale of Executive Function, Second Edition (BRIEF-2)* (Gioia et al., 2015), grouped under the headings of behaviour, cognitive and emotional regulation.

McCloskey and Perkins (2013) offer a complex theoretical model that identifies cognitive constructs on "five tiers of executive function control" (p.15), of which the tier of self-regulation consists of 32 executive functions which "appear to be responsible for cueing, directing and coordinating multiple aspects of perception, emotion, cognition and action" (p. 12). Similar to Feuerstein et al. (2015), McCloskey and Perkins (2013) do not see cognition and metacognition as a single construct. They submit that executive functions - as "cognitive constructs" (p. 10) - can be viewed as "co-conductors … each with a highly specific directive role in the overall performance of the orchestra, but each working - ideally - in a highly collaborative manner with all of the other co-conductors" (p. 10). These constructs manifest differently according to the "arenas" (p. 20) in which they occur, and parallels may be found in the key competencies of the *New Zealand Curriculum*, which include
- the intra-personal: self-monitoring of cognitive thoughts, relating to the key competency of *managing self*;
- the inter-personal: interaction with others, relating to the key competency of *relating to others*;
- academic pursuits, relating to the key competency of *using language, symbols,*

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and texts); and

● the wider community, and the key competency of *participating and contributing*.

What is common to all the above-mentioned frameworks is the complex multi-dimensionality of the constructs of cognition and metacognition, and the impact they have on all areas of functioning. Although they bring researchers no closer to a unified understanding of cognition and metacognition, scholars internationally and locally have identified that the focus on cognition and metacognition, as one of the 21st-century skills, is essential in education.

Metacognition in Education: The Key Competencies

The key competencies of the *New Zealand Curriculum* are defined as the "capabilities people have, and need to develop, to live and learn today and in the future" (Ministry of Education, 2020b). Aligning with the 21st-century learning skills identified by Organisation for Economic Co-operation and Development (OECD) as the core skills required by young people to be successful in a future workforce, contributing members of their communities and life-long learners (Fullan & Scott, 2014; Hipkins, 2007; McEachen, 2017; OECD, 2005, 2018), the key competencies are critical to the *New Zealand Curriculum* as educators support young people to be "future-fit" (OECD, 2020, p. 11).

Although identified as the foundational skills necessary for learning, the key competencies are not an additional layer to the *New Zealand Curriculum*. Instead, as understanding has increased, the key competencies are not only interwoven through the *Curriculum* (Hipkins & Cameron, 2018b; McDowall & Hipkins, 2018), but are placed at the heart of the *Curriculum*. Bringing a "future-focused perspective to teaching and learning" (Ministry of Education, 2020b), the aim of the key competencies is to prepare young people as life-long learners, able to meet the demands of a future workforce, face global challenges, adapt and transfer skills to situations that are novel and complex (Education Review Office, 2019).

However, assessing the key competencies remains challenging for educators (Hipkins & Cameron, 2018b). Practitioners, tasked to support young people and educators as members of a young person's inclusive learning community, have a role to contribute to the collective knowledge and understanding of how young people learn and to build educators' capability to teach. Similar to the recommendations made by Yeomans (2008), the potential exists for practitioners to make links to the education framework and foundational skills. In Aotearoa New Zealand, this includes the key competencies of the New Zealand *Curriculum*, and done best through individualised and tailored assessment with young people.

Methods of Assessing Metacognition and Executive Functions

Due to the complexity of defining and quantifying the concepts of metacognition and executive functions, assessment of these concepts is challenging. Attempts to capture related aspects of cognition include process observations, such as those included in the *WISC-V* which can be scored to provide a base measurement of performance. However, Kaufman et al (2016) suggest that

> the standardised procedures for administrating and scoring the WISC-V help ensure objectivity in evaluating a child, but sacrifice the in-depth understanding of a youngster's cognitive processing that may be obtained from a technique such as Jean Paiget's probing method, Feuerstein's test-teach-test dynamic assessment approach, Vygotsky's zone of proximal development or Kaplan's process approach (p. 27).

Neuropsychology has readily embraced process assessments based on Kaplan's approach due to the "recent switch to emphasizing *function* over *structure* [emphasis added] in cognitive assessment" (Kaufman et al., 2016, p. 409). Although methods of assessment predominantly include rating scales such as the *Behavior Rating Scale of Executive Function (BRIEF-2)* (Gioia et al., 2015) and standardised tests, for example, *A Developmental Neuropsychological Assessment* (*NEPSY-II)* or *Delis-Kaplan Executive Function System D-KEFS)*, classroom observations, record reviews and interviews with parents, educators and the young person remain highly valued. Yet, practitioners still appear to find comfort in obtaining scores to reflect learners' performance relative to

their peers.

Alternative metacognitive assessments include self-report questionnaires, "coded observations, think-aloud protocols, performance ratings, and interviews" (Harrison & Vallin, 2018, p. 16), and the "Metacognitive Awareness Inventory" (MAI) (Schraw & Dennison, 1994), reported to be one of the most frequently used self-report questionnaires for young people (Harrison & Vallin, 2018). More recently, Burden's (2014) questionnaire - "Myself as a Learner (8-16+)" - has been developed for educators and practitioners working in education but, like the MAI, self-report questionnaires continue to present challenges for both young people and assessors, including issues with honesty, bias, and many young people's inability to access themselves accurately (Salters-Pedneault, 2020).

McCloskey and Perkins (2013) offer a summary of executive function assessment methods (pp. 96-99). Although from different paradigms and not a standardised procedure, a dynamic approach to assessment has been positioned within Table 2.1 to enhance understanding of the location of this approach within practice.

Table 2.1

Positioning a Dynamic Approach to Assessment within a Framework of Executive Function Assessment Methods

Assessment approach	Formal technique	Informal technique
Direct approach: with learner through *direct observation* of learner while performing tasks	Individually administered standardised tests, (e.g. *D-KEFS*)	Process-oriented interpretation of test results; classroom work samples during direct observation A dynamic approach to assessment of learner-mediator-task interaction through conversation, observation and collaboration
Indirect approach: does not involve direct observation	Behaviour Rating Scales Parenting Rating Scales Teacher Rating Scales Self-report Rating Scales (e.g. *BRIEF-2*)	Interviews (learner, parents, teacher, etc) Records review Interpretation of rating scale responses

In a White Paper regarding the identification and intervention possibilities for young people with learning difficulties, Hale at al. (2010) suggest, among other recommendations, that "children with SLD [Specific Learning Difficulties] need individualized interventions based on specific learning needs, not merely more intense interventions", and that "assessment of cognitive and neuropsychological processes should be used for both SLD identification and intervention purposes" (p. 233). While the aim of a dynamic approach to assessment is not diagnostic, it does offer qualitative value and a partnership approach to the assessment of cognition and metacognition through conversation, observation and collaboration. There are few authentic and ecological frameworks of assessment that offer an in-depth understanding of *why* young people learn the way they do, and *how* this co-constructed knowledge can inform intervention with a young person, educator or family and whānau.

A Dynamic Approach to Assessment: Assessing for the Future

Described as an "umbrella term" (Beckmann, 2014; Elliott, 2003) for a myriad of approaches, a number of definitions for dynamic assessment exist (Stacey, 2016; Stringer, 2018). Nonetheless, dynamic assessment shares certain features common to all, the core of which is to integrate assessment, learning and instruction (Grigorenko, 2009). Valued for its ability to reveal learning capability in young people from diverse learning communities and minority populations, when young people's educational opportunities have been limited, where they have suffered "cultural deprivation" (Feuerstein et al., 2015, p. 15) and/or complex trauma (Mainwaring, 2015), measures relying on knowledge-based and culturally-loaded questions are reported to be clearly inadequate (Elliott, 2003; Haywood & Lidz, 2007).

Dynamic assessment, therefore, appears to be an educationally useful choice of assessment when the aim is not to measure stable cognitive ability, but to assess the conditions under which change occurs. It is a process of assessment that does not propose to limit interaction between assessor and learner, but seeks to explore the potential of interaction to bring about engagement and change in learning as the young

person is an active *participant*, rather than the *object* of assessment. Dynamic assessment does not use a restricted script of questions, but a highly flexible and adaptable approach to obtain learner response to change which can guide recommendation for intervention. It purports to be culturally safe, fair, responsive and strengths-based, and located within the Vygotskian zone of proximal development (ZPD) (Elliott, 2003; Feuerstein et al., 2015; Haywood & Lidz, 2007; Robinson-Zañartu & Carlson, 2013).

The focus of standardised assessment, therefore, is yesterday's acquired knowledge, but the heart of dynamic assessment is tomorrow's learning (Grigorenko, 2009).

Dynamic Assessment and Assessment in Education

Reflective of the socio-cultural context of learning within which assessment occurs, how knowledge is constructed is closely associated with the tools used, the frameworks for interpretation, and the observations made (Baird & Black, 2013; Schunk, 2020). Therefore, it is helpful to locate a dynamic approach to assessment within socio-constructivist, socio-cultural and, it could be argued, transformative paradigms (further discussed in Methodology: Chapter 4). Theories and frameworks of pedagogy and assessment relevant to this research include Feuerstein's theories of structural cognitive modifiability (SCM) and the mediated learning experience (MLE), Vygotsky's mediated learning, Bishop's "Te Kōtahitanga" pedagogy, Bronfenbrenner's ecological theory, and Engeström's cultural-historical process theory of learning. Additionally, the policies and frameworks guiding practice in Aotearoa New Zealand are of particular relevance, as is Lundy's model (2007) for conceptualising Article 12 of the United Nations Convention on the Rights of the Child.

What is common to these theories, models and frameworks of assessment, teaching and learning is the core belief that all young people have the potential to change, the ability to learn and adapt to the demands of society. Learning is a process: a directed, purposeful and intentional interaction between learner and educator, mediated through culture, language and artefacts (tools), and shaped by historical influences and societal expectations which are constantly in flux. There is a move away from universalism and

positivism: "There is no single biologically determined universal, appropriate, or good way to learn among humans" (Engeström, 2015, p. xviii). Not all learning needs to be assessed and, therefore, assessment is relative.

A dynamic approach to assessment is inclusive, tailored to an individual situated within a culture, and can analyse the gap that exists between learning and intentional instruction (Engeström & Sannino, 2012; Feuerstein et al., 2015). It further recognises the rights of the learner to be assessed in meaningful, authentic contexts, and values the diverse contributions of young people, family and whānau, educators and practitioners (Stringer, 2018). The focus changes from product to process, from obtaining a static score to an interplay and exchange of information in a dynamic of reciprocity that can also be embraced by the concept of ako in assessment.

In "Ka Hikitia" (Ministry of Education, 2013a), ako is described as "a dynamic form of learning ... a teaching and learning relationship where the educator is also learning from the student in a two-way process and where educators' practices are informed by the latest research and are both deliberate and reflective" (p. 16). Deliberate and reflective assessment is the essence of a dynamic approach to assessment. Both refer to "the acquisition of knowledge and to the processing and imparting of knowledge" (Bishop et al., 2003, p. 96). More importantly ako is a teaching-learning practice that involves educators and students learning in an interactive dialogic relationship. It is through the interactive relationship that learners' areas of strength and potential strength are explored, and how these can be utilised with intervention tailored to a learner's strengths to raise educator expectations (Bevan-Brown, 2006; Bishop et al., 2014).

Furthermore, both dynamic assessment and ako are firmly embedded in the ecological approach. Knowledge about a young person's learning is co-constructed *with* young people, whānau and family and educators, which can only occur within culturally-safe environments (Macfarlane et al., 2007) and where the relationship is central in the assessment process (Bishop et al., 2014). Understanding that culture plays an integral role in meaning-making, and mediational language influences how young people think and act, the assessment process mirrors the teaching pedagogy proposed by Bishop et al. (2003) in "Te Kōtahitanga", where:

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the participants in the learning interaction become involved in the process of collaboration, in the process of mutual storytelling and re-storying, so that a relationship can emerge in which both stories are heard, or indeed a process where a new story is created by all the participants (p.32).

Therefore, through a process of collaboration, a new "story" of a learner's abilities is created. Dynamic assessment belongs firmly within the paradigm which makes "differences in, rather than predictions about, students' lives" (Reschly & Ysseldyke, 2002, p. 16). In such an approach, a shared understanding is developed through collaboration with the learner, family, whānau and educators to further explore, in greater depth, the potential of learners to change and learn, especially when assessment takes place in the presence of stakeholders (Stringer, 2018).

As some assessment has been described as "a troubling and treacherous process for all involved" (Hughes, 2014, p. 1), there is a need to explore ways to include and empower the learner, by eliminating the fear of failure, developing a sense of competence (Frey & Fisher, 2011), facilitating tolerance for frustration, and encouraging young people to positively respond to challenge (Baird, et. al, 2017). In a dynamic approach to assessment, the assessor's use of language is critical, as is knowledge of the responses required. As instructions are not prescriptive, the assessor is able to ensure that the young person understands what is required and has the flexibility to modify instructions (Feuerstein et al., 2015). This creates a psychological sense of safety, increases motivation and a sense of competency, contributing to the development of a relationship based on the reciprocity of teaching and learning.

Dynamic assessment has also been identified as an assessment process that may be helpful within the response to intervention (RTI) framework (Caffrey et al., 2008; Elliott et al., 2018; Grigorenko, 2009; Gustafson et al., 2014), align with the principles of the practice framework of "He Pikorua", and viewed as a "fellow-traveller in terms of conceptual leanings, assessment sensibilities and educational orientation" (Leung, 2007, p. 257) of Assessment *for* Learning (A*f*L) and Assessment *as* Learning (A*a*L) (Lauchlan & Carrigan, 2013; Yeomans, 2008). Engeström (2015) views the teaching and learning process with the potential for transformation or change as not just dialogic, but

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"dialectically intertwined":

> This means that the prescribed and planned process the instructor is trying to
> implement must be compared and contrasted with the actual process performed
> by the learners. The two will never fully coincide. The gap, struggle, negotiation,
> and occasional merger between the two need to be taken as key resources for
> understanding the processes of learning as processes of formation of agency (p.
> xix).

Formats and Approaches of Dynamic Assessment

As with all assessments, a dynamic approach is used for a particular purpose and when
appropriate. Two general traditions in dynamic assessment have emerged: (a)
interventionist and research-oriented, which focuses on response to intervention
(learner potential) using a pretest - mediate - post-test method; and (b) interactionist
and clinically-oriented, which aims to produce change and capture the processes
(intervention strategies) which brought about that change (Caffrey et al., 2008;
Robinson-Zañartu & Carlson, 2013; Stringer, 2018).

Although there is ongoing interest in developing dynamic tests, cognitive intervention
programmes and studying learner potential from a research perspective (such as the
work of Deutsch, 2017; Haywood & Lidz, 2007; Tzuriel, 2001), an increasing number of
researchers are moving towards a practice-based qualitative approach which provides
information about a young person's cognitive and metacognitive skills, affect and
motivational factors that influence the teaching-learning interaction (including the
work of Feuerstein et al., 2015; Lauchlan & Carrigan, 2013; Stringer, 2018). This latter
approach to dynamic assessment can be used to assess cognition and metacognition
inherent in academic skills, such as mathematics (Moscardini & Moscardini, 2020),
reading (Bisschoff, 2019), or any area which includes learning as an essential part of
assessment (Kozulin, 2013). Therefore, the use of dynamic assessment has also been
embraced by (a) speech-language therapists, and substantial research has been done on
how dynamic assessment can inform therapy and the language development of first and
second-language speakers (such as Camilleri et al., 2014; Hasson, 2018; Poehner, 2008);
and (b) psychologists who use informal games, such as the Bunny Bag (Waters &

Stringer, 1997) and Dynamic Master Mind (Saldaña, 2004) in play-based dynamic assessment.

Criticisms, Limitations and Problems of Dynamic Assessment

The concept of dynamic assessment has been contentious in the wider academic community, despite providing valuable information which purely standardized assessment cannot obtain (Haywood & Lidz, 2007; Haywood & Tzuriel, 2002; Hill, 2015). Proponents of dynamic assessment frequently find themselves in conflict with practitioners snared in the web of standardized constructs and procedures.

A review of the literature detailing criticisms levelled at dynamic assessment are individually identified below but addressed throughout this thesis. These include:

(a) the deficit-based language used in some dynamic assessments to describe cognitive processes. The policy documents that guide practice in New Zealand - "Ka Hikitia - Ka Hāpaitia (The Māori Education Strategy)" (Ministry of Education, 2021b), and "He Pikorua" (Ministry of Education, 2021a) are strengths-based, which is reflected in the RE*Think* framework (refer Chapter 2: *Relevant Documents, Policies, Frameworks and Codes of Practice*);

(b) the proclaimed "fuzziness" (Frisby & Braden, 1992, p. 283) of terminology, and confusing definitions of constructs (Haywood, 2012). Based on the work of Feuerstein et al. (2015), the concepts used in the REThink framework were also drawn from the literature on executive functions and the cognitive and metacognitive skills likely to be known in education (refer Chapter 3: *Learner-Task Interaction: Cognitive and Metacognitive Skill Analysis*);

(c) assessors using dynamic assessment are required to have greater skill, insight and mediational expertise to adapt intervention strategies and assess learner cognition and metacognition than those using standardised protocols. While this implies that the value and relevance of a dynamic assessment is dependent on assessor skill and experience, this is likely true for any assessment practice;

(d) dynamic assessment is time and labour intensive (Deutsch & Reynolds, 2000), and requires expertise and training, which can be expensive and is not easily accessible in Aotearoa New Zealand (Hodges, 2013). As the RE*Think* framework

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is principled and structured, it is an authentic process of assessment that can be used in any environment and with any tools or activity, such as games (refer Chapter 3: *Mediator-Task Interaction: Activity Analysis*);

(e) approach with limited diagnostic or research applicability (Brooks, 2014). The RE*Think* framework is not intended to be a diagnostic assessment tool, but an assessment *process* to answer *how* best to teach a young person to bring about change, and develop their functioning in the real world;

(f) difficulties have been identified bridging assessment outcomes into the schooling curriculum (Yeomans, 2008). The key competencies of the *New Zealand Curriculum* have been used as the starting point for assessment, analysis and framework for outcomes, due to educators' familiarity with this framework (refer Chapter 3: *Contextualising: The RE*Think *Framework and the Key Competencies*);

(g) with the rejection of standardised procedures, the reliability and validity of dynamic assessment is questioned (Elliott et al., 2018), and dependent on the teaching environment. Feuerstein et al. (2015) offer the following explanation: "the typical statistical apparatus of reliability and validity of the data obtained and creating the necessary test conditions for that is radically opposed to the very goals of the dynamic assessment" (p.12). Quantifying potential implies limitations on cognitive functioning, which is precisely the antithesis of dynamic assessment. Nonetheless, an assessment that does not produce a "score" is not necessarily understood when the "gold standard" of standardised assessment is highly valued in the community (Beckmann, 2014; Hill, 2015). Therefore, it is necessary to position a dynamic approach to assessment within a qualitative paradigm of practice, with a clearly defined purpose for assessment.

The purpose of a dynamic approach to assessment as used in the RE*Think* framework is to analyse an activity or task, as well as to determine how best to teach young people to develop their cognitive and metacognitive skills, with a focus always on bringing about positive change. This is done by inviting educators or teachers' aides to observe the collaborative and reciprocal interaction between mediator and learner. The transparency of this process of assessment not only serves to develop educators' capabilities to support young people in schooling environments, but collaboration with

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family and whānau also ensures social and ecological validity as the outcomes informing mediation are valued and can be generalised into various real-life situations.

In Aotearoa New Zealand, evidence-based practice that is culturally responsive and guided by Te Tiriti o Waitangi / the Treaty of Waitangi principles has to be considered (Macfarlane & Macfarlane, 2013). Such practice includes:

- o *Tika*: consideration of research and literature "that is *culturally* grounded, relevant, authentic and realistic" (p. 73);
- o *Aroha*: respectful consultation and relationships with whānau and family, which include "interactions with whānau that enable whānau voice, knowledge, perspectives and participation" (p. 73); and
- o *Pono*: Practitioner knowledge and skill that foregrounds "practice interactions that have cultural integrity, are reasoned, just and fair" (p. 73).

As practitioners, we *do not require diagnoses* to access resources for young people in education. However, we *do* need to ensure that as Treaty Partners our assessment practices are culturally responsible and ethical.

Games as Authentic Tools for Assessment

Games are considered a natural assessment tool as young people learn through play. Games are non-threatening, culturally-placed and viewed as the taonga [treasure] of a culture (Brown, 2016), with the potential to "create opportunities that reflect the typical, useful and meaningful experiences of the child" (Ministry of Education, 2012, p. 21). An assessment process situated in the "real world", that is authentic and uses assessment tools that are familiar to young people and deemed to be playful and fun, aligns with the foundational philosophy of the assessment of young people supported by practitioners working for the Ministry of Education.

Games can be used as the task for assessing the teaching and learning of cognitive and metacognitive skills. Most importantly, an approach to assessment using games includes student voice, and can change the learning/teaching/assessment relationship in a most dynamic way:

In some ways games (as playful experiences) are polar opposites of more formal

forms of assessment: one of the strengths of games is allowing students to make mistakes, learn from them, and try a different approach - without fear of being monitored or assessed as they play. However, almost all games already provide forms of both assessment and feedback; in fact that 'make mistakes, learn and improve' cycle is often encouraged and scaffolded by clever in-game feedback, helping the player to first learn how to play and then develop their skill as they move through the game (Moseley, 2014, p. 344).

Psychology is in the unique position to provide theoretical frameworks for understanding the outcomes of games, as "affective and motivational, knowledge acquisition /content understanding, perceptual and cognitive skills, behaviour change, physiological and social/soft skills outcomes" (Boyle, 2014, p. 4). Another outcome is the assessment of metacognition (Hessels-Schlatter, 2010). Games, therefore, are ideally positioned to authentically change task contexts to assess cognitive and metacognitive skills. Unlike activities related to the school curricula, games require less specific prior knowledge, allowing the young person to focus on process rather than content, and without the frequently observed emotional dysregulation triggered in a number of young people when confronted with a testing situation (Hessels-Schlatter, 2010).

The use of games as tools for intervention is well-known, such as Lego-based therapy developed by Daniel LeGoff for young people with autism spectrum disorders, social communication difficulties and anxiety (Seath, 2020). This intervention has been adapted by the Ministry of Education and is known in Aotearoa New Zealand as "Brick Club". There is an abundance of literature on games-based learning (Bolstad & McDowall, 2019): an umbrella term which includes playing, designing, making and analysing games. Typically used for "building social cohesion in the classroom; giving students a chance to develop and practise collaborative and problem-solving skills; and getting students to think and talk about what knowledge, skills, and capabilities different games required" (p. 12).

Certain parallels may be drawn between a dynamic approach to assessment and playing games. Using Bolstad and McDowall's research (2019), these include: (a) "Instant feedback and opportunities to 'try again'" (p. 8) as feedback cycles encourage

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perseverance; and (b) "Recognition of progress" (p. 8) where information regarding *how* to make progress in a game is seen as more valuable than the pass or fail experience so typical of schooling activities. These characteristics of game-playing positions a dynamic approach to assessment well in the co-construction of knowledge of *how* to play through a mediator scaffolding or mediating learning, whilst focusing on the cognitive and metacognitive skills required and the young person's level of skill development.

Technology based assessment (TBA) using games is worth a mention here. Advocates of computerised gaming promote the assessment and learning built into educational programs. Csapó et al. (2012) argue "The limitations of paper-based assessment have been reached" (p. 237), and that technology-based assessments have the potential to give young people the instant feedback they need, provide feedback that is formative, and save educators the time they don't have for individualised feedback. Nonetheless, despite promises that "there might be an important role for game-based assessment in filling the reliability and validity gap created by the strong emphasis on standardized testing in education" (De Klerk & Kato, 2017, p. 33), this research proposes that formative, individualised assessment through the human mediating-learning interaction is still highly valued in Aotearoa New Zealand. This has become increasingly evident in an age of lockdowns and social isolation due to the COVID-19 pandemic, which has resulted in the increased digitising of education. Colín and Collar (2021) find the value of educators for 21st-century teaching lies not only in imparting the content of the curriculum, but the mediation of content:

> The situation has made us appreciate that success in teaching goes beyond the digitization of didactics; it has to do with the teacher and what he does in an integral way as a person. It is about *how* he faces change, challenges, and *how* he proposes and restructures what, with what, and *how* to do it [emphasis added] (p. 2).

Therefore, although there is a definite shift to technology-based assessment as a more efficient way of assessing young people, there is a place for an interactive assessment process that is individualised and done collaboratively *with* young people and educators to progress learning and modify teaching. This is a role for practitioners in their work

with young people and educators, and an approach to assessment that has the potential to fill the significant gap in cognitive and metacognitive assessment in Aotearoa New Zealand, using culturally-situated games as a tool for assessment.

Summary

Positioning this study within the context of Aotearoa New Zealand Education's system, foregrounds assessment with its concomitant obligations to Te Tiriti o Waitangi/The Treaty of Waitangi, which is embedded in the policies, frameworks and codes of practice which govern practice at the Ministry of Education. Practitioners additionally are cognisant of New Zealand's commitment to the philosophy of Inclusion in education, and consideration has to be given to the impact and role of assessment practices on young people, their educators, family and whānau. With a societal shift towards paradigms of social justice and transformation, there is increasing recognition that inclusion of culturally-situated young people with diverse learning needs is a collective responsibility and that knowledge creation is socially constructed. Therefore, there has been a corresponding tentative shift in assessment practices both in the classroom and those conducted by practitioners working for the Ministry of Education. However, despite the sense that social constructivism is the paradigm to which practitioners aspire, pockets of positivism persist.

Yet, education no longer focuses only on the factual knowledge that students learn from their educators, which is more readily measured using standardised, normed or criterion-referenced assessments. The focus now falls on educators co-constructing knowledge with young people, on developing young people's metacognitive and critical thinking skills which 21st-century skills that researchers have identified as key to ensuring young people's education is "future-fit" (OECD, 2020, p. 11), and assessment now has to be tailored to individual need. Practitioners working with young people in such an education system have also had to adapt and consider the Rights of the Child in assessment.

This study argues that cognition and metacognition in assessment should be foregrounded to align with the aspirations of the education system. It proposes a way

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forward to be a dynamic approach to assessment and, further considering New Zealand's adherence to the philosophy of learning through play, this research suggests that games are well-suited as a tool for assessment. The following chapter reconceptualises the nature of assessment and presents a "rethink" framework to support and operationalise a dynamic approach to assessment.

Chapter 3

Assessment for Change

This chapter intentionally forms a link between the literature review and methodology chapters. As this research aimed to develop and trial a dynamic approach to assessment and framework of cognition and metacognition using games as a tool for assessment, the foundation for participants' involvement was predicated on them attending a professional learning and development session. In this chapter, the RE*Think* framework is presented, the individual components of a dynamic approach to assessment are analysed, and contextually linked to the key competencies of the *New Zealand Curriculum*.

As an inclusive, practice-based qualitative approach to assessment which can inform ongoing mediator-learner interaction through observation, conversation and collaboration, this research on a dynamic approach to metacognitive assessment seeks to (1) further explore the potential of this assessment approach in Aotearoa New Zealand, and (2) contribute to practitioners' practice by offering an alternative and complementary assessment, using games as a tool or activity for this type of assessment.

A dynamic approach can be applied to any assessment, area of the curriculum or activity, which Stringer (2018) describes as "a theoretical and conceptually driven process" (p. 23) and Beckmann (2014) views as a "methodological approach" (p. 21). This study does not attempt to create a "new" or "improved" assessment tool, but rather an approach to assessment that has developed from the theory and philosophy of dynamic assessment. Due to the unfamiliarity of this assessment approach in general, the RE*Think* framework was developed to operationalise a dynamic approach to assessment and position it within practitioners' existing frameworks of practice.

The RE*Think* Framework

Grounded in social constructivism, a dynamic approach to assessment explores changes in learning through mediation. In this study, games were used as a tool to assess learner cognition and metacognition. This framework for assessment was named RE*Think* to prompt practitioners, who support educators and young people in the schooling system, to (a) "re-think" or foreground their position on assessment and assessment practices, and (b) establish a link to the key competencies of the *New Zealand Curriculum*.

The *New Zealand Curriculum* is a "*framework* curriculum … [that] gives signals about the sorts of learning students should experience" (Hipkins et al., 2014, p. 8). Using this principle, the RE*Think* framework offers practitioners an assessment process which signals how to bring about change: (1) how the mediator-learner interaction can be changed; (2) how the activity or task may be manipulated by analysing the mediator-task interaction; and (3) how young people's cognitive and metacognitive skills can be developed to enhance their learning experiences both cognitively and emotionally through analysis of the learner-task interaction.

Bringing about Change

Unlike standardised assessment which compares an individual's performance against that of their peers, a dynamic approach to assessment aims to not only capture individual strengths, unique differences and a young person's processes of learning, but to determine how teaching may be optimised to bring about change (Haywood, 2012). Focusing on not what has been learnt, a dynamic approach to assessment explores a young person's potential to learn (Jeltova et al., 2007) through a shared understanding of *how* they learn and their motivation for change.

When change is at the heart of assessment, the possibilities for future potential are foregrounded: "Assessing the individual's propensity and capacities to change and identifying ways to bring about that change is the promise and potential of dynamic assessment" (Feuerstein et al, 2015, p. 17). Deliberately working collaboratively for

young people to be motivated and confident learners with a well-developed sense of self-efficacy, potentially leads them to life-long learning. These are the responsibilities of those who support young people in education, and a dynamic approach to assessment has the potential to fulfil the "empowerment purpose of assessment" (Lauchlan & Carrigan, 2013, p. 23).

The RE*Think* framework consists of three essential components to bring about change: the mediator-learner interaction (mediation); the mediator-task interaction (activity analysis); and the learner-task interaction (cognitive and metacognitive skill analysis), see Figure 3.1 below. Change sits at the very centre of this framework as a dynamic approach to assessment focuses on changing teaching (mediation), changing the task (using activity analysis) and changing learning (through cognitive and metacognitive skills analysis). These three components will be unpacked in the next sections.

Figure 3.1

The Essential Components of a Dynamic Approach to Assessment
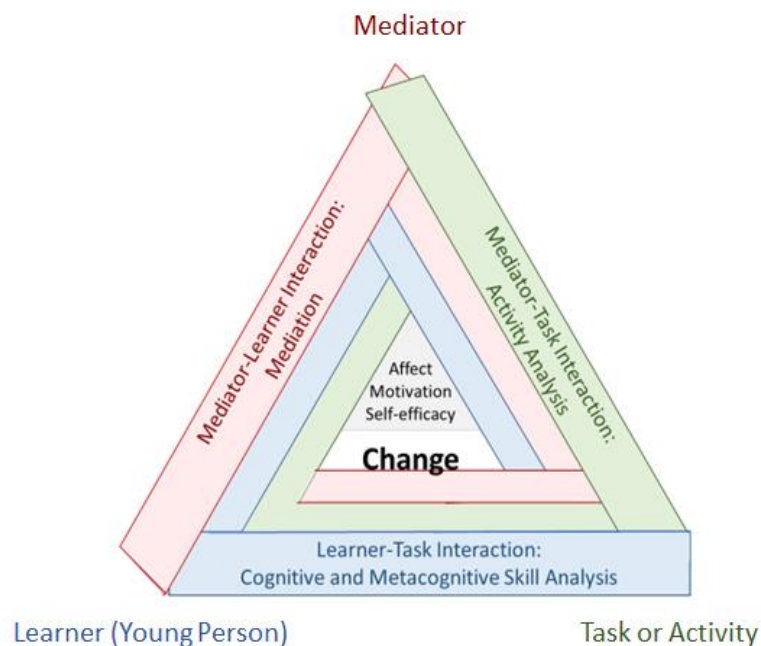
Note. This research is colour-coded, which means that when tables or diagrams are used: (a) analysis of mediation is coral/red; (b) analysis of the task or activity is green; and (c) learner cognitive and metacognitive analysis is blue.

Mediator-Learner Interaction: Mediation

As a dynamic approach to assessment includes mediation as one of the key components, it is necessary to explore this concept more fully. The philosophy underpinning this approach to assessment is the steadfast belief that all young people can learn, and learn to adapt (Feuerstein et al., 2015). Researchers agree that the "intelligence" that matters is the ability to "adapt" and change (Haywood, 2010; McCloskey & Perkins, 2013; Sternberg, 2020). Twenty-first century skills are predicated on the belief that it is essential to equip young people with the skills to adapt and apply knowledge in an ever-changing, technological and challenging world.

The socio-constructivist approach to child development views these skills as heavily reliant on a young person's cultural environment. The nature of the young person's interaction with family, whānau and educators is critical to cognitive development, attitude to learning, sense of agency, and ability to meet societal challenges. However, when young people do not have the developmental abilities or environmental opportunities to independently develop skills through incidental exposure or direct culturally relevant experiences, then learning has to occur through intentional interaction (or the mediated learning experience - MLE), which creates opportunities for "effective learning" (Mentis et al., 2008, p. 10).

Culture is a dimension of learning. Feuerstein et al. (2010) spoke about the impact of cultural deprivation, writing that "one can be deprived of his or her culture, with damaging effects" (p. 66). In their work with holocaust survivors after World War II and recently with refugees internationally, Feuerstein et al. (2010) found that without being grounded within their own culture, where cultural transmission occurs intergenerationally, young people are at increased risk of not developing the "socio-cognitive skills" (Mentis et al., 2008, p. 102) necessary to function effectively within their own communities. With echoes in New Zealand, without mediation of culture, the result is likely to be the loss of cultural ways of thinking and adapting. The loss of a sense of identity and belonging impacts on young people's cognitive, socio-emotional development, and ability to learn (Bevan-Brown, 2006; Macfarlane et al., 2007; Macfarlane, 2015). This has significant relevance for educators, who are likely to have a

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number of young people in their classrooms with limited access to their cultural heritage.

This research uses Feuerstein's terms of "mediation" and "mediator" as opposed to "teaching". "Mediation" in the Feuerstein (2010) sense differs from the traditional concept of "teaching" as follows: (a) In "mediation", adults make sense of learning by co-constructing meaning through a culturally informed lens, guiding the learner with the language, cognitive and metacognitive tools needed to modify their thinking. "Teaching" typically involves demonstrating how an activity or task may be performed, or broken down into steps; (b) "mediation" focuses on the *process* of learning, whereas "teaching" aims to impart knowledge/content; (c) successful "mediation" increases learner independence and a sense of agency by bridging skills into other areas or activity, while "teaching" involves measuring learning success based on test scores or mastery of the subject; and (d) through "mediation", learners develop a sense of competency as their learning is scaffolded by creating conditions that bring them to a successful understanding of the task through change: of the learner's cognitive and metacognitive skills, mediation and task or activity. "Teaching", on the other hand, is more likely to involve correcting incorrect responses, typically providing feedback on the task (Hattie & Timperley, 2007), without necessarily considering process or learner affect (Feuerstein et al., 2010; Mentis et al., 2008).

Both incidental (non-mediated) and intentional (mediated) learning experiences are necessary for "optimal" (Mentis et al., 2008, p. 10) cognitive development as it is through mediation that a young person develops the skills ultimately required for effective self-directed learning. In Vygotskian terms, mediation and the process of learning occur within the learner's zone of proximal development (ZPD) (Ashton et al., 2008). It is certainly acknowledged that educators include many aspects of mediation as described above in their practice, the salient point here being the intentionality and reciprocity of the interaction, and the dynamic interactions between educator and learner (Feuerstein et al., 2002; Mentis, et al., 2008). This finds resonance in Bishop and Berryman's (2006) use of the concept of ako, which is similar to the Feuerstein notion of reciprocity found in the tuakana-teina interaction (Bishop et al., 2003; Bishop & Berryman, 2006).

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In a dynamic approach to assessment, mediation focuses on developing the reciprocal mediator-learner relationship with the goal of identifying the "right kind of interaction" (Mentis et al., 2008, p. x). For Feuerstein et al. (2015), mediation may take many forms, and includes astute observation to guide conversation with learners (which may be non-verbal), being curious about how young people learn, exploring their motivation to learn, and having a keen interest in their emotional well-being. The focus falls on learner, mediator and activity as opposed to the more conventional form of assessment which focuses primarily on the learner. Ultimately, it is an assessment for *change*: the changes in mediation required to bring about the change in learning.

The framework for mediation used in this research is based on Feuerstein's mediated learning experience (MLE). Although Feuerstein et al. (2015) identified 12 criteria of mediation, the three foundational requirements for successful mediation - Intentionality and Reciprocity, Meaning, and Bridging - are given greater emphasis. It is noted that Feuerstein et al. (2015) use the term, "mediation of transcendence" (p. 55), where the term "bridging" has been used in this study. The reason for this is to enhance understanding by using familiar language to explain a concept integral to this approach to assessment, and relate (or bridge) outcomes to different contexts and environments. The three foundational requirements, without which successful mediation cannot occur, are discussed further in Table 3.1 below.

Table 3.1

Mediation: Foundational Criteria (Adapted from Feuerstein et al., 2015)

Mediator-Learner Interaction: Mediation	
Foundational Criteria	*What does this mean?*
1. Intentionality and Reciprocity	*Intentionality*: "when the mediator deliberately guides the interaction in a chosen direction" (Mentis et al., 2008, p. 13) *Reciprocity*: when the learner "gives an indication of being receptive to, and involved in, the learning process" (Mentis et al., 2008, p. 13)
2. Meaning	The activity or task must have purpose, be meaningful and culturally relevant

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3. Bridging	Underlying principles and skills are transferred to different activities and contexts
Assessing change	What was done by the mediator to bring about change? How was the purpose and cultural relevance of the task mediated? What were the underlying principles and skills? How were these principles and skills transferred/bridged to other areas? What is required for change to be maintained? Under what conditions are skills established?

Feuerstein et al.'s (2015) nine other "situational" (p. 53) criteria of mediation were referenced at the workshop (see Table 3.2) as optional ways to mediate a young person's learning behaviour, motivation and affect, when appropriate and relevant. A brief explanation of each is offered as only the foundational criteria (in Table 3.1) are the sine qua non of mediation.

Table 3.2

Mediation: Situational Criteria (Feuerstein et al., 2015; Mentis et al., 2008)

Situational Criteria	_Mediation…_
Competence	develops the learner's confidence in their own abilities
Self-Regulation and Control of Behaviour	develops the learner's awareness of their patterns of thinking which impact on their behaviour
Sharing	encourages collaboration
Individuation	develops the learner as a unique individual, and celebrates diversity
Goal Planning	encourages goal-setting, supports the learner to plan, organise and delay gratification, evaluate the outcome and adjust the goal if needed
Challenge	prepares the learner for change, to cope with complexity, and persevere in adversity
Self-Change	develops the learner's sense of their abilities to embrace change
Search for the Optimistic Alternative	supports the learner to develop the belief that a positive outcome is possible
Sense of Belonging	supports the learner to find their place in the world

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Mediator-Task Interaction: Activity Analysis

The second key component of a dynamic approach to assessment is an analysis of the task, activity or test in order to identify areas for modification and mediation. Using the RE*Think* framework, any activity or task can be analysed but, for the purpose of this thesis, board games (as opposed to more traditional or normative school-related tasks) are used as the activity or task. Traditional games afford practitioners the potential to focus on (a) process and less on content: the lack of curriculum knowledge needed enables young people and practitioners to focus on the process involved in playing; (b) motivation and aspects of affect: when introducing novel components to an interaction, determine how young people manage frustration, and respond to mediation. Also, playing games is mostly perceived as fun, and young people do not necessarily have the same past experiences of failure associated with school tasks or activities; and (c) the interaction of playing games between two people enables mediation.

The framework for analysing games in RE*Think* (activity analysis) was based on Feuerstein et al.'s (2015) Cognitive Map and offers practitioners a way of analysing skills needed. As every task (in this case games) has cognitive and metacognitive requirements (Haywood & Lidz, 2007), analysis is required to determine (a) which skills are needed for young people to engage with the game; (b) how a mediator might manipulate or change the game to bring about cognitive or metacognitive learning; (c) how the mediator might teach or mediate the skills needed through playing the game, and (d) to identify "transfer tasks for the trained processes and strategies" (Hessels-Schlatter, 2010, p. 119) or how skills can be bridged or used in related activities. Transferring skills may be particularly challenging for young people with diverse learning needs who have difficulty generalising skills to different activities and contexts. Therefore, a practitioner's ability to analyse games is essential to knowing how to change both the learning and teaching of the game, and to know *what* is being assessed when a particular game is used. These parameters are listed in Table 3.3 below.

Table 3.3

The Parameters of Task or Activity Analysis and Task-Dependent Mediation (Adapted from Feuerstein et al., 2015)

Mediator-Task Interaction: Activity Analysis				
Parameters	*What does this mean?*			*Mediation: Task-dependent criteria*
Cause	Purpose of the task or activity			Determine and mediate the purpose
Content	Analysis of subject matter			*Change/mediate* the content or subject matter
Context Occurring in:	Cultural context	The environment or situation		*Change/mediate the* context or situation
Composition Which modality:	Visual	Auditory	Motor	*Change/mediate* the composition or modality
	Pictorial	Symbolic	Graphic	
Complexity	Novel - familiar	Easy - complex	Concrete - abstract	*Change/mediate the* complexity, novelty or level of abstraction

Table 3.3. outlines the elements of task or activity analysis. There are five parameters of analysing the task, and these are (a) *Cause*: where the purpose of the activity is identified and mediation involves co-describing this purpose with the learner; (b) *Content*: where the subject matter is analysed in relation to the knowledge and skills of the learner and adapted if not relevant or appropriate for the learner or mediated; (c) *Context*: where, situated within a cultural context, either the situation and/or the environment where learning takes place is analysed, and changed or mediated to accommodate learner needs; (d) *Composition*: where the modality of an activity is analysed and manipulated to carry mediation and facilitate learning; and (e) *Complexity*: where the complexity of an activity is evaluated, and learning is scaffolded either by mediating novelty through links to related activities, and/or by making abstract concepts more concrete to enhance learner understanding. Activity or task-dependent mediation is the mediation or teaching skill required for each of the activity parameters.

Learner-Task Interaction: Cognitive and Metacognitive Skill Analysis

The third key component of a dynamic assessment approach is the identification and mediation of cognitive and metacognitive skills needed by the learner to successfully engage with the task or activity. In the RE*Think* framework, and in an attempt to be as relevant as possible, elements of cognition, metacognition and the skills that impact on young people's learning were identified using the body of research literature on (a) dynamic assessment (for example Feuerstein et al., 2006, 2010, 2015; Haywood & Lidz, 2007; Howie, 2011, 2020; Lauchlan & Carrigan, 2013; Mentis et al., 2008; Stringer, 2018; Tzuriel, 2001); (b) metacognition (including Dimmitt & McCormick, 2012; Dinsmore, 2017; Dunlosky & Metcalfe, 2009; Efklides, 2009, 2011; Flavell, 1979; Hacker et al., 2009; Norman et al., 2019; Schraw & Dennison, 1994); (c) executive functioning (including Gioia et al., 2015; Kaufman, 2010; McCloskey & Perkins, 2013; Meltzer, 2010; Schoenberg & Scott, 2011); and (d) 21st-century learning (including Bialik & Fadel, 2015; Fullan & Scott, 2014; McEachen, 2017). These elements are detailed in Table 3.4.

Although the RE*Think* framework offers the following cognitive and metacognitive skills for practitioners unfamiliar with this area and to support observation during assessment, this framework is not exclusive, nor does it intend to be limiting. As a complementary, principled and structured approach to assessment, practitioners are encouraged to use a framework of cognition and metacognition with which they are familiar across paradigms, such as the *Behavior Rating Scale of Executive Function (BRIEF-2)* (Gioia et al., 2015) which is commonly used by clinical and neuropsychologists.

The RE*Think* framework of learner cognitive and metacognitive skills is presented to support practitioners' observations of the learner-task interaction when using a dynamic approach to assessment and the "thinking" skills involved when young people "explore" their world, or task and activity. The information-processing model is useful for organising these skills. Feuerstein et al. (2015) describe the "three phases of the mental act" (p. 28) being "Input - Elaboration - Output" (p. 28), which Mentis et al.

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(2008) explain as "Taking in information (Reception)", "Working on the Problem (Processing)", and "Communicating a response (Expression)" (p. 114).

In this research, four phases of cognitive activity are presented as being (a) *Engage*: relating to how a learner engages with an activity and gathers information. This includes the ability to focus on cues from the environment; direct attention, discriminate between relevant and irrelevant information, sustain attention to gather sufficient detail, and use of short-term and working memory to process information; (b) *Adapt*: involving the learner's ability to resist impulsivity, to continue when interrupted or stopped; and being cognitively and emotionally flexible to change strategies when needed; (c) *Solve*: relating to a learner's ability to identify a problem and make sense of information gathered. This includes the ability to investigate hypotheses of what created the problem; find alternative strategies and plan the sequence of problem-solving; and (d) *Evaluate*: involving a learner being able to communicate their response. This includes seeing relevance in responses, monitoring for perseverance, accuracy and efficiency; an ability to communicate clearly and appropriately; and consideration of the originality and creativity involved in the response (see Table 3.4 below). However, regardless of the framework used, it is important to note that processing information is not a linear process and cognitive and metacognitive skills may be required at any phase of processing (Feuerstein, 2015).

Analysis of the learner-task interaction also focuses on identifying the cognitive and metacognitive requirements of tasks, as well as exploring the young person's unique learning profile and their capacity to change, ways of bringing about that change through mediation, and bridging these skills into different environments in which to develop their "thinking" skills in all their complexities.

Table 3.4

*Cognitive and Metacognitive Skills of the RE*Think *Framework*

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Learner-Task Interaction: Cognitive and Metacognitive Skill Analysis					
Engage Focus and retrieve information	Attention			Short term & working memory	
	Direct	Discriminate	Sustain		
Adapt Manage impulsivity and be flexible	Resist (impulsivity)		Restore (stop & start)	Be cognitively and emotionally flexible	
Solve Problem-solve	Define the problem	Test hypothesis Find relationships		Plan & organise	Solve the problem
Evaluate Evaluate the outcome	Find the meaning	Copy, transfer with accuracy	Monitor response	Communicate clearly	Be creative

A dynamic approach to assessment is inherently a process of assessment involving the reciprocity of ako to bring about change in learning. Mediation may involve the regulation of behaviour and emotion, while developing young people's metacognitive knowledge, and the cognitive and metacognitive skills and strategies to adapt to all challenges individually, academically and socially.

As this research argues for the relevance of a dynamic approach to assessment to Aotearoa New Zealand education, and to further support practitioners' understanding of this assessment approach, the RE*Think* framework is contextually linked to the key competencies of the *New Zealand Curriculum* as an authentic starting point for assessment, and framework for cognitive and metacognitive analysis, and bridging outcomes of assessment.

Contextualising: The REThink Framework and the Key Competencies

Contextualising involves an analysis of the context of learning, where the skills taught and learnt are transferred and bridged to different contexts and environments. This consolidates the learning of cognitive and metacognitive skills, enables the formation of habits and strengthens change. Different contexts also afford different ways of engaging in an activity, and the ability to adapt a skill and apply knowledge in different areas has

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been identified as one of the essential 21st-century skills (Bialik & Fadel, 2015).

Feuerstein et al. (2015) argue that there is a need for the use of dynamic assessment:

> Given the rapid technological change, and major human factors stresses
> encountered (economical, education, political, cultural, etc.) at no time has there
> been more awareness of the need for the human being to be adaptive and
> responsive to change (pp. 16-17).

The RE*Think* framework of assessment references the key competencies of the *New Zealand Curriculum* as these (a) are familiar to educators and practitioners; (b) offer practitioners an authentic starting point for assessment; (c) provide a structure within which to analyse cognitive and metacognitive skills; and (d) create the potential for assessment outcomes to be useful and meaningful for stakeholders. The RE*Think* framework draws on prior work done by Mentis et al (2008) and is presented in Figure 3.2 below and discussed further.

Figure 3.2

Contextualising Metacognition

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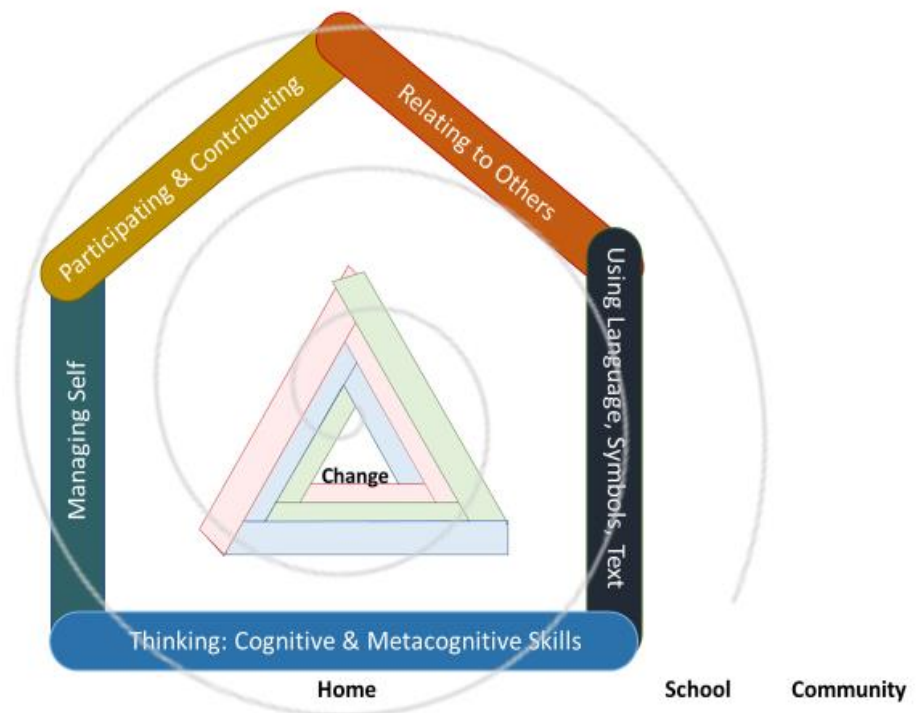
The RE*Think* framework in Figure 3.2 is unpacked as follows:

- At the centre, Change: The young person, with the ability to learn, adapt, and change is at the heart of the assessment process.

- The dynamic assessment triangle (see Figure 3.1): The triangle of mediation, task, and cognitive and metacognitive skills analysis, is integral to understanding how a young person engages in learning through a dynamic mediator-learner interaction process.

- Key competencies of the *New Zealand Curriculum*: Cognitive and metacognitive skills are revealed within the context of each key competency: *Thinking*; *Using language, symbols and text*; *Managing self*; *Relating to others; Participating and contributing*. Hipkins et al. (2014) conceptualise the key competencies as "all cross-cutting of each other. We pull them apart to understand their individual character, but it's also important to stitch them back together when we put them to work in real contexts" (p. 16). Details of how cognitive and metacognitive skills are embedded within each key competency of the *New Zealand Curriculum* are provided in Appendix 4 (4.2 A reference sheet).

- The Korurangi spiral (McLachlan & Huriwai, 2016): Growing from a central belief in change, with one of the outcomes being an increase in learner affect, motivation and sense of self-efficacy across all settings, the Korurangi spiral in Figure 3.2 shows the interrelatedness of the mediator, learner and the task. It portrays how cognitive and metacognitive skills are to be bridged into home, school and community environments through a cultural lens and as the context of change (Feuerstein, 2015), a concept also emphasised and foregrounded by Engeström (2015):

    > a truly high level of metacognitive awareness in learning requires … conscious analysis and mastery of not just discrete learning situations but of the continuous activity context in which the situations are embedded (whether they are situated within school going, work, science, art, or some other activity) (p. 103).

The questions of *how* components interact to produce an outcome, advance learning through mediation, and bridge outcomes into various environments to bring about change, are the focus of a dynamic approach to assessment.

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Putting It All Together: The Relevance for Practice in Education

Informed by Feuerstein et al.'s *Learning Propensity Assessment Device* (*LPAD*), widely regarded as the "mother of dynamic assessment batteries" (Murphy, 2007, p. 317), the RE*Think* framework was developed to make a dynamic approach to assessment accessible to Aotearoa New Zealand-based practitioners working with young learners. Aligning with the attributes of 21st-century learning, based on the key competencies of the *New Zealand Curriculum*, and responding to the demand for assessment models that are authentic, ecological and situated in the "real world", this framework of assessment offers practitioners a way forward to meet these needs using a structured approach of conversation, observation and collaboration to bring about change.

Conversation, observation and collaboration are methods that remain instrumental in this assessment approach.

   Conversation: With reference to Lundy's (2007) conceptualisation of Article 12 of the United Nations Convention of the Rights of the Child (1993), engaging young people in conversation regarding decisions that impact on their education and capturing their voice in assessment, conversation is integral to a dynamic approach to assessment. Conversation also includes discussion with others, such as educators, family and whānau, especially if any are present during the assessment process.

   Observation: Bentley, Boot, Gittlesohn and Stallings (1994) state that observation, as a source of information, has the advantage of providing data first-hand. Observation, especially, allows the practitioner to document what people do, rather than (a) relying on others' interpretations of learner behaviour and educator skills, and (b) avoiding possible negative subjectivity when young people evaluate themselves.

   Collaboration: Collaboration in assessment includes purposefully bringing about change, assessing to tailor interventions, and negotiating change with a young person and all members of their team how identified learning goals may be met using a person-centred approach and strategies which transfer into different environments and cultural contexts.

As an assessment approach, the RE*Think* framework meets Haywood's (2012) recommendations for a dynamic process of assessment that should include:

> direct observation of learning and problem solving as it takes place across different problems, comparison of the effectiveness of different kinds of "help," use of a transfer paradigm, and use of a mediation paradigm (p. 221).

As shown in Figure 3.3 below, the RE*Think* framework as a dynamic approach to assessment involves both the *what* and the *how* of assessment to bring about change. This assessment approach explores how a learner's strategies are used in context, and the content and modality of response required. Using methods of conversation, observation and collaboration, practitioners determine how to:

- develop learner metacognitive regulation and metacognitive knowledge, and build educator capability through analyses of mediator-learner and learner-task interactions using mediation;
- produce efficient problem-solving as every activity or task has metacognitive goals using activity analysis of the mediator-task interaction; and,
- support learners' experience of learning by assessing the non-intellective factors of affect, motivation and learner sense of self-efficacy for their influence on learning, and the mediation required to facilitate a process of ako.

Figure 3.3 links assessment of the *what* (the metacognitive skills in education) on the left of the diagram, to assessment of the *how* (the RE*Think* framework) on the right of the diagram, through practitioners' use of conversation, observation and collaboration.

Figure 3.3

*Relating Metacognitive Skills in Education to Components of the RE*Think *Framework*

Assessing the *What:* Metacognitive skills in education	Practitioners use	Components of the RE*Think* framework as a dynamic approach to assessment: Assessing the *How* to bring about change
Metacognitive Regulation • Learner skills		**The Mediator-Learner Interaction:** Mediation
Metacognitive Goals or Tasks • Activities, games or tasks	Conversation	**The Mediator-Task Interaction:** Activity analysis
Metacognitive Knowledge • Learner strategies and skills	Observation	**The Learner-Task Interaction:** Cognitive & metacognitive skill analysis
Metacognitive Experience • Affect • Motivation • Self-efficacy and sense of agency	Collaboration	**Non-Intellective Factors** • Affect • Motivation • Self-efficacy and sense of agency

Summary

With the underlying philosophy that learning occurs through the reciprocal process of mediation, the focus of a dynamic approach to assessing change is exploring how best to realise a young person's potential to learn and adapt, and become a motivated, capable learner. The RE*Think* framework operationalises a dynamic approach to assessment through analysis of the following components: the mediator-learner interaction, where change can be brought about through mediation; the mediator-task interaction: where manipulating an activity can bring about change; and the learner-task interaction: where change occurs by developing a young person's cognitive and metacognitive skills. The value of this approach lies in its flexibility, and its potential use across context, content, tools and paradigms. It can be applied to the key competencies of the *New Zealand Curriculum* and, as essential 21st-century skills, has the potential to frame outcomes that may be familiar to educators, family and whānau, and bridge skills into the home, school and wider community.

This research aims to provide practitioners working with young people in education with an assessment framework that is ecological, culturally responsive and psychologically safe. Based on conversation, observation and collaboration, this

research responds to the quest for an alternative and complementary assessment framework for practitioners in Aotearoa New Zealand; one that is accountable, has the potential to improve teaching and learning, and co-construct knowledge with young people regarding how they learn that will foster lifelong learning (Hipkins, 2007) to become "future-fit" (OECD, 2020, p. 11) 21st-century learners.

A dynamic approach to assessment using the RE*Think* framework was presented to participants of this research as part of a workshop called, *A Game-Changer for Assessment*, and research progressed as detailed in the next chapter.

Chapter 4

Methodology

This thesis explored practitioners' experiences learning about and using a dynamic approach to assessment in their work with young people and educators. As this involved rich descriptions of practitioners' experiences, a qualitative methodology that could capture a rich, nuanced exploration of assessment *in* action, and reflection *on* assessment, through the practitioner lens was used.

This chapter is structured following the research process represented in Figure 4.1: (a) the methodological framework; (b) the research design; and (c) the strategies used throughout this research to enhance research vigour. The core beliefs and ethical considerations which influenced and informed this study are woven throughout as they relate to the different areas and stages of research, and further discussed below.

Figure 4.1

The Research Process

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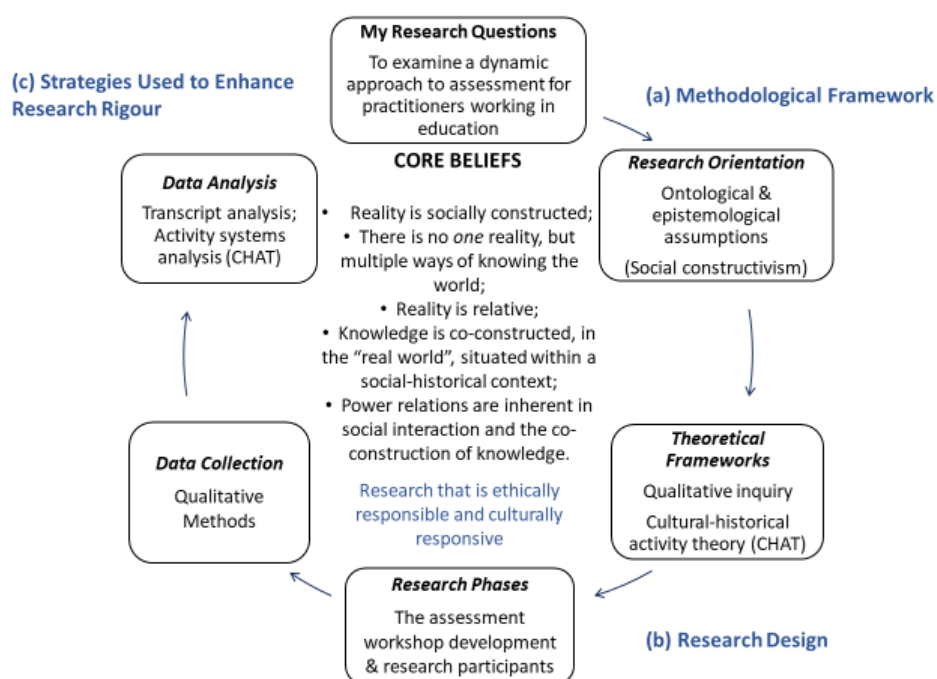
Although Figure 4.1 represents what could appear to be a neatly systematic approach, qualitative research is often "messy, complex and non-linear" (O'Dowd, 2018, p. 383). This research required a circular and reflexive process – a constant grappling with concepts, ideas and perspectives as the process flowed backwards and forwards until understanding of the research topic emerged (Charmaz, 2014; O'Dowd, 2018).

Methodological Framework

How understanding emerges is determined through the lens of a worldview, *how* we understand reality, and how we acquire knowledge *about* reality are fundamental to how we approach research. This section details the methodological framework used for this study, providing descriptions (a) the research orientation; and (b) theoretical frameworks.

Research Orientation: Ontological and Epistemological Assumptions

Aligning with the qualitative approach, I brought my own multiple worldviews to this study, comprising a set of core beliefs about reality which became the paradigms of my research. These paradigms determined the process of inquiry and provided me with the tools of research to help make sense of the world (Butler-Kisber, 2018; Wiersma, 2000). The orientation of this research was positioned within the postmodern era with a social constructivist perspective of reality, viewed through the lens of "social justice" and the search for "legitimate knowledge" (Mertens, 2015, p. 21).

This research took the ontological position that the nature of reality is subjective and relative (Butler-Kisber, 2018; Lincoln & Guba, 2013). In this view, there is no *one* reality or *a* perception of reality. Instead, multiple constructions of reality are created through individual experiences situated within social contexts. This premise enabled me to explore the relative and subjective realities of practitioners' experiences and reflections on their assessment practices.

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As the realities of experience invite questions of how we come *to know* and how knowledge is created, it follows that there are many ways of *knowing* reality. The epistemology of the social constructivist paradigm explores *how* knowledge is known (Butler-Kisber, 2018), and questions the relationship between "knower and the knowable" (Lincoln & Guba, 2013, p. 37). Social constructivists propose that knowledge is co-constructed through meaningful interaction with others (Merriam & Tisdell, 2016; Mertens, 2015), "mediated through language / tools" (Kerwin-Boudreau & Butler-Kisber, 2016, p. 956), and the situatedness of this interaction gives meaning to knowledge. Within this situatedness of socially-constructed practice, culture and society are foregrounded in the construction of knowledge.

Educational research is also influenced by, and viewed through culture, values and the belief systems positioned within social, historical and cultural contexts of time and place (Bishop & Berryman, 2006; Cram & Mertens, 2016; Feuerstein et al., 2002; Lee, 2011). In order for the nuanced practices of assessment in education to be understood, dimensions of *culture*, *time* and *place* are enmeshed within the power relationships inherent in every society and the multiplicity of realities (Cram & Mertens, 2016). Power relationships between professionals, between educators and learners, and across the social environment within which assessment takes place are inevitably entwined in the construction *of* knowledge, so there can be no neutrality *in* knowledge, either at an individual level or within a collective community.

Consequently, social constructivists increasingly locate their research within paradigms that acknowledge and investigate relationships of power to become advocates for social justice (Mertens, 2015). Social justice and children's rights are particularly relevant when engaging in research with or about children, and in this case with contentious issues around assessment of learning. These include the use of standardised assessments with young people who may be culturally disadvantaged through the administration of such assessments and marginalised by the results, by the schooling system and educator, family, whānau and practitioner expectations.

This research aimed to support practitioners to explore how their assessment practices could be enhanced by working collaboratively and respectfully with a diversity of young

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people with a range of skills and abilities, whilst recognising the power relationships that are embedded within assessment activities. It was anticipated that by co-constructing legitimate knowledge, practitioners could negotiate a pathway of inclusion through a process of assessment, thus enabling practitioners to be culturally responsive and embrace diversity.

The research questions for this study focused on the in-depth nature of a dynamic approach to assessment in educational contexts and explored how practitioners adapted, reacted, or reflected on their assessment and professional practice. Using practitioners' descriptions of their experiences and reflections on assessment, emphasis was placed on participant expression and perspective to "make meaning" (Butler-Kisber, 2018, p. 28) of their practice. This research was not grounded in the attempted objectivity of *one* reality that typically characterises scientifically-based quantitative research. Rather, it focused on "situated activity" (Mertens, 2015, p. 236), positioning both research participants and the researcher *in* the real world as participating members of the research(ed) community to create "meaning".

A further dimension of this research was establishing a means to give potentially marginalised practitioners a voice as advocates of assessment practices that co-construct knowledge of young people's learning: through an approach to assessment that has moved from the *what* of standardised testing to an advocacy of collaborative assessment that describes the *why* and *how* of learning and teaching.

This approach to assessment, by its very nature, is an activity embedded within social constructivism: knowledge is co-constructed through shared conversation, observation and collaboration that occurs between learner and mediator, mediator and supportive family and whānau. It aims to transform not only the perceptions of young people about their own learning and skills, but possibly challenges (or confirms) educator, family and whānau opinion of learner ability, possibly even the young person's perceptions of their own identity as learner.

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Theoretical Frameworks

Qualitative research is an effective approach when researchers are interested in describing and understanding experiences through narrative and dialogue (Merriam & Tisdell, 2016; Mertens, 2015; Wiersma, 2000). Widely used in the social sciences, health, psychology and education when the nature of research is emergent (Butler-Kisber, 2018; Yamagata-Lynch, 2010), qualitative inquiry and cultural-historical activity theory (CHAT) are particularly relevant. They add value when the focus is on examining people's reactions and experiences in practice-based settings (Davies et al., 2008) and "real-world complex learning environments" (Yamagata-Lynch, 2010, p. 1).

Qualitative Inquiry. Qualitative inquiry and qualitative research have a different function to the empiricism of a positivist (or quantitative) research paradigm (Butler-Kisber, 2018; Denzin & Lincoln, 2018). Qualitative inquiry evolved from a rich history of research which grew from seeing reality as a dualistic mind/body state (i.e., the premodern era), to a belief in the ability of scientific study to explore reality objectively (i.e., the modern era), to an understanding that realities are created through social interaction (i.e., the postmodern era) (Butler-Kisber, 2018). Although "Inquiry" is widely used as both methodology and approach in the research literature, in this thesis qualitative inquiry was used as "a reflective process" (Agee, 2009, p. 431), seeking to understand and describe what people did, and discover the meaning of their actions (Erickson, 2018; Lincoln et al., 2018). Therefore, emerging from the social constructivist paradigm, reality is understood to be created through interaction as *process* rather than product. This means that the co-construction of knowledge is framed by social context, culture and history. Accordingly, the analytical framework of cultural-historical activity theory (CHAT) was considered most suited for its responsiveness to both the situatedness of the research activity, as well as exploring the individual practices of assessment.

Cultural-Historical Activity Theory (CHAT). Cultural-historical activity theory (CHAT) has particular value as a framework to foreground complex activity systems that are practice-based, and to describe the influences that impact on activity.

Developed by Engeström, CHAT is based on the work of several scholars, specifically Vygotsky's cultural-historical approach, Luria's cross-cultural research, and Leont'ev's work on activity theory (Davies et al., 2008; Engeström, 2001).

Engeström used Vygotsky's work as the foundations for CHAT, basing his activity system on Vygotsky's triangle of *mediated action*. Here, the stimulus and response of purposeful human behaviour are mediated by artefacts (tools), situated within a wider cultural-historical context. Engeström's addition of mediators as factors of the cultural-historical context that influence activity include *community members*, the *division of labour* within a community, and guiding *rules* (Koszalka & Wu, 2005) (see Figure 4.2). Without consideration of these additional mediators, the *how*'s and *why*'s of subject transformation in a cultural-historical context would be difficult to explain (Lee, 2011).

Figure 4.2

Relating Vygotsky's Model of Mediated Action to Engeström's Structure of a Human Activity System

Vygotsky's model of mediated action

S (Subject)   (Object) R

X
(Mediating artefacts / Tools)
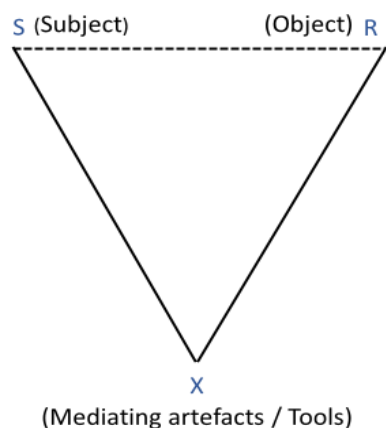
(Engeström, 2001, p. 134)

Engeström's structure of a human activity system

Tools and signs

Subject   Object → Outcome
Sense / meaning

Rules   Community   Division of labor
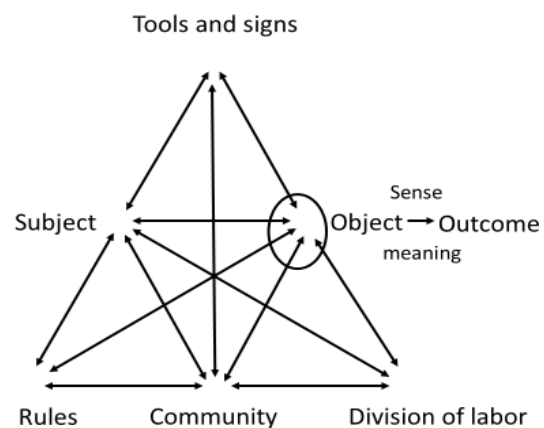
(Engeström, 2001, p. 135)

Therefore, CHAT foregrounds human activity as goal-oriented and purposeful, mediated through culture and influenced by history and socio-political forces (Engeström, 2001; Yamagata-Lynch, 2010). The activity system examined becomes the unit of analysis,

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consisting of six core components, i.e., the motive, subject, object, outcome, tools, rules, community and division of labour (briefly defined below in Table 4.1). In this research, as a "contextualised activity" (Baird, 2018), the activity system of assessment was identified as the unit of analysis. The core components of this activity system are noted in Table 4.1., and further discussed in Chapter 5: Results.

Table 4.1

Core Components of the Activity System of Assessment

Activity system component	Brief definition	In this research
1. Unit of analysis	Human activity "embedded within its social context" (Yamagata-Lynch, 2010, p. 6)	The activity system of assessment
2. Motive	The reason why individuals participate in an activity	
3. Subject(s)	The individual(s) involved in the activity	Practitioners working for the Ministry of Education (i.e., Psychologists, SLTs, SEA, RTLB)
4. Object	The goal of the activity	Assessing young people
5. Outcome	The "end result of the activity" (Yamagata-Lynch, 2010, p. 2)	
6. Tools & Mediating artefacts	Resources "for the subject in the activity" (Yamagata-Lynch, 2010, p. 2)	The RE*Think* framework as dynamic approach to assessment using games
7. Rules	The formal or informal rules that impact on how the activity takes place	For example, Ministry of Education rules, professional guidelines and codes of practice, etc.
8. Community	The "group the subject belongs to while engaged in the activity" (Yamagata-Lynch, 2010, p. 2)	For example, young people, family & whānau, educators, practitioners from other agencies and colleagues
9. Division of labour	How "tasks are shared among the community"	Who assesses? Who picks up the referral?
10. The oval	"The object is depicted with the help of an oval indicating that object-oriented actions are always, explicitly or implicitly, characterized by ambiguity, surprise, interpretation, sense making, and potential for change" (Engeström, 2001, p. 134)	

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CHAT has evolved through "generations" of development and intent, with the more recent fourth-generation of CHAT exploring the possibility of developing interventionist approaches based on the concept of expanded learning (Lee, 2011; Engeström & Glăveanu, 2012); third-generation CHAT embeds the activity system within, and interacting with, networks of other systems (Davies et al., 2008; Engeström & Glăveanu, 2012). Although these latter iterations of CHAT are invaluable for educational research, this study used second generation CHAT.

Second generation CHAT allowed for the tensions created within systems to be exposed enabling insight into change, possible resistance to change, and the specific aspects within a system that can create or deter the potential for transformation. A key feature of this research, therefore, was to expose the dynamic interplay of participants' responses within their own systems of activity. Given that second generation CHAT focuses on understanding the activity system and the impact of change *within that system,* it was seen as the most relevant framework to answer my research questions.

Research Design

This research consisted of three phases, all of which contributed to understanding participants' experiences of learning about and implementing a dynamic approach to assessment. Phase 1 involved designing and developing this research; Phase 2 introduced research participants to the RE*Think* framework to operationalise a dynamic approach to assessment at the workshop, *A Game-Changer for Assessment*; and Phase 3 analysed participants' reflections of their learning in practice (see Table 4.2). (A summary of the number of practitioners who participated at every phase of this research is provided in Table 4.4.)

Table 4.2

Phases of Research

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Phase 1: Designing and Developing This Research		
Workshop Development	**Data Collection**	**Research Participants**
A Game-Changer for Assessment • The RE*Think* Framework • Games as tool for assessment • Resources	Document Review	Identifying and Recruiting Participants
		Negotiation with the Ministry of Education: • Met with the Manager (Practice and Implementation) • Consulted with the Practice Advisor: Offered a *Game-Changer for Assessment* workshop for the PLD Plan • Practitioners were recruited to participate in this reseach
Phase 2: Introducing This Research to Participants		
Resource Development at the workshop: Games as tool for assessment		**Further Participant Recruitment:** Participants were recruited for ongoing research
Phase 3: Analysing Participants' Reflections of Learning in Practice		
Ongoing Research Participants: 3 and 6 months post-workshop		
Data Collection: Qualitative Methods	Questionnaires	Semi-structured Interviews
Data Analysis	Thematic transcript analysis	Activity system analysis with CHAT

Phase 1: Designing and Developing This Research

Although this phase of research development is described sequentially, the reality consisted of several processes occurring simultaneously. These included developing the workshop, *A Game-Changer for Assessment*, starting the data collection process by reviewing relevant documents, and recruiting research participants.

Workshop Development: A Game-Changer for Assessment. This workshop was developed for practitioners to trial a different way of assessment as a number of practitioners working for the Ministry of Education (Learning Support) were unfamiliar with the concept of dynamic assessment and had little understanding of the potential value this form of assessment could offer young people, educators, family and whānau. Workshop material included: (a) The RE*Think* framework to facilitate participants' understanding of a dynamic approach to assessment and to offer structured frameworks for conversation, observation and collaboration for change in learning and teaching (described in detail in Chapter 3); (b) games as tool for assessment; and (c) resources to support implementation.

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Resources. Specific resources were developed for use at the workshop and given to participants to support their learning and implementation during the research process (see Appendix 4). These included:

    4.1 A set of cards, linking the key competencies of the *New Zealand Curriculum* to the RE*Think* framework of learner cognitive and metacognitive skills, which could potentially be used in assessment with young people to identify learning goals.

    4.2 A reference sheet, expanding on the information provided on the set of cards. Although participants indicated that a script would be helpful, this is contradictory to the principles of a dynamic approach to assessment, which relies on the flexibility (and creativity) of the practitioner to be able to bring about change.

    4.3 A template for recording observations.

    4.4 An interactive website was set up to give participants access to journal articles, PowerPoint presentations, templates, and to provide them with an opportunity to engage with other research participants after the workshop.

Document Review. Policy documents were consulted regarding assessment and standards of practice for practitioners working for the Ministry of Education and registered with the New Zealand Psychologists Board. These documents included, for example, the "Position Paper" (Ministry of Education, 2011a), "Specialist Service Standards" (Ministry of Education, 2015a), "The Behaviour Framework" (Ministry of Education, 2012), "Communication Practice Framework" (2013b), the *Code of Ethics* (New Zealand Psychologists Board, 2012), and guidelines on psychometric testing (New Zealand Psychologists Board, 2015; 2020). These documents were consulted to understand the frameworks of assessment recommended for practitioners working with young people with diverse needs in New Zealand, and to position a dynamic approach to assessment within these frameworks of practice which supported negotiation with the Practice and Implementation Team.

Recruiting Research Participants. As my research questions involved assessment practices of practitioners working with young people and their educators,

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practitioners from the Ministry of Education (Learning Support) were identified as the body of professionals most likely to be interested in a dynamic framework of assessment and explore the relevance and value of this method.

Recruiting participants in a city in Aotearoa New Zealand required negotiation with the Ministry of Education. After meeting the Manager (Practice and Implementation), my research proposal was submitted to the wider Management Team. The Team agreed for this research opportunity to be offered to practitioners in Learning Support and to support attendance at a three-day workshop, *A Game-Changer for Assessment*, held at Massey University. Permission was also granted to further recruit research participants willing to engage with ongoing, in-depth research after the workshop, and the Ministry agreed to support two interviews.

The workshop was included on the Ministry's Professional Learning and Development (PLD) Plan (see Appendix 1). This ensured the random and voluntary recruitment of psychologists, speech-language therapists (SLT), advisors of deaf children (AODC), kaitakawaenga and special education advisors (SEA), who support learners of eight years and older. One resource teacher: learning and behaviour (RTLB) asked to participate in this study when they heard of the workshop. Early intervention teachers (EIT) were not included in recruitment for the purposes of this study: firstly, as this research involved a dynamic assessment of metacognitive skills, the developmental stage of these skills evident in early childhood is emerging; and secondly, consideration was given to the educational environment of young people, and the practitioners who work within the School Sector.

Ethical considerations: This research involved practitioners working in education and with young people, which heightened the need for ethical considerations prior to, and during the research process. The research obtained full ethics approval through Massey University's Human Ethics Committee (Approval number: SOB 17/24). Prior to the start of this study, ethical considerations associated with this research were discussed with my supervisors (both of whom are registered psychologists), colleagues and the cultural advisor at the Ministry of Education (Learning Support, Tai Tokerau District), who were independent of this research.

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Sixteen practitioners applied to attend the workshop through the PLD Application Process. Once an application was received, the Practice and Implementation Lead contacted each participant and e-mailed an information sheet which provided details of this research (see Appendix 2). Particular attention was given to the recruitment of practitioners from the Ministry of Education Learning Support team, many of whom were personally known to me (the researcher). This was resolved in two ways: (a) through the voluntary nature of recruitment and (b) through excluding practitioners from my current place of employment. Furthermore, participants were recruited from a different Ministry working region than my own, and through advertising within the Ministry of Education's Professional Learning and Development Planner (Learning Support).

Phase 2: Introducing This Research to Participants

This phase of the research involved (a) introducing participants to the RE*Think* framework and a dynamic approach to assessment; (b) participants developing their own resource using games as a tool for assessment; and (c) recruiting participants to participate in ongoing research.

      Participants Who Attended the Workshop. Sixteen practitioners registered to attend *A Game-Changer for Assessment* and provided consent for their data gathered during the workshop to be used for this phase of the research. Of the 16 participants, seven were speech-language therapists (SLTs), seven registered psychologists, one special education advisor (SEA), and one resource teacher: learning and behaviour (RTLB). All 16 participants worked for the Ministry of Education. Half of the practitioners identified as European New Zealanders/Pākehā and two participants as New Zealand Māori. The remaining practitioners identified with a diversity of different cultures including Filipino, Pasifika, Asian New Zealand, Middle Eastern, Latin American and African (specifically South African) ethnicities. These practitioners support young people from the New Zealand Māori, Pākehā, Pasifika and Asian New Zealand populations, which reflects the multicultural nature of the city within which they work.

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Twelve of the 16 practitioners completed their qualifications in New Zealand, and four were overseas-qualified. These qualifications ranged from Bachelor degrees through to PhD level, with the majority of participants holding postgraduate Master's degrees. Practitioners also had a wide span of experience, ranging from seven practitioners who were at the beginning of their professional careers (i.e., up to three years' experience), five who had been practising for three to 10 years, and four practitioners who had more than 10 years' experience (see Table 4.3). These practitioners worked with a range of children and young people with individual needs and across settings.

Table 4.3

Demographics of Research Participants

Participants		SLTs (n=7)	Psychologists, SEA, RTLB (n=9)	Participants (n=16)
Country of Professional Training	NZ	5	7	**12**
	Overseas	2	2	**4**
Highest qualification	PhD		1	**1**
	PGDip	1	7	**8**
	Masters	3	1	**4**
	Bachelor	3		**3**
Length of practice	0 - 3 yrs.	3	4	**7**
	3 - 10 yrs.	2	3	**5**
	10yrs +	2	2	**4**

Resource Development: Games as a Tool for Assessment. Participants had the opportunity to bring culturally appropriate games to the workshop to develop their own skills of analysing activities (or games), learner cognitive and metacognitive skills, and the mediation/teaching required to teach cognition and metacognition using games. At the workshop, participants were encouraged to work together to analyse games and develop a compendium which they could use in their assessments - an example is

included in Appendix 4 (see 4.3). These were added to a website created to give participants the ability to share these resources and engage with other participants in the research project, using games as a tool for assessment.

Further Participant Recruitment. Practitioners were invited to participate in a trial using a dynamic approach to assessment, with the further option of either participating in, or opting out of ongoing research.

Ethical considerations: The nine participants who chose to engage in ongoing research were informed of their right to withdraw at any time, without prejudice, as this was a study completed independently of the Ministry. The researcher gained informed consent in written form and these signed forms were stored securely (see Appendix 3).

Phase 3: Analysing Participants' Reflections of Learning in Practice

Phase 3 details (a) the commitment of participants to the ongoing research, three and six months after the workshop; (b) the methods of qualitative data collection, using questionnaires and semi-structured interviews; and (c) data analysis using thematic transcript analysis and activity systems analysis with CHAT.

Ongoing Research Participants. After the workshop, the number of the research group changed from 16. Initially, nine practitioners gave consent to participate in the ongoing research for a period of six months and agreed to two semi-structured interviews at three-month intervals. Having a three-month interval between interviews was necessary to enable participants to reflect, practice and use their skills in context in order to be able to discern the implications of their practice, and the behaviours of those around them. Having a period between interviews gave participants time to reflect on their experiences (Butler-Kisber, 2018). Although nine practitioners initially engaged with this research, after three months and the first interview, three participants withdrew for personal and professional reasons. Six participants, therefore, participated in the second round of interviews and one requested a third interview six months thereafter, which was conducted in the spirit of dynamic assessment and responsive interaction.

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In summary, the number of research participants and method of data collection are tabled as follows (see Table 4.4):

Table 4.4

Workshop Attendees who Participated in Ongoing Research

Participants	Workshop attendees	Workshop attendees who participated in ongoing research		Workshop attendees not part of ongoing research
Time frames	Immediately before and after the workshop	3 months post-workshop	6 months post-workshop	6 months post-workshop
Data collection methods	*Questionnaires* January 2018	*Interview 1* April 2018	*Interview 2* July 2018	*Questionnaire* July 2018
Total:	**16**	**9**	**6**	**3**
SLT	7	3	2	3
Psych	7	4	2	-
RTLB	1	1	1	-
SEA	1	1	1	-

Ethical considerations: Due to the small number of participants, the results from all interviews were combined to ensure anonymity of the participants within the research process. This ensured no participant could be identified without consent, and anonymity for all documentation and write-up of research was assured.

Data Collection: Qualitative Methods. As a situated activity, rich descriptions and depth of participants' feelings, experiences, actions, and reflections of their assessment practices were elicited using semi-structured interviews, and activity systems analysis (CHAT) used to understand the complex data sets. The survey presented to the participants did collect quantitative data in addition to qualitative data, and these responses are presented in the following chapter.

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Questionnaires. All sixteen participants completed an online questionnaire to outline their current assessment practice prior to the start of the workshop, and a mini questionnaire immediately after the workshop (see Appendix 5). On completion of the workshop, the participants were asked to implement a dynamic approach to assessment using games in their work with young people, and to complete an online mini questionnaire at the end of a six-month period detailing their experiences of using this approach to assessment.

An online survey (using *Survey Monkey* software) was used to develop all three questionnaires (i.e., pre-workshop, post-workshop, and six months post-workshop). These questionnaires were useful for exploring participants' attitudes, opinions and perceptions of assessment practices (Artino, La Rochelle, Dezee, & Gehlbach, 2014), and consisted of both open-ended and closed questions (Thwaites Bee & Murdoch-Eaton, 2016): open-ended questions provided rich qualitative data, whilst closed questions elicited both quantitative and some qualitative data.

As identified in the literature (Gillham, 2011; Mertens, 2015), the advantages of using questionnaires, especially whilst participants were on campus, included low cost, anonymity of responses, no interviewer bias and, just prior to the start of the workshop, an increased likelihood of engagement with questions. There were some disadvantages in administering questionnaires immediately after the workshop as some participants needed to leave or were possibly tired from their workshop participation. Questions were also vulnerable to participant interpretation, without the possibility of further clarification from the researcher. Six months after the workshop, the disadvantage of using an online questionnaire was significant as there was an exceptionally low response rate and, where there were responses, these were extremely limited and mostly incomplete. However, this was not entirely unexpected, and reported to be a common experience of researchers engaged in any form of longitudinal study (Gillham, 2011).

Semi-structured Interviews. Interviews are common forms of data collection in qualitative research (Charmaz, 2014; Wiersma, 2000). Through interviewing

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experiences are made visible, and understandings become explicit. Semi-structured interviews offer the researcher the structure to find answers to research questions, but also the space to give participants the ability to share experiences beyond the research focus (Galletta, 2012). Semi-structured interviews provide opportunities for the interviewer to gain in-depth information not easily observed or captured through questionnaires (Mann, 2016). These interviews create "openings for a narrative to unfold, while including questions informed by theory possibilities" (Galletta, 2012, p. 1).

A framework was developed to serve as a semi-structured guide for interviews regarding practitioners' use of the RE*Think* framework as a dynamic approach to assessment (see Figure 4.3). This framework consisted of the interrelated aspects of practitioners' experiences, of their (1) use of assessments, and the factors that influenced or impacted on their practice; (2) collaborative interactions with young people during assessment; (3) conversations with educators; (4) observations of young people in interaction with educators and their learning in the classroom; (5) use of games as tool for assessment; and (6) use of links to the key competencies of the *New Zealand Curriculum*.

Figure 4.3

The Framework Used for Semi-Structured Interviews
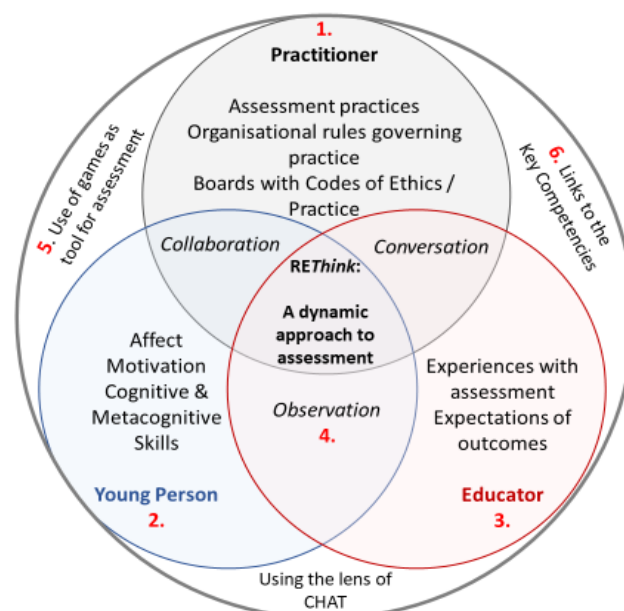
Interview prompts informed by CHAT further aligned each interview with the theoretical framework of this study. Prompts, for example, included the following:

Activity system component	Typical questions / prompts
Activity	**Assessment as unit of analysis**
Subject	Who conducted the assessment?
Object	What was the purpose of assessment?
Tools (Mediating artefacts)	What assessment tools or approaches were used during the period under review? • "How is dynamic assessment (as trialled) different from other ways you assess?" • "Could we explore your use of games for any part of the assessment?"
Rules	What cultural norms, organisational rules and professional guidelines impacted on assessment practice?
Division of labour	Who was responsible for assessment?
Community	Who was involved in the process of assessment?
Outcome	What were the outcomes of assessment for young people?

Although this framework was developed (Figure 4.3), participant actions and experiences ultimately determined the nature of the interview. As the researcher, I made a conscious effort to "honour the emergent 'openings' that not only help shape and shift the direction of our research but also allow us to be shaped by it" (Rodricks, 2018, p. 786). Interviews, therefore, became exciting, dynamic and mediational interactions: of discovering participants' existing belief systems, building on their prior experiences, and co-constructing possible alternative assessment processes.

Working as a trained educational psychologist within the Ministry of Education, I came with the advantage of working in the 'world' of my research participants. In this way, I was able to view the situation from the perspective of an 'insider', whilst not claiming to replicate their experiences in their working lives. Therefore, I held a privileged position: to capture the rich experiences of research participants within multiple "realities"; and being a reflective practitioner. I could observe the practitioners' (participants) experiences, furthering my understanding of their interpretations of a dynamic

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approach to assessment. However, with this approach to research, the ethical responsibilities regarding my research participants were heightened.

Ethical considerations: When interviewing participants, I was particularly cognisant of the principles of Te Tiriti o Waitangi/The Treaty of Waitangi, which informed the interview process. This included an awareness of partnership, participation and protection in my relationship with research participants. A cultural advisor with te ao Māori [Māori worldview] knowledge from the Ministry of Education was consulted to ensure appropriate methods of accountability, and to guide my interaction with research participants, including those who identified as Māori. This advice included being particularly mindful of introducing myself, identifying my background, finding the connections that brought us together in this research, and keeping participants informed of every stage of the research process.

To minimise disruption to participants' work commitments, interviews of approximately one and a half hours were held at Ministry of Education offices during school holidays when they were less likely to be working with educators, family, whānau and young people. Prior to both interviews, informed consent was revisited and gained with each participant, and the principles of partnership, participation and protection guided the interview process. This meant that the researcher and participants co-constructed the interview, the researcher following paths created by participants, listening actively and seeking clarification when issues were alluded to during the interview, rather than making assumptions (Cram, n.d.). Furthermore, to ensure participants were fully informed of the nature of the interview, a semi-structured interview schedule was provided to the six participants who had agreed to a second interview to give them time to consider their responses.

All interviews were audio-taped with permission from the participants: first, because it was impossible to capture all information at the time of the interview and second, making notes during interviews proved to be distracting for research participants, and detracted from the researcher's attention. However, practitioners were informed of their right to request the recorder be switched off at any time. Interviews always ended with an expression of gratitude for participants' gift of time to this research and an

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invitation was extended to them to contact the researcher at any time for six months after the final interview.

The semi-structured nature of the interview generated possibilities for trajectory perspectives or different meanings to be explored regarding the topic of research (Galletta, 2012). This also allowed for greater insight into respondents' feelings, attitudes, motivation, beliefs and perceptions of activities (Kallio et al., 2016). The challenge of using semi-structured interviews was that they were time-consuming to analyse, transcribe and code, and also required research participants to allocate time for both the actual interviews, and subsequent review of transcripts. Participants had ownership of every interview, gave their permission to the researcher to use the reviewed transcripts, and all their input was valued as taonga [treasure].

Data Analysis. This section explains how data analysis of all components within an activity system required thematic analyses of the data sets. Whilst this is typical of qualitative inquiry, emerging from the constructivist paradigm is the tacit understanding that there is no objectivity in data: participants' perspectives are individual and contextualised, data cannot be generalised, and data are sensitive to social issues of injustice (Charmaz et al., 2018).

Transcript Analysis: Identifying Themes. The value of transcribing interviews verbatim creates opportunities for the researcher to become very familiar with the *voice(s)* of the participant, their views, and the links across the interview process. It allows for initial and ongoing analysis, and to listen to inflection and emotional content which also adds meaning to the text. Butler-Kisber (2018) argues that transcribing is potentially loaded with power imbalances, always limited and frequently biased and, therefore, it is not a neutral activity.

Ethical considerations: All interviews were transcribed verbatim by the researcher and to avoid any bias, I engaged in constant reflection and questioning during the process of transcription. Transcripts were given to participants for their feedback, with invitations to comment and engage with the researcher to clarify positions, ensure

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experiences were accurately portrayed, and to delete any information from the transcript after the interview. Participants were made aware that interviews in their entirety would not be used, that quotes would inform the body of research, but that these would be used in such a way as not to violate confidentiality and anonymity.

Through the process of transcription of both interviews and analyses of the surveys, themes emerged and were developed using the framework of research questions and context. Codes were generated, and themes were manually organised using the software programme nVivo 12. This enabled the researcher to review and compare participants' responses, develop themes that could be generalised, and identify individual responses that did not concur with the majority. Throughout the results chapter, participant quotes were used to illustrate these themes.

Over the course of six months, participants shared their understandings and experiences of using a dynamic approach to assessment. In addition, they also revealed the multiple perspectives of how their assessments played out, identified the power relationships inherent in assessment, and the broader dynamics within the context of their work environments. Through activity systems analysis, these themes revealed "systemic implications" (Yamagata-Lynch, 2010, p. 7), which were mapped onto a CHAT framework for the analysis of the diverse activity systems of practitioner-participants.

Activity Systems Analysis with CHAT. Through activity systems analysis, the diverse and complex activity systems of practitioner-participants were revealed. CHAT offered a methodology for contexts and activities to be examined, and to explore the challenges, tensions, contradictions and opportunities that were reflective of the power dynamics among people, and between people and organisations. The analysis process offered a way of working with complex data sets that were manageable, explored the implications of tensions and contradictions for an activity system situated in a particular period of time and culture, and examined the interactions between the components of the activity system (Foot, 2014; Yamagata-Lynch, 2010).

As this study introduced new elements (the RE*Thin*k framework as a dynamic approach,

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and games as tools for assessment) into an existing system of activity, the *motive*s that initially determined participants' choice of assessment, their reasons for learning about a complementary or alternative approach to assessment, and the potential for change that occurred in their assessment practice were explored. According to Engeström, change is more likely to occur when there is either tension in a system or dissatisfaction exists within the status quo, which then serves as a catalyst for people to actively seek an alternative way to engage in an activity system. In this way, people are motivated to restore alignment, often through amending or changing their practice.

In this research, the activity system of assessment is represented in Figure 4.4 below.

Figure 4.4

The Existing Activity System of Assessment
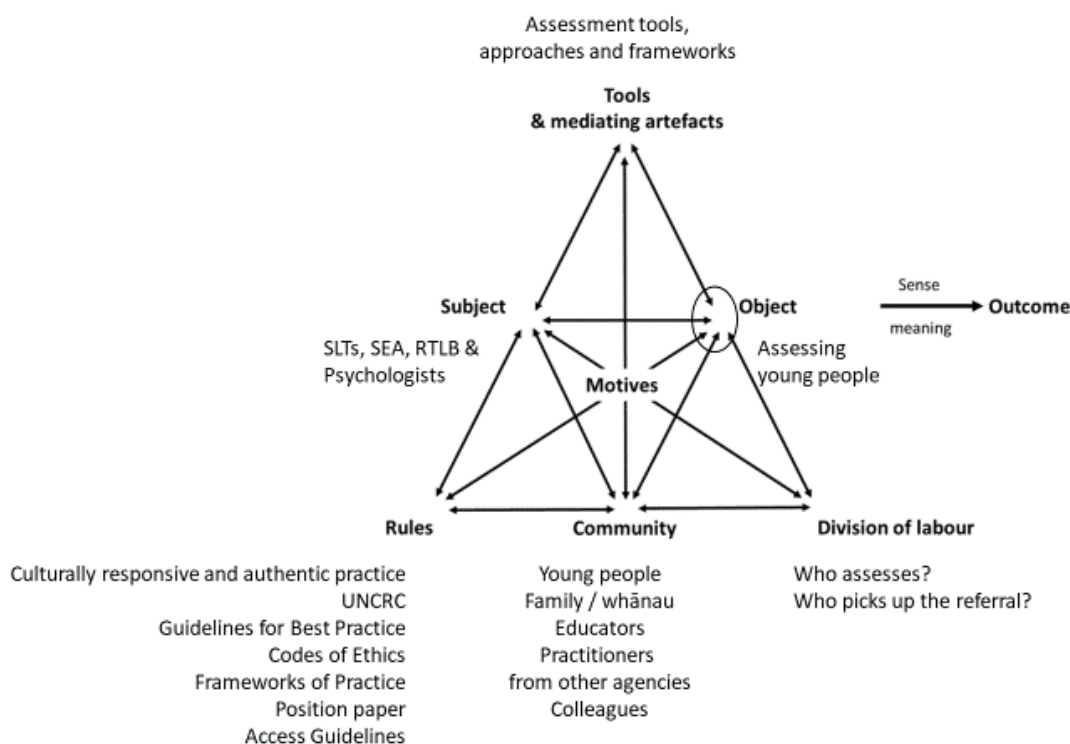
Activity systems analysis with CHAT, therefore, was particularly useful for capturing the complexity of assessment practices: (a) the learning, understanding and emotional

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changes participants made with regard to assessment as a result of the workshop, and (b) the activity of assessment in the broader educational context, including the cultural, social and historical contexts of both assessment practice and practitioners, which enabled me to answer my research questions of the *what*, *why* and *how* of assessment practice.

Strategies Used to Enhance Research Rigour

Within the positivist paradigm, research is judged by the *methodological* rigour which measures how well research adheres to the method of study, and answers to the concepts of internal and external validity, reliability and objectivity (Mertens, 2015, p. 268). Unlike quantitative research, qualitative research is moulded by the purpose of research and philosophical approach of the researcher (Mertens, 2015). Qualitative research, embedded within social constructivism, is evaluated on the *interpretive* rigour with which human experience is co-constructed, with all the subjectivities of opinions and emotions that "make life conflictual, moving and problematic" (Lincoln et al., 2018, p. 138).

To identify the strategies used to enhance research rigour, the concept of rigour had to be defined. This was not a simple exercise: *what constitutes rigour?* and *how do we evaluate rigour in qualitative research?* are two intensely debated questions in the field of qualitative research. As Seale (2002) writes: "Quality is elusive, hard to pre-specify, but we often feel we know it when we see it. In this respect research is like art rather than science" (p. 114). However, although the subjectivity of data collection processes, analysis and interpretation of multivocal co-constructed realities makes evaluation complex, *how well* this research has been conducted depends on the strategies used to ensure rigour.

Mertens (2015) suggests that "standards of evidence" (p. 267) can be determined by documentation of the research journey and evidence of the researcher's thinking processes. The processes followed in this research adhered to the principles of trustworthiness and authenticity (Lincoln & Guba, 1986; Lincoln, et al., 2018). Although these criteria were initially proposed by Lincoln and Guba in the early 1980s in

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response to the inapplicability of positivist criteria imposed on "naturalistic" research (and later as constructivism), the concepts of trustworthiness and authenticity remain relevant and widely used (Kivunja & Kuyini, 2017; Seale, 2002; Lincoln & Guba, 2013). Trustworthiness is a requirement of qualitative research along with the criteria of credibility (paralleling the internal validity of quantitative research), transferability (paralleling external validity), dependability (paralleling reliability), and confirmability (paralleling objectivity) (Denzin & Lincoln, 2018; Mertens, 2015).

Trustworthiness of Research in the Constructivist Paradigm

Trustworthiness of this research is identified through the criteria of credibility, transferability, dependability and confirmability. Each of these criteria is further discussed. Trustworthiness and credibility depend on prolonged engagement with the research material (Chapman, 2014; Morse, 2018; Seale, 2002), and "whether the researcher has developed an intimate familiarity with the topic or context" (Butler-Kisber, 2018, p. 58). Prolonged engagement serves to prevent the researcher from reaching premature conclusions based on insufficient time in the field (Mertens, 2015).

As a researcher and practitioner, my engagement with this topic area has been extensive. As a practitioner (and registered psychologist in education), I have used a dynamic approach to assessment on a regular basis for the past five years and this approach has become foregrounded in my practice. I have worked within the areas of assessment, learning and teaching, and shared this approach with practitioners working from different paradigms and fields of expertise, such as clinical psychologists. I have also presented workshops and worked collaboratively with educators, teachers' aides and special needs coordinators outside the Ministry of Education (Learning Support) to implement aspects of this approach within the classroom. These various experiences have given me an 'insider's perspective', which has helped me to identify with the struggles of my research participants to understand a dynamic approach to assessment, and to appreciate the challenges faced within their places of work. This required detailed attention to the data I received from my research participants, and immersion to co-construct their experiences through dialogue. However, whilst I recognise my "insider's view" as a practitioner working for the Ministry of Education, I acknowledge

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that I have different experiences and understandings of a work-based environment and my participants' practice.

Butler-Kisber (2018) suggests that credibility of research is strengthened by "interviews that take place over time" (p. 58). Therefore, to increase credibility with my participants, and through the research process, I conducted semi-structured interviews with participants twice over a period of six months. At the end of each interview, an open invitation was extended to participants to maintain contact, either through Massey University's PLD site and online forum, or by other means (such as email or telephone), for any arising questions or concerns for the remainder of the year. One research participant maintained ongoing contact after the July interview and, for the purposes of this study, this support ended at the close of the data collection period.

Transparency of process and data collection further contributed to the credibility of this research. This was ensured by transcribing each interview verbatim and providing a copy of the written transcript to each participant (Morse, 2018). As Mertens (2015) argues, "the most crucial technique for establishing credibility is through '*member checks*'" (p. 314). All interview transcripts were sent to research participants for their feedback, their amendments, additions and further dialogue (as needed, either by phone or via email) to ensure accurate and fair representation of their views. All participants returned their transcripts, giving the researcher permission to use the content for this research. Where participants had made changes to their transcripts, these were amended to ensure *their* perspectives would be represented. This was also used to establish credibility as part of the research activity, which included critical discussion of the overarching processes of data collection, analysis, and research outcomes.

Peer debriefing occurred most frequently with a fellow practitioner also enrolled in PhD study, and less often with a group of six or seven employees at the Ministry of Education. These employees were part-time students enrolled at different universities, working full-time at the Ministry, fulfilling diverse roles and researching a range of topics related to education. They were engaged in various stages of research at the time, either working towards a Masters' degree, in the process of writing a PhD, or who had recently completed research. The group consisted of diverse ethnicities, including Māori

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and Pākehā practitioners, who were able to offer cultural guidance on aspects of this research, without breaking confidence or divulging results of data obtained from my research participants. The group met approximately twice during the year this research was being developed, which gave all the opportunity to offer support, problem-solve, and present work for discussion.

Transferability is a concept that explores whether the results and analysis may have applicability to other people in their contexts. The onus is on the researcher to provide "extensive and careful description of the time, place, context and culture, [which] is known as thick description" (Mertens, 2015, p. 271). Thick description means that the data provide readers with detailed information about methods and the social-historical context of research (Morse, 2015). Using this information, other researchers are able to explore whether this research applies to their own contexts, and transferability becomes possible (Lincoln & Guba, 2013; Mertens, 2015).

To meet the criteria of trustworthiness in dependability, Mertens writes that the research process has to be tracked and any change made available for public scrutiny. Although this research is grounded in the constructivist paradigm and "change is expected" (Mertens, 2015, p. 272), researchers need to be held to account. This research addresses aspects of dependability and confirmability through a systematic inclusion of background notes and email correspondence with research participants and my supervisors from the conception of the study. Electronically capturing thoughts, recording methodological decisions made regarding the direction of this research journey, detailing the analytical processes and logic followed to synthesise data, exposed any bias and assumptions that influenced research decisions and outcomes. Furthermore, decisions determining which elements to include in this study were made by developing countless diagrammatic representations of ideas, which were then discussed with peers and my supervisors, and notes were made of references which could be relevant, with regular reference back to the research literature to ensure dependability. Earlier drafts of chapters were also kept showing the decisions made regarding this research, showing the development of this research process and my own growth of "self-awareness" as researcher.

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Methodological decisions were made in the early phases of the research process. Other decisions regarding methods of data collection were made as this research unfolded, and the development of the questions used in the second round of interviews serves as an example. The first interviews with my research participants were transcribed immediately after the interview and returned to participants within a month. During transcription, themes were roughly identified, and experiences noted. These themes and experiences framed the questions for the second round of interviews, which meant that the interview guide was individually tailored for every research participant. The interview guide, therefore, consisted of two parts: first, a general section intended to address my research questions, with cognisance given to my framework of analysis; and second, individual questions were based on the responses received in the first interview. Even then, although these notes *informed* the interview process, interviews were ultimately co-constructed with participants, often resulting in a change of direction, not unexpected in constructivist research.

Authenticity in Research

As this research is concerned with human rights and social justice, the criteria of authenticity which promotes a fair and balanced view of the perspectives co-constructed in this study are foregrounded. Saukko (2018) proposes that authenticity of research depends on "how well [research] represents or *gives 'voice'* to the participants' realities [emphasis added]" (p. 263), and with sufficient detail to capture the individuality of human experience (Butler-Kisber, 2018).

This research aimed to *give voice* to practitioners as they work with young people, families and whānau in our community, and explore the use of a dynamic approach to assessment which, as yet, mostly remains a marginalised area of assessment. Giving *attention to voice*, however, comes with the responsibility of representing participants with *fairness*. In the research process of data collection, "participant reality" completely determined the interview process to produce a rich kaleidoscope of information that not only reflected individual experience of assessment processes but also revealed the dynamic interplay between practitioner and organisation, their values and conflicts, and how these impacted on assessment practice.

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During the interviews, eight research participants requested further information and support on how to implement a dynamic approach to assessment, to enable change and bring about new assessment experiences. Lincoln et al. (2018) identify these occurrences in qualitative research as "catalytic and tactical authenticities" (p. 140), which are particularly relevant to this study. For example, at the first interview in April, five participants had not yet attempted to incorporate a dynamic approach to assessment in their practice. In these instances, participants were prompted to include a dynamic approach to assessment in their practice, and their understanding carefully scaffolded to support implementation of this approach. Lincoln et al. (2018) suggest that this dynamic interplay does not compromise the authenticity of research when the relationship between researcher and participant is based on an in-depth reciprocal co-construction of reality and trust. Although the co-construction of realities was achieved mostly through dialogue, reflections of practitioner experience were further obtained through written artefacts provided by a few of the research participants.

Consideration has been given to the concept of *reciprocity* and "giving back to communities" (Mertens, 2015, p. 274). It is envisaged that this research can be shared within the wider practice community of Learning Support, as requested by six participants in this research. However, reciprocity also involves giving back to the wider community of assessment with young people, beyond the realms of Learning Support and the field of Education.

Ultimately, as Mertens (2015) states, all research represents the standpoint of the researcher, situated in time and place: "research is an interactive process shaped by one's personal history, biography, gender, social class, race, and ethnicity, and those of the people in the setting" (Denzin and Lincoln, 2018, p. 12). To enhance research rigour, therefore, critical self-reflexivity was essential and documentation, as described before, was used to support this process. This included recording early thoughts and seeing how these developed during the research process, as well as capturing "the 'ah-ha' moments, and even the transformative perspective that doing research brings" (Morse, 2018, p. 813).

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I was particularly mindful of Saukko's (2018) cautionary words regarding the absolute necessity to critically examine "how methods and associated validities configure realities, … [and to ask] what kind of realities our work helps to create and for whom" (p. 271) – a philosophy that finds resonance with the approach of a dynamic approach to assessment.

Summary

This research was based on participants' rich descriptions of their learning experiences and developing understanding of an assessment approach grounded in social constructivism. Qualitative inquiry and cultural-historical activity theory (CHAT), therefore, were used as theoretical frameworks for this study to capture participants' responses to learning and their awareness of the social responsibility they carry in partnership with educators and young people, the realities they co-construct, and the rights of those they promote through a process of assessment.

As both the assessment approach and participants' experiences of learning and implementation were socially constructed processes situated within a context of culture, time and place, activity systems analysis with CHAT was used as the framework for identifying and analysing the themes that emerged from documents, questionnaires and semi-structured interviews. Using strategies to meet the criteria of trustworthiness and authenticity for research, the findings are presented, and analysed in the next chapter.

Chapter 5

Results

This study showed that assessment practices of practitioners working with young people who require additional support to maximise their learning are by necessity, diverse. The findings highlighted the practitioners' assessment methods and approaches, and illustrated the varied approaches ranging from psychometric through to child-led methods. Through investigating the value of using a dynamic approach to assessment in changing participants' perceptions, this research explored how their assessment practices could be adapted and developed to enable more intentional use of cognitive and metacognitive approaches that both assess and help learning.

The research questions were:

1. What were practitioners' perceptions and experiences of assessment prior to learning about a dynamic approach to assessment?
2. Did knowing about a dynamic approach to assessment enhance practitioners' understanding of cognitive and metacognitive assessment, learning and teaching in their work with young people and educators?
3. Were games useful to practitioners as a tool for a dynamic approach to assessment?
4. Did learning about a dynamic approach to assessment bring about changes in practitioners' approach to assessment?

This chapter presents answers to these four questions in three parts. Part 1 discusses participants' existing assessment practices and, using CHAT, explores the activity system of assessment prior to the *Game-Changer for Assessment* workshop (research question 1). Part 2 details participants' perceptions and experiences of learning about the RE*Think* framework as a step to operationalising a dynamic approach to assessment, using the key competencies of the *New Zealand Curriculum* as an authentic starting point for assessment, structure for analysis of cognition and metacognition, and framework for assessment outcomes (research question 2), and games as a tool for

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assessment (research question 3). Finally, Part 3 explores whether participants changed their approach to assessment with the bridging of knowledge into practice, using CHAT analysis to reveal the opportunities and challenge of change with the implementation of a dynamic approach to assessment in their practice (research question 4).

Figure 5.1 below presents participants' steps of learning: from their use of existing frameworks, methods and tools for assessment (Part 1), to learning about the RE*Think* framework to operationalise a dynamic approach (Part 2), to using a dynamic approach to assessment using skills of conversation, observation and collaboration (Part 3).

Figure 5.1

Participants' Steps of Learning
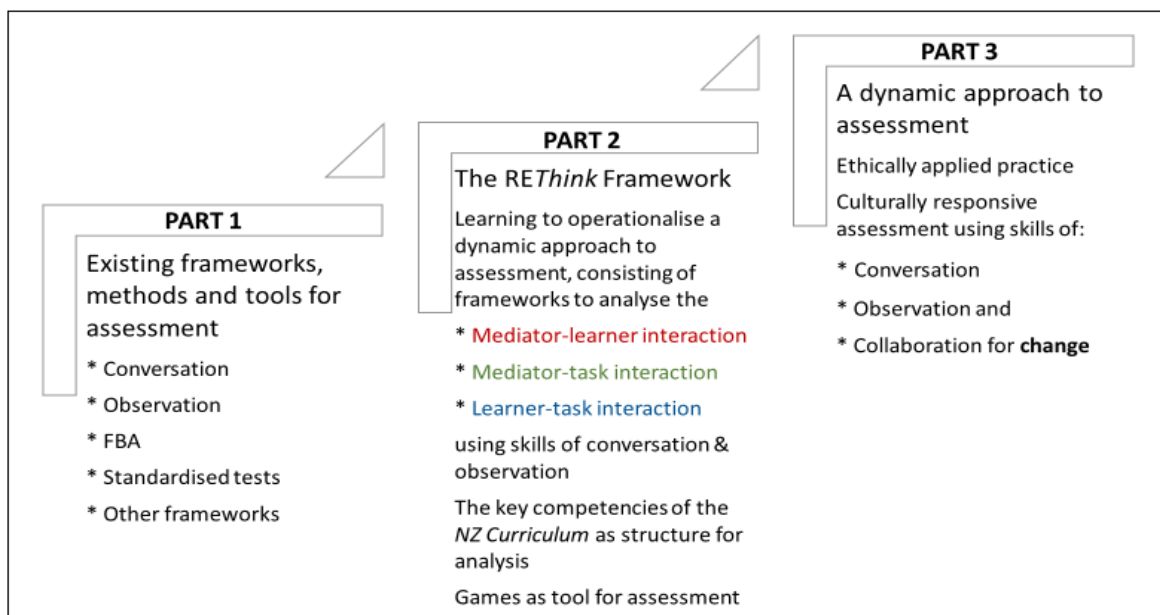
Part 1

Part 1 focuses on participants' practices of assessment prior to the RE*Think* workshop. As assessment is not a neutral or value-free activity, it was useful to explore themes emerging from participants' practices, experiences and outcomes of assessment within the activity system of assessment, using the framework of CHAT.

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Participants' Existing Assessment Practices

The *Game-Changer for Assessment* workshop was developed for this research to support the participants to learn about a dynamic approach to assessment, develop a deeper understanding of cognition and metacognition, and explore how games could be used as a tool to assess and to bring about change in teaching and young people's learning. First it was imperative to determine whether practitioners felt that their existing assessment practices were able to meet the needs of the young people with whom they worked, and whether they were open to considering change or incorporating another approach to assessment into their practice.

To appreciate the opportunities and challenges practitioners faced in their daily work, it was also necessary to gain an understanding of *what*, *how* and *why* assessments were used, and *how* organisational policies informed and influenced the service that practitioners provided to young people and educators. The analysis of questionnaire responses prior to the workshop revealed that the two main reasons *why* participants assessed young people were to increase learner engagement and facilitate inclusion.

Assessing Young People to Increase Engagement and Inclusion

The results showed that decisions made with regards to *how* participants' assessment approaches were influenced by organisational demands and differed from one participant to another, depending on their professional roles, and the paradigms within which they worked. All participants reported using sociocultural or ecological approaches to begin the assessment process by identifying the area of difficulty: "what the problem is and whose problem it is" (Participant 9), and obtaining baseline data: "what does the child need to be able to do? What can they already do?" (Participant 1). Combined, these questions explored the participants' approach to assessment, the frameworks and methods they applied, and the tools of assessment used. The findings showed that increasing learner engagement and facilitating inclusion was achieved by (a) getting to know young people, (b) identifying environmental factors, and (c) understanding how young people learn were all factors in assessment.

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Getting to Know Young People. Described as the "least intrusive and natural forms of assessment" (Participant 13), valuable information was gained using the following assessment forms outlined by Participant 2 below:

> Observations, interviews, discussions, reviewing case history ... are used with every child I see as they provide me with an overview of the child's capabilities that I would not be able to ascertain from an assessment alone ... It also gives me the parents', teachers' perspective of what level they consider the child to be at.

Although viewing portfolios was mentioned, these brought their own challenges: "Portfolios are tricky because there is no evidence of the situation that the piece of work was collected from" (Participant 11). Once this information had been gathered, assessment usually progressed to exploring and analysing the young person's learning environment.

Identifying Environmental Factors. All participants used functional behaviour assessment (FBA) with regards to their work with young people with severely challenging behaviour. FBA was used to guide discussion and observation of the young person in interaction with others and across settings over time. This included observation of structured activities (such as one-on-one with an educator or small group collaborative work), and during free play with peers (out in the playground where interaction among all young people can change how a young person responds to others):

> I look at the whole environment ... I observe the whole class, the setup of the learning environment, environmental factors. ... How a TA is used and the activities that the child is expected to do. If the child is doing the same activities as others, level of skill needed, does it seem easy, hard? Is the child engaged or bored?... Is there a strength-based behaviour [management] system being used and what is the ratio of negative to positive reinforcement being used by the adults? (Participant 10).

Another ecological approach, Routines-Based Intervention (RBI) entered the frameworks of assessment endorsed by the Ministry of Education, and some

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participants found this approach helpful: "a useful method to gain information from families and centres for younger children" (Participant 4) and for those "with more complex needs" (Participant 12). Participants have increasingly incorporated trauma-informed assessment into their practice, offering educators insight into how trauma impacts on young people's engagement with learning, their relationships with others and their sense of belonging: "many of our clients come from traumatic backgrounds and ... attachment and interaction form the most important building blocks for learning" (Participant 5).

A few participants identified using Situational Analysis to establish areas for intervention and determine strategies to scaffold desired outcomes: "I try to give a detailed account of the young person's 'worldview'. This includes social and emotional competence and internalizing / externalizing behaviours. Then putting this information into themes, and potential strategies and outcomes to work toward" (Participant 13). Therefore, assessment of home and school environments was essential to determine how these either supported, or posed a barrier, to young people's learning.

Understanding Young People's Learning. Other than the programmes of study attended during their university years, participants reported a general void in their participation in assessment courses or professional learning to understand young people's learning. Within the authentic framework of assessment, including narrative assessment and informal play-based assessment, 10 of the 16 participants (62%) found observation of young people within their natural environment and their engagement with typical tasks helpful, "real-world and relevant" (Participant 8). Recommended formal frameworks such as "*SCERTS* [*the Social Communication, Emotional Regulation and Transactional Support Model*] or [the] *Carolina Curriculum*" (Participant 4) were considered by participants as limited, often culturally inappropriate, and "too complicated" (Participant 4).

When authentic ecological assessment or a functional behaviour assessment (FBA) alone was not able to fully address referral questions, participants turned to standardised assessment to:

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- identify developmental concerns: "After an initial functional behaviour assessment, I will decide whether to do a cognitive assessment, especially if the function is task avoidance or there are other indicators of intellectual disability" (Participant 15);

- triangulate data: "I definitely use an ecological framework and try to gather information across all contexts/environments. I gather data from parent's case history, teacher's case history, do kindergarten or school observations and then direct formal standardised or informal criterion-referenced assessment" (Participant 14); and

- contribute to formal assessment as requested: "I will often be asked by a paediatrician for scores/stanines of a specific assessment tool" (Participant 5).

The most used standardised assessment tools mentioned by participants included the *Wechsler Intelligence Scale for Children, Fifth Edition (WISC-V), Adaptive Behavior Assessment System, Third Edition. (ABAS-3), Behavior Assessment System for Children (BASC), Conners', Wechsler Individual Achievement Test (WIAT), Sensory Profile, Six-Year Net, e-asTTle, Probe, Numpa, Clinical Evaluation of Language Fundamentals, Fourth Edition (CELF-4), Diagnostic Evaluation of Articulation and Phonology (DEAP), Khan-Lewis Phonological Analysis (KLPA), Renfrew Action Picture Test & Derbyshire Receptive, NZ Articulation Test of Speech, Te Reo Māori Speech Assessment, Renfrew Language Assessment*, and the *Clinical Evaluation of Language Fundamentals, Preschool-2 (CELF-P2)* (with Australian and New Zealand norms). While speech-language therapists reported they were "required to use norm-based assessments as criteria for a service" (Participant 9), the use of standardised assessments was seen across discipline groups as "profession-linked" (Participant 7), reinforced by the view that "quantitative aspects do add weight to any assessment outcomes/advice that is spurred by assessment" (Participant 13), see Table 5.1 below.

Table 5.1

Participants' Use of Standardised Assessment in Their Practice

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		Participants (n=16)
How often do you use psychometric / standardised assessments?	Mostly	4 (25%)
	Often	3 (19%)
	Sometimes	4 (25%)
	Seldom	3 (19%)
	Unfamiliar*	1 (6%)
	No response	1 (6%)

* *Note.* Although one participant marked *unfamiliar*, elaboration on the answer indicated that standardised assessments were used in practice and aligned with the Ministry of Education Impact framework.

As an approach to understanding how young people learn, dynamic assessment was not well known or regularly used across discipline groups. Speech-language therapists (SLT), however, appeared most conversant with this approach to assessment as opposed to participants working with young people's learning and behaviour, and the use among practitioners varied considerably. For example, Participants 2 used standardised assessment to gain "an understanding of the child's development compared to their typically developing peers", but for young people who "have no language … a dynamic play assessment … [to] gain a baseline". Table 5.2 presents an overview of participants' use of dynamic assessment prior to the workshop.

Table 5.2

Participants' Use of Dynamic Assessment Prior to the Workshop

Participants (n=16)		SLTs (n=7)	Psychologists, SEA, RTLB (n=9)
How often do you use dynamic assessment in your practice?	Mostly	1 (14%)	2 (22%)
	Often	3 (44%)	-
	Sometimes	1 (14%)	2 (22%)
	Seldom	1 (14%)	1 (12%)
	Unfamiliar	1 (14%)	4 (44%)

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The ability to assess and analyse factors contributing to young people's engagement with learning is key to facilitating inclusion. Aotearoa New Zealand's education system is typically one where inclusion is fundamentally understood as supporting children and young people to belong, participate, contribute and be successful in their learning environments. Therefore, it was not surprising that participants' questionnaires contained themes aiming not only to engage young people in their learning to increase their participation in class, but promoting inclusion by ensuring that "the people around them understand the best way to interact in order for them to achieve success" (Participant 15).

The following quotes illustrate where participants focused on environmental factors to "Identify triggers for behaviour and implement plans to be used in the classroom to minimise problem behaviour, and maximise inclusion and engagement" (Participant 15); and identify how inclusion was reinforced in the classroom:

> Are other children working with the child, or are they working alone or just with a TA [teacher's aide]? How is the child included in the class? Are there celebrations of the child on display or recognition of the child's efforts in the room? (Participant 10).

Participants' Experiences of Assessing Young People

Critical to assessment is the relationship and rapport participants can build with young people. Participants reported varying experiences with young people when doing assessment, which were often associated with the approach or assessment tools used.

Participants' Descriptions of Positive Experiences. Participants reported that in their view, young people found assessment experiences positive when the processes were collaborative, fun and respectful. Participants identified the value of collaboration between the assessor and young person in assessment when young people were "key players" (Participant 8), understood the purpose and could "see the benefit" (Participant 15). When assessment incorporated ways to obtain a young

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person's point of view, ensuring that they "feel heard, they feel understood [and] empowered that their voice is heard" (Participant 3), assessment was more likely to be relevant and successful. Through conversation, the next steps of learning could be co-constructed using a "young person's strengths and goals" (Participant 8), and "based on [a young person's] interests and play" (Participant 12). When assessment was "novel and fun" (Participant 11) and formal assessment conditions were changed, participants noted that feelings of anxiety were reduced and rapport more readily established: "Some [children] are easy to engage because I set the scene as informally as possible and usually have an activity to engage the child first … I don't use a timer or tone that implies it is a 'test'" (Participant 9).

Participants' Expressions of Concern. Participants reported feeling uncomfortable when they perceived young people's experiences with assessment to be negative. These occurred mainly when (a) the relationship with young people prior to assessment was poorly established, (b) the process of assessment contributed to young people's anxiety, and (c) assessment activities were not authentic.

Participants were aware of the importance of building rapport with young people. One participant, for example, wrote: "the most powerful tool in assessment is relationship and rapport - if the child does not feel safe, then we cannot expect 'good' assessment to happen" (Participant 5). However, the lack of time to commit to assessment was not unusual and compromised the rapport critical for safe assessment:

> the speed of assessment means I am not always able to build as strong a rapport
> as I would like before doing the more formal assessment, which is quite daunting
> for the child and means they may not perform at their best or trust me in the
> future (Participant 15).

Participants reported some young people's experiences of "performance anxiety" (Participant 6) during assessment. They questioned the relevance of such assessment when young people did not put "their best effort forward" (Participant 7), there were "language barriers" (Participant 7), assessment was "daunting" (Participants 13 and 15) and relied on failure for completion: "[young people] don't want to carry on once they

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have experienced failure (which a lot of assessments require)" (Participant 15).

Furthermore, participants recognised that some young people disliked being "tested":

> The concept of formal assessment can also act as a barrier to these young people. They lack confidence, they find it difficult to concentrate and they don't see the point of doing the assessment - all factors which affect the final score and subsequent access to supports or opportunities (Participant 8).

Therefore, knowing that assessment potentially created unease for young people, some participants reported trying to "disguise formal assessment as much as possible" (Participant 5), and doing "anonymous observation, rather than introducing myself and being honest about why I am there" (Participant 15). When assessments became "too long and tiring for assessor and child to use - the *WIAT* [*Wechsler Individual Achievement Test*] for example" (Participant 7), some participants reported trying to make assessments more accessible by turning them "into a game" (Participant 15). Participant 14, for example, resorted to humour to get through the process: "I think [young people] find [assessments] boring except for when I bribe them with stickers (ha-ha) or use silly voices & make up stories about the assessment items". One participant recognised that trying to obscure assessment could make young people feel "a little bit unsure of what they are being tested on, or if they are being tested" (Participant 1), potentially compromising protocols and rendering results invalid.

Participant 16 further noted that such assessments expect "an unnatural manner of performance", pose "some barriers to optimal performance", and produce results which may be harmful for young people and whānau:

> At times using standardised assessments provide a negative bias that is not conducive to outcomes emotionally for parents and the client. Most are aware that clients with significant impairments will not be able to meet the ages and stages of typically developing tamariki [children]. In this case it is far more reasonable to determine what the client can do rather than what they cannot (Participant 16)

Therefore, such assessment may also be seen as culturally inappropriate, further discussed below.

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Cultural Considerations in Assessment

As an activity situated within a social context, assessment is integrated with culture. Fifteen of the 16 participants (94%) reported understanding the impact of culture on assessment as the following comment describes:

> There is considerable diversity in child rearing, expectations of how a child learns and how they behave and communicate with adults and peers in different situations. It is important to respect, value and have some understanding of the cultural background of the child and family. 'Norms' are culturally established and not universal (Participant 9).

Therefore, as culture shapes the way young people make sense of their world, which influences how they respond to assessment, the disadvantage of using standardised assessment tools in Aotearoa New Zealand was clearly identified: "I feel that many of the American and British generated assessment tools contain components which are foreign/irrelevant for our Māori and Pasifika young people, and therefore have the potential to affect their scores" (Participant 8).

Participant 16 questioned the relevance of standardised assessments for *all* young people, not only for young people in Aotearoa New Zealand, and the following quote illustrates: "No matter the culture, knowledge of the client's culture and background in itself can and does have an impact on data outcomes". It was unexpected, therefore, that when asked how frequently they used standardised assessments (refer to Table 5.1), seven of the 16 participants (44%) *often* or *mostly* used these assessments, despite the concerns raised above.

Considering that all participants work with youth identifying as New Zealand Māori, a critical question around the authenticity and relevance of assessment must be asked. The tensions and contradictions that exist regarding the use of tools, methods of assessment and approach to assessment are shown by one participant's responses to the following two questions:

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Q13.   Thinking about your assessment practice, what role does cultural

     relevance play?

Answer.   *Of utmost importance as most assessments are NOT normed for NZ*

     populations.

Q14.   What assessment tools or processes do you currently use? Please

     list your top 5 most used assessments.

Answer.   *1. WISC-V*

     2. Conners'

     3. WIAT

     4. Dyslexia Portfolio

     5. WISC Non-Verbal

A number of culturally-informed assessment frameworks are available to all practitioners (such as "Te Whare Tapa Whā", *The Early Childhood Curriculum - Te Whāriki*, "Te Pikinga ki Runga"), and participants listed up to three different frameworks. Therefore, while participants had access to culturally appropriate assessment frameworks, they reported requiring knowledge of culturally responsive "assessment methods" (Participant 4).

Therefore, across all disciplines, participants were strongly critical of assessments not seen as culturally responsive, and of assessments that did not have "appropriate norms for culturally and linguistically diverse children" (Participant 4). Seeking a culturally responsive method of assessment became one of the motives why participants attended the workshop, and to learn about a dynamic approach to assessment.

Participants' Perceptions of Satisfaction and Tension Within Assessment Practices

In this section, discussion centres around participants' perceptions of satisfaction and experiences of tension within their assessment practices, and analysis explores the activity system of assessment prior to the workshop.

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To gain insight into participants' satisfaction with their assessment practices, participants were asked to rate their levels of satisfaction. All participants, except one, were either *slightly satisfied* or *satisfied* with their assessment practice (see Table 5.3 below).

Table 5.3

Comparison of Participants' Levels of Satisfaction with Assessment Practices and Years of Experience

Participants' Years of Experience:		0 - 3yrs	3 - 10yrs	10yrs +	Participants (n=16)
How satisfied are you with your current assessment practice?	Not at all				-
	Slightly satisfied	4 (25%)	2 (13%)	2 (13%)	8 (50%)
	Satisfied	3 (19%)	3 (19%)	1 (6%)	7 (44%)
(Rounded-off percentages)	More than satisfied	-	-	1 (6%)	1 (6%)
	Very satisfied	-	-	-	-

One participant viewed assessment as a "work in progress. I continually scan for effective models to enhance what is essentially a formative assessment process" (Participant 11). Seven participants (44%) marked that they were *satisfied* with their assessment practices, although they experienced similar tensions in their work to the eight participants (50%) who reported being *slightly satisfied*. Factors which contributed to participants' levels of satisfaction with their existing practices are further explored using CHAT analysis, and this framework of analysis reveals why participants were keen to learn about an alternative approach to assessment.

The Activity System of Assessment: Prior to the Workshop

This section explores the assessment context prior to the workshop. The analysis framework of CHAT foregrounds the tensions and opportunities within participants' existing activity systems of assessment, with discussion focusing on the following

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components: (1) Assessment tools, and (2) within the organisation: Rules and Division of labour.

In Figure 5.2 below, tensions are presented as they occurred between the components of the activity system of assessment. These tensions are shown using black arrows, while the light blue dotted lines indicate where not all participants experienced similar tensions.

Figure 5.2

Tensions Identified Within the Activity System of Assessment: Prior to the Workshop
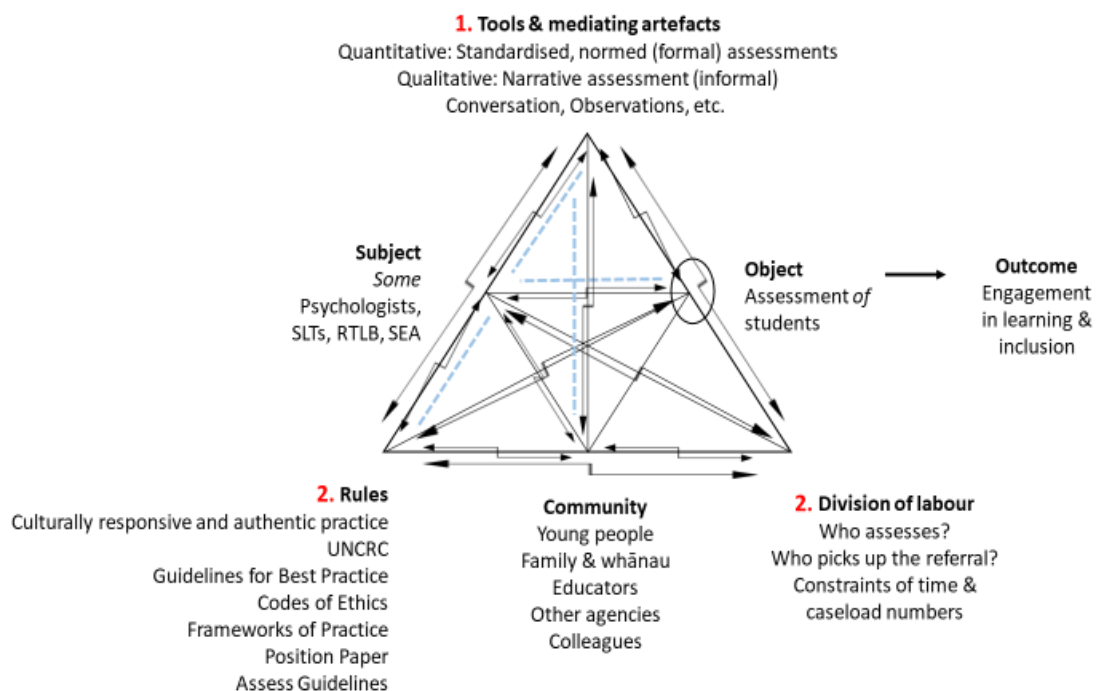
Analysis reveals why participants felt either *satisfied* or *slightly satisfied* with their assessments, and when they experienced tensions in their practice. The tensions identified cannot be seen as typical of a homogenous group of specialists or organisations, and the results of analysis cannot be generalised. Some participants (Subjects) reported unease using standardised assessments, another with dynamic assessment, and others reported tension with the process of assessing young people. It is also important to note that these perceptions of (dis)satisfaction are not related to participants' years of experience, given that results of (dis)satisfaction are distributed

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across years of experience and practice (refer to Table 5.3). However, all participants reported similar tensions within the organisation and across the community: the organisational restrictions of the Division of Labour, in other words, high caseloads and a lack of time to work with young people, their educators, family and whānau. This includes the Rules that govern practice with regards who takes on casework, when and with whom. Although artificially separated for ease of discussion, every component of the activity system is interrelated and influences the other, and further discussed below.

Assessment Tools. Participants described being *satisfied* with the assessments they used when

- assessment was structured: Eleven of the 16 participants (68%) were confident using formal standardised assessments because they were "profession-linked" (Participant 7), "prescriptive" (Participant 14) and "easy to administer" (Participant 6), which implied that participants believed they were "able to carry out [assessments] correctly" (Participant 12); and

- formal and dynamic assessments complemented the other in practice: "formal assessments are useful and can be useful in addition to dynamic assessments as it is also the child's behaviour in approaching the assessment that provides observational information" (Participant 9).

However, polarised views around the use of standardised assessment tools created tensions in practice when:

- assessments were seen as culturally inappropriate (as discussed earlier);

- assessments could not be tailored for individual need: "Reporting on assessment often makes me feel that I am giving all the animals in the forest the same 'test' - the fish must compete in the tree-climbing assessment" (Participant 7);

- assessment results indicated that young people were "less capable than they actually are" (Participant 16);

- participants were challenged to write strengths-based reports that provided "Next Steps [that] look at forward momentum" (Participant 16), and that guided learner progress or educator interaction; and

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- scores were not "useful/meaningful at all for parents or young people" (Participant 8), or "helpful for supporting teachers to shift their practice" (Participant 11).

The lens through which young people were viewed influenced not only the assessment instruments and frameworks practitioners chose, but potentially impacted on the *way* young people were assessed and influenced analysis of outcomes, as the following quote illustrates: "I believe that your strength can also become your weakness, meaning: when your only tool is a hammer, then everything becomes a nail" (Participant 7). However, despite their concerns, participants' limited knowledge of alternative assessment methods potentially created barriers to their use of more culturally responsive assessment tools.

Assessment, such as a functional behaviour assessment (FBA) that identified young people's strengths to direct intervention across settings, was described as useful. However, tensions emerged when participants had to manage others' expectations that standardised assessments should be used in practice. Clinicians from Child Health expected participants to contribute to their assessment processes by giving rating scales to educators, family and whānau, and expecting participants to provide standardized assessment results "particularly in relation to norms" (Participant 9). Participant 11 expressed ambivalence as "Rating scales make too many judgements [and are] influenced by perceptions at multiple levels", and other participants conveyed their concerns when paediatricians used results to label young people without educators, family or whānau "gaining some understanding of the implications for the learner" (Participant 6).

Three of the 16 participants (19%) felt they had to prove themselves to the teaching community as competent practitioners. They reported pressure from educators to "show the worth of what we do" (Participant 13) and provide "solutions ASAP" (Participant 12), which participants perceived to be assessment based on "a rapid assessment in a clinical situation" (Participant 9). However, once completed, trying to communicate assessment outcomes "in a way that will be utilized … in an already busy teacher schedule" (Participant 13) was particularly challenging. Practitioners then also

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experienced difficulties with the limited time made available to them to verbally share assessment results, resulting in feedback typically done through written reports, or over the phone.

Within the Organisation: Rules and Division of Labour. Three of the 16 participants (19%) reported being confident when their assessments followed organisational guidelines and expectations. This meant assessment that was "In line with [practice] frameworks" (Participant 3), met "work position requirements" (Participant 5), and adhered to the principles described in the "Position Paper" (2011a), with the use of the "least intrusive" (Participant 13) approach aligning with most participants' paradigms of practice across disciplines.

Nonetheless, participants experienced tension when Rules within the organisation, such as the "Access Guidelines", posed a barrier for young people to obtain support. One participant reported "bending the rules" and using the scores of an assessment to argue for a service which depends on a score:

> doing a standardised language assessment helps me to find out what the child's 'age-equivalent' is - I don't usually share this information with the parents but I can use this 'age-equivalent' as a bargaining tool with my manager if I'm advocating for a child to receive our service (Participant 14).

High caseload numbers and time constraints were reported to influence professional judgement and potentially compromise ethical practice across all discipline groups. All participants reported tensions in the activity system which impacted on their ability to plan assessments and determine the relevant tools to answer referral questions:

> I feel that because I work with such a varied population and the caseload is so big, sometimes I don't have the time to plan and make intentional decisions about which assessments I'm using ... I'm worried I'm going to have a 'go-to' assessment and choose a particular assessment based on personal biases (for example, "oh this assessment is easy to administer") or professional biases (for example, "I don't have a lot of time, I'll do this quick one") as opposed to choosing an assessment based on what is the most relevant for this child (Participant 14).

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This invariably led to participants using assessments for the wrong reasons and potentially opened the route to assessment reports that not only included "unnecessary and trivial detail" (Participant 8) but revealed the lack of time participants had to write up assessments and accurately analyse all data collected (Participant 16). For some participants, therefore, their assessment practices presented an ethical dilemma as they were not able to meet their own expectations for what constituted effective assessment, nor were they able to address the needs of the young people and educators with whom they worked.

Tensions were inevitably created by the Community's activity of increasingly referring young people for support, the organisation's accountability to the Community, and participants' ideals of effective evidence-based practice. Participants clearly indicated their preference for assessment practice described as "comprehensive", "relevant" and "useful", while time restrictions and organisational demands limited opportunities: "there is an ideal of how assessment can be facilitated but constraints of caseloads / organisation expectation etc influence this" (Participant 5).

Across disciplines, high caseloads and time constraints impacted on participants getting to know young people: "I have a huge caseload and working individually to get to know the child is not in my capability" (Participant 10). Completing comprehensive assessments, therefore, was not possible, and assessment often didn't "go far enough" (Participant 15). For example, Participant 15 reported that often "a behaviour plan is implemented before getting to the root cause of the behaviour", and Participant 14 noted that to effectively implement a particular programme, "it is recommended that we do a pre-programme video to assess the teacher's interaction with the child. Unfortunately, I have not done this in 2 years because of time constraints".

The levels of dissatisfaction and the tensions that emerged from the use of assessment tools, from within the organisation and out in the community, served to foreground the need for a different and/or alternative approach to assessment. Two participants expressed a sense that they were "missing part of the puzzle" (Participant 1), and another reflected: "why I have chosen certain assessments and what I could potentially [be] getting out of them that I am not in my current way of assessing" (Participant 2).

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Reflections on their practice and the tensions further identified in their activity system of assessment served as catalysts for participants to contribute to this research. Their motives for learning about an alternative approach, or method for assessment are discussed below.

Motives for Learning About a Dynamic Approach to Assessment

Participants reported wanting to learn about an assessment process grounded in responsive practice, that was "culturally appropriate" (Participant 7), and relevant "to the general NZ public" (Participant 7). They also wanted an assessment that would potentially address their concerns regarding existing practices, but also incorporate and build on the strengths of the assessment approaches already in use, focusing on increasing learner engagement and facilitating inclusion.

Grouping participants' requests, the following four motives emerged:

- **Motive 1 (The mediator-learner interaction - Mediation):** Motive 1 aligns with facilitating change through mediation, focusing on learner potential and strengths to enhance participation in learning, facilitate inclusion and young people's sense of belonging in their schooling environments as illustrated by the following participants' views: Assessment that, through collaboration, would "help facilitate positive change" (Participant 13), provide information that was "strengths-based" (Participant 5), capture young people's point of view, and enable participants to "feedback to parents and teachers in a meaningful way that promotes growth and focuses on potential" (Participant 6).

- **Motive 2 (The mediator-task interaction - Activity Analysis):** Motive 2 aligns with a dynamic assessment approach of using collaborative task analysis to inform intervention strategies by unpacking the task and assessing how best to teach the principles of the task, and the cognitive and metacognitive skills required. As illustrated by the following quotes, participants wanted an assessment process to "better inform a situation would be great" (Participant 13), "would be the most relevant to practice / therapeutic implementation"

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(Participant 1), and that could "get teachers thinking about next steps" (Participant 12).

- **Motive 3 (The learner-task interaction - Analysis of Cognitive and Metacognitive Skills):** Motive 3 aligns with an assessment process and framework of cognition and metacognition to co-construct young people's knowledge of their own learning processes, thereby enhancing learner engagement and contribution to learning. Participants wanted an assessment process that would "assess what really matters" (Participant 13), involve "[young people] in the process so that they feel they can get/learn something about themselves too" (Participant 8), and "provide effective, useful and valid results" (Participant 9) that would be helpful to educators.

- **Motive 4 (Games):** Motive 4 aligns with assessment based in the real world, using games as a tool for assessment: "Assessment is evolving and therefore using play-based assessment would be beneficial to my practice" (Participant 5). Participants required an assessment approach that was "novel and fun" (Participant 11), "authentic" (Participant 1), respectful, "relevant, informal and real-world" (Participant 8), and provided information that was "close to reality and therefore [had] the potential to make a difference" (Participant 11).

Although Participant 13 described observation and discussion as the "easiest, and broadest categories. Natural forms of assessment that are almost expected in the work", two participants specifically wanted a framework to guide observations, and the following quotes illustrate: "A lot of the time with observations, you need a framework because there isn't one" (Participant 6), and Participant 4 wanted "to find a useful and effective framework".

Concluding Reflections: Part 1

All participants reported in some form that their main purpose and outcomes for assessment was to support young people to engage in learning and to facilitate inclusion. Using a range of assessment tools, methods and approaches from both qualitative and quantitative paradigms, most assessment outcomes focused

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predominantly on learner development and young people's participation and sense of belonging in their learning environments. Knowing that young people's responses were often associated with the approach or assessment tools used, participants were motivated to learn an alternative approach to assessment that was collaborative, strengths-based, educationally useful and brought about positive change for learners. This approach is discussed in Part 2.

Part 2

Part 2 focuses on research question 2: "Did knowing about a dynamic approach to assessment enhance practitioners' understanding of cognitive and metacognitive assessment, learning and teaching in their work with young people and teachers?". Analysis of themes emerging from questionnaires and interviews (both prior to, and after the workshop) details participants' understanding and experiences of the individual components of the RE*Think* framework.

The RE*Think* Framework: Operationalising a Dynamic Approach to Assessment

Participants were introduced to the RE*Think* framework as a learning step towards implementation, and a tool for operationalising a dynamic approach to assessment. As discussed in Chapter 3, the RE*Think* framework provides a detailed approach to guide observation of the following components. The

- mediator-learner interaction: analysis and change of mediation;
- mediator-activity interaction: analysis and change of the task, activity or game;
- learner-activity interaction: analysis of learning, involving learner cognitive and metacognitive insights to enable change in learning, and using the overarching key competencies of the *New Zealand Curriculum* as a starting point for authentic assessment, structure for metacognitive analysis, and bridging assessment outcomes.

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This framework was offered as either an alternative to using conventional assessments with young people, or as a meta-assessment of assessment and learning when the object of assessment is to learn *how* young people learn. Findings are presented through the combined analyses of participants' motives for attending the *Game-Changer for Assessment* workshop, and how the components of this framework could meet these needs. The discussion of each component follows a similar structure:

- A brief description of the concept as used in the RE*Thin*k framework and introduced to participants at the workshop.
- Analysis of themes, drawn from questionnaires pre- and immediately post-workshop, and two rounds of interviews three and six months later.
- A summary of findings.

Mediator-Learner Interaction: Mediation

Mediation (mediator-learner interaction) aligned with the first motive participants identified for workshop attendance, which included learning about collaborative assessment that would "help facilitate positive change" (Participant 13), provide information that was "strengths-based" (Participant 5), and enable participants to "feedback to parents and teachers in a meaningful way that promotes growth and focuses on potential" (Participant 6).

At the workshop, the concept of mediation based on Feuerstein's model of dynamic assessment was introduced to participants, with an emphasis on the foundational three requirements for successful mediation:

- intentionality and reciprocity: developing a reciprocal interaction between learner and mediator to enable change in learning through teaching;
- meaning: foregrounding the purpose of the learning activity with the learner; and
- bridging*: explicitly teaching* the principle of the activity and then applying, transferring or "bridging" to other areas (cf. Tables 3.1 and 3.2).

After the workshop, participants were encouraged to implement this framework in their ongoing assessment practice.

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Without exception, in answer to the question: *In your assessment practice, is it important to assess teacher interactions with learners?*, all participants reported that observation of the interaction between educators and learners was a focus of their assessments prior to the workshop. Given the strength of this finding, it positioned participants as more likely to align with, and understand the process of dynamic assessment. However, while the analysis of interaction was crucial to understanding the bi-directional flow between a young person and others, the philosophical lens through which participants viewed mediator-learner interaction shaped not only *what* they observed, but also influenced *how* they interpreted their findings. As discussed earlier, participants mostly used the lens of functional behaviour assessment (FBA) which meant that prior to the workshop, assessment was predominantly static, with *descriptions* of interaction that did not inform *how* best to teach young people. Only two participants (13%) used dynamic assessment which framed mediator-learner interaction as mediation, where the educator "guided the learning process" (Participant 11) to bring about change.

Immediately after the workshop, 16 participants completed the post-workshop questionnaire. Of these, 15 participants (94%) reported that assessing through mediation would be either *very useful* or *useful* as they considered whether they could embrace mediation in their assessment practice, whether mediation could facilitate positive change, and capture the voice and experiences of young people's learning within the process of assessment. When intervention strategies were co-constructed *with* young people, learning could be progressed by having "those deeper conversations around teaching and learning, bringing the ako to the fore" (Participant 13). Through ako - the "dance" (Participant 8) of learning and teaching - young people become active participants in their learning, "more aware of their learning and what they have learnt" (Participant 6).

However, the results suggest that supporting young people to become aware of their ability to learn is dependent on assessors and educators embracing the philosophy that all young people *can* learn. As one participant wrote: "[this young person] can learn, and learn just as well as everybody else … in a slightly different way" (Participant 11). Mediation can show what a young person does with assessment and offer insight into

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how learning can progress - the *how* of intervention - to "figure out ways to mediate and improve performance" (Participant 6).

However, the results showed that for participants, learning is not just about developing cognitive and metacognitive skills but addressing young people's emotional investment in learning. Using mediation, positive experiences during assessment become possible. For example:

> Oh yes, I can't forget his facial expression when he realised that he won with just that one question. … I can still vividly remember it, cause it was just "wow!". I guess that assessment, mediation was what I did. (Participant 12)

Therefore, mediation is different to "teaching": "it's a different form of engagement when you're teaching rather than just 'going along', I guess: *What* are we trying to teach, and *how* are we trying to teach them" (Participant 13). Mediation therefore occurs within the Zone of Proximal Development (ZPD): "It's moving into that 'gap'. As a teacher, I think I've always been aware of 'over there'. We're over 'here', how do we get 'over there'? There's a really huge hole" (Participant 10). However, how that "gap" is crossed relies on a practitioner's ability to influence a change in learning through mediation, and an educator's willingness to learn how to mediate.

While this was a theme that also featured strongly in interviews three and six months after the workshop, participants reported that together with a belief in change, getting to know the young person was essential for successful mediation. Identified as poorly developed in assessment practices prior to the workshop, a "strong rapport and relationship" (Participant 8) was crucial when assessment was not to "know a name, an age, a number" (Participant 11), but when educators wanted to explore "what's going on for the learner" (Participant 11). The following quote illustrates the importance of bringing about change:

> With formal assessment, I will do that mediation … in the report I would say the score was this, or this is how he performed, *but he appeared to learn once being shown ways of doing things* [emphasis added] … I still believe in formal assessment, but it's not the number at the end that's going to help (Participant 9).

Findings showed change in participants' perspectives and understanding of mediator-learner interaction after their engagement with the criteria of mediation. They moved from a static description of mediator-learner interaction to an understanding of the dynamic interplay of specific mediation approaches between educator and learner. For one participant, this was more than "teaching" as it aligns with the philosophy of ako, grounded in the belief that all young people can learn, and informing the *how* of intervention by bringing about change in young people's emotional responses to assessment and learning, the activity or task, and learner cognition and metacognition.

Mediator-Task Interaction: Activity Analysis

This section aligned with participants' second motive for learning about a dynamic approach to assessment, which included learning about assessment that would be "the most relevant to practice/therapeutic implementation" (Participant 1) and to "get teachers thinking about next steps" (Participant 12).

At the workshop, participants were introduced to the RE*Think* framework for analysing activities, games or tasks, and applied as participants engaged with game analysis. Components of an activity or task were identified using primarily Feuerstein's framework of task analysis (cf. Table 3.3). This offered participants the tools with which to analyse and to change the activity or task, and to know *what* is being assessed when an activity or task is used. After the workshop, participants were asked to analyse activities using this framework, and/or a dynamic approach to assessment in their practice.

Prior to the workshop, in answer to the question: *In your assessment practice, is it important to analyse learner tasks or activities?*, eight of the 16 participants (50%) responded *Yes* to using some form of task analysis, with comments indicating wide variation in their knowledge of analysis; three participants (19%) reported *No*, and comments such as: "unsure what 'learner tasks or activities' are" (Participant 2) showed limited understanding of the value of activity analysis; and five participants (31%) responded *Don't know*, uncertain whether task analysis was relevant to their practice, as one participant suggested: "it may not apply to me" (Participant 14). General

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understanding and knowledge of task analysis were unexpectedly limited, but likely due to learning opportunities. As Participant 3 noted, she didn't have the training to do activity analysis, but wanted to know more.

Where task analysis was reported, participants compared tasks to identify individual skills: "I try to use areas of strength to direct further intervention for areas they are struggling with" (Participant 8), and to show "exceptions in problem-saturated stories" (Participant 5). Participant 8 reviewed young people's portfolios of work: "I like to view samples of the child's work (best and most difficult) and talk with them [teachers] about how they manage to complete tasks." However, these brought their own challenges: "Portfolios are tricky because there is no evidence of the situation that the piece of work was collected from" (Participant 11).

Analysis of the data explored whether the curriculum content matched the young person's knowledge-base by having "conversations with the teacher about the task steps" (Participant 1), and identifying activities or tasks as the possible antecedent that triggered challenging behaviour,

> both inside and outside the classroom. I look at the young person's ability in relation to their same-aged peers. This is mainly done to ensure that tasks are set at the correct level, any skill deficits are addressed, and specific triggers are identified so that strategies can be put in place for those tasks (Participant 15).

One participant reported using Feuerstein's "Task Design Criteria" for detailed task analysis, to "adjust" (Participant 11) tasks and "analyse [the] effects on engagement and learning ... with suggestions for modifications" (Participant 11). However, for the majority of respondents, task analysis matching the demands of the activity to a young person's cognitive and metacognitive skill development prior to the workshop was rare.

Immediately after the workshop, 15 of the 16 participants (94%) reported that analysis of an activity task using the RE*Think* framework would be either *useful* or *very useful*. Understanding that every task or activity requires cognitive and metacognitive skills - which made "perfect sense across all domains of young person life" (Participant 7) -

individualised adaptation of intervention strategies beyond modification of the task became possible.

However, three to six months after the workshop and given the complexity of the interrelated components of the RE*Think* framework, a few participants reported that analysing the activity or task not only for the content, but the skills required for learners to engage with the task, was challenging. Where standardised assessment tests provide detailed explanations of the skills assessed, one participant had difficulty applying newly acquired knowledge to activities beyond the structured and normed test typical of formal assessment, and understanding: "Yes, well, it's that thing where you can assess any activity" (Participant 13).

Additional challenges presented when participants tried to engage young people in assessment whom they did not know well. However, knowing the young person enabled successful mediation for change, as Participant 12 explained:

> Because I know him, I know that certain types of questions he wouldn't be able to answer, such as abstract-level questions. But then if you scaffold that and break it up into really simple questions, he would be able to answer them enough to get to the answer.

Foregrounding the aspiration to build the capability of adults who support young people, collaboration in assessment has become increasingly important. Collaborative task analysis adds another level of understanding *how* young people learn and increases possibilities of mediation for young people. Working collaboratively with an educator, the following example by Participant 11 illustrates this in practice:

> So I thought, how could I have this conversation with her? So a colleague of mine and I went in and we used Task Analysis to frame up our conversation. And she's a really thoughtful teacher so it wasn't beyond her, and it really connected with her and the way that she thinks. So we just went through and broadly – broad brush-stroke – analysed [the lesson] against [the components of Task Analysis], and she could see immediately the high complexity demands that the task was asking of the kids, because they weren't connected – that was her biggest problem – they weren't connected to this text in any way.

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Including a collaborative component to activity analysis also has the potential to enrich the teaching process, and directly bring about change during young people's learning. As example,

> And so I will sit with the teacher's task, and in the moment I'll be watching the child while the teacher teaches a group and identify the 'sticking point' - that's where it's not working. And the teacher will look at me, and we've got such a good relationship that she'll be able to say, 'maybe if we do this?'. And we'll give it a try, and we can see what worked, and that's in that moment … and that to me is the most powerful learning for everybody (Participant 11).

When collaboration is successful, everyone in the process of assessment benefits from the learning that occurs.

Prior to the workshop, task analysis included a static description of learner strengths, identification of triggers and steps for curriculum modification. After the workshop, not only was there an increase in the number of participants who considered using task analysis for assessments and activities, but the findings also showed a shift in participants' understanding of the learning-activity interaction. As every task or activity has cognitive and metacognitive requirements, educators were able to consider how a task or activity may be changed to make learning accessible for young people. The value of collaborative task analysis is foregrounded, with its potential to bring about change in both learning and teaching.

Learner-Task Interaction: Cognitive and Metacognitive Skill Analysis

This component of the framework aligned with participants' third motive, which included learning about assessment that would assess "what really matters" (Participant 13), involve "[young people] in the process so that they feel they can get/learn something about themselves too" (Participant 8), and "provide effective, useful and valid results" (Participant 9) that would be helpful to educators.

At the workshop, participants were introduced to the RE*Think* framework, based on Feuerstein's concepts of *thinking (cognition)* and *thinking about thinking*

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(metacognition), and on the skills identified for 21st-century learning (see Table 3.4). Participants were provided with a reference sheet, detailing each skill, with links to the key competencies to support their understanding that: (1) *thinking* skills are embedded within each of the competencies, including *using language, symbol and text; managing self; relating to others; and participating and contributing*; and (2) the key competencies could provide structure for metacognitive skills analysis and for bridging outcomes. The metacognitive skill cards provided to participants were grouped according to the key competencies to further understanding and support implementation in practice. These could also be used as prompts during assessment and task analysis, and to support collaborative goal-setting with young people. Participants had the opportunity to practice using these cards in role play, and unpack the reference sheet to support their understanding of cognitive and metacognitive skills, and to guide their ongoing practice.

Questionnaires completed prior to the workshop revealed a wide range of understanding of cognitive and metacognitive skills, and the key competencies among participants. In answer to the question: *In your assessment practice, are the concepts of cognition and metacognition important?*, eight of the 16 participants (50%) responded *Yes*; four participants (25%) answered *No*; and the remaining four participants (25%) were either *unsure* or responded *N/A*. Comments ranged from cognitive and metacognitive skills being "less important in my role as psychologist" (Participant 15), to being seen as integral for learning: "I think they are very important, not sure how to assess them" (Participant 10). Only two participants (13%) reported using an existing tool and/or framework for the assessment of cognitive and metacognitive skills.

Participants' responses to the questionnaire pre-workshop did not reflect their understanding that cognitive and metacognitive skills were required for successful engagement with any task or activity (including standardised assessments). However, participants did recognise the value of metacognition, and as one noted, "[metacognitive skills] are personally very interesting. I would like to assess them more. I have not used many cognitive assessments, with most of my cases being 'behaviour' and therefore using FBA etc. in practice" (Participant 13). Further, they were viewed as isolated skills, requiring a different assessment tool: "The assessments I use currently do not assess these concepts" (Participant 4).

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Regarding the use of the key competencies as structure for analysis of cognition and metacognition, four participants (25%) used the key competencies as assessment headings to "align observations and feedback" (Participant 11) and under which to "formulate ... goals" (Participant 12). Some participants reported looking to the "RTLB [resource teacher: learning and behaviour] for guidance" (Participant 3) during school-based meetings and, as Participant 16 noted, not all schools refer to the key competencies in Individual Education Plans (IEPs).

Immediately after the workshop, 12 participants (75%) considered analysis of a learner's cognitive and metacognitive skills using the RE*Think* framework to be either *useful* or *very useful*, and 13 participants (81%) found the framework for providing participants with the language to discuss cognition and metacognition with educators and young people either *useful or very useful*. Participants recognised these skills as "the building blocks of actually learning" (Participant 13) and revealed a greater understanding of the role cognitive and metacognitive skills play in the dialogue of learning: "By recognising the metacognitive skills needed to learn the speech and language skills, it becomes 'easier' for us to figure out why strategies work and why others don't for that particular child" (Participant 12). Through mediation, cognitive and metacognitive skills may be developed and learning supported, as Participant 11 explained:

> It's reducing that cognitive load without taking [the young person's] independence away. He was still doing the work, but I was supporting the delivery of the work ... He wants to learn, he loves learning, but he moves away when he [experiences] cognitive overload.

Regarding the potential use of the key competencies as structure for cognitive and metacognitive analysis, although 11 of the 16 participants (69%) responded *Yes* to the question: *In your assessment practice, are the* NZ Curriculum *key competencies important?*, five participants (31%) reported having limited knowledge of the competencies prior to the workshop, and the challenges for implementation of this approach became evident. A number of participants used the key competencies because educators understood them: "I structure my IEPs around the KCs to ensure they are

strength-based - using this language is very helpful for teachers as they get it straight away" (Participant 8). Only two participants (13%) reported the value of the key competencies in their assessment practice. For example, Participant 8 described them as "SO important! But not given enough credit! These are key social skills/life skills".

Nonetheless, the majority of participants working with learning and supporting behaviour reported to be less familiar with cognitive and metacognitive skills than speech-language therapists. These results are somewhat counterintuitive as metacognitive skills are inherent in how young people think, act and behave. However, when a speech-language therapist explained that as understanding metacognition was part of their training, it became clear why they appeared to have a greater understanding of the impact cognitive and metacognitive skills have on young people's speech and learning. The following quote illustrates: "cognitive skills are deeply intertwined in language development. What's the point in targeting vocabulary if a child has poor retention skills? What's the point in working on receptive language skills if we don't also target delayed processing?" (Participant 14).

Three months after the workshop, participants without a teaching background found the framework of the key competencies challenging - "We all got lost in the key competencies" (Participant 16). However, for Participant 6, metacognitive analysis using the key competencies would be relevant to their practice: "I feel that it fits in well with the work that I do: ORS, behaviour (social skills)". Therefore, although the use of the key competencies presented challenges for implementation, when used with the RE*Think* framework they offered participants with opportunities to enhance their practice and make assessment outcomes more educationally meaningful. For Participant 10, "it always comes back to those key competencies, and the metacognition behind learning".

Linking to the key competency of *Thinking*, Participant 8 reported increasing young people's awareness of their learning processes, "and getting them to think about their thinking", Participant 8 noted:

> the change in this last term has been to … have a discussion what we've seen, the
> goals that we've talked about, and to get them thinking about how they might

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think about their learning in a different way or think about what they're doing in a different way and bring that awareness forward for them (Participant 8).

When "learners became aware of themselves as learners" (Participant 10), one of the outcomes of bringing about change in their cognitive and metacognitive skills was the potential impact on their well-being. The following interview exchange with the Researcher (R) and Participant 11 (P11) has mostly been included in full below as illustration of how a young person learned about her own abilities as a learner, the confidence it gave her, and how analysis using a dynamic approach to assessment potentially enabled successful mediation for learning to occur:

Researcher: Can you give me an example of where this (building a young person's confidence) has worked well for you, or what has been the biggest change you've seen in a child?

Participant 11: Well, that child I was talking about that I did most of my work with … In Year 3, she had had a cognitive assessment (she'd been referred to me), but had also done a cognitive assessment through [Child and Adolescent Mental Health]. She was diagnosed as 'mentally retarded', which was the actual wording that they put on her - in the 2nd percentile - and her mother's response was: 'I think I might be mentally retarded, too'. And I just sort of thought, 'my god, there's such a hopelessness in that whole diagnosis'. And the mother wasn't at all perturbed, just thought, 'well, we're very alike, and I'm not worried about her at all. She'll just trot through school'. And, you know, the good part about it was that the school also thought 'no, that's such a damning description of her. She's got far too much sparkle in her eyes for any of that to be true'. And so then I did the dynamic assessment, of course, and thought, 'this is the one that I work with' [using the Junior Assessment of Mathematics] …

R: And how did she change?

P11:   So, over the years, she became (as a Year 6 young person) a highly confident young girl, who has now gone to Intermediate, and math is her strength which is really interesting to me. Without me going

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very much further in terms of math (I worked occasionally with some of her teachers), but the organisational skills that she learnt within the math context transitioned - without me doing anything - to her reading and her writing, so those transferable skills were bridged. She did have some great teachers, but it was almost as though the teachers would say something and she would connect to it, whereas before she was disconnected from what was happening in the classroom …

When I interviewed her in her Year 6, before she went off to Intermediate to find out what she wanted to do in her future, she said, 'I want to be a lawyer'. And I thought, 'oh my gosh, that is just such an awesome thing', because she wants to help people. She knew why she wanted to do it, she knew what it was all about, and I thought, 'wow, hopefully one day you'll get the opportunity to do something along those lines', which was just awesome. So there were no limitations for her, really, in the end.

Findings indicate that, prior to the workshop, there was inconsistent interpretation of what constituted cognition and/or metacognition amongst participants, of the role these play in speech, learning, behaviour and affect, and knowledge of how assessment may proceed. This was an unexpected finding as these are the skills that "matter" in 21st-century education, and the skills foregrounded in the key competencies of the *New Zealand Curriculum*. After the workshop, although a few participants remained hesitant about the value of cognitive and metacognitive skills in their practice and how to apply their newly acquired knowledge, it is important to note that these results were not discipline specific, and the use of the key competencies as a starting point for assessment and framework for metacognitive analysis remained challenging. The majority of participants reported that having the language to talk about cognition and metacognition, and knowledge of the skills required by tasks and the mediation to bring about change in learning were all useful in assessment practice.

Games as a Mediating Tool for Assessment

This section presents the results for research question 3: "Were games useful to practitioners as a tool for a dynamic approach to assessment?" and aligns with participants' fourth motive for learning about an alternative approach to assessment. This was assessment that would offer a way of assessing that participants described as "novel and fun" (Participant 11), "authentic" (Participant 1), respectful, "relevant, informal and real-world" (Participant 8), that was "close to reality and therefore [had] the potential to make a difference" (Participant 11).

Games as a tool for assessment were introduced as an alternative to standardised assessments. Used as authentic assessment tools that could be used with young people in their natural environments, participants identified a range of games for the assessment of various domains. As games were made available at the workshop, participants analysed a number of these using task analysis, identifying the cognitive and metacognitive skills needed to play, and the mediation required in small group role plays. After the workshop, these were written up and made available to participants for use in their ongoing practice.

Of the 16 participants who completed the questionnaire immediately after the workshop, 15 participants (94%) reported using games in their practice prior to the workshop and shared their thoughts and perceptions of their use not only for assessment and intervention, but for a range of different functions. For example, participants used games as a "reward" (Participant 4) and "an 'icebreaker'" (Participant 2), which allowed for "authentic interaction and relationship building" (Participant 15); another used games to help regulate young people with self-regulation difficulties: "tamariki [children] [who] find it challenging to just sit and speak, … the physical task of doing helps support those with high levels of physical activity" (Participant 16).

Used across development domains, games were also used in informal assessment activities: "games give you the ability to assess a number of different skills the child may be using, from cognitive ability to social skills and self-regulation" (Participant 10). Games were convenient when observing peer interactions in "turn-taking, sharing,

sportsmanship" (Participant 7), how young people "react to winning or losing, whether they follow the rules" (Participant 3), and helpful when teaching social skills. Four participants (25%) reported using games such as "Lego, board games, games in the playground, role playing, play with sand, playdough" (Participant 3) to assess cognitive skills: "processing time, short-term memory" (Participant 3) and the ability "to follow differing step instructions" (Participant 1). Games were also used to assess concepts "small/big, colours, shapes etc" (Participant 1), and "to gage [the] language level of a child who may be shy or who has yet to develop language" (Participant 2):

> YES, I've always used games as a platform for assessing language and speech skills. I usually find out what the young person's special interest is and then go from there. A lot of the time I will make up a game using whatever toys the child has. I also use games that hit the 'enjoy and laugh a lot' button in kids (Participant 12).

As games were so widely used in daily practice, the concept of using games as a tool for assessment was one that aligned with the paradigm of assessment within the Ministry of Education. In Aotearoa New Zealand, the philosophies of learning through play, and of culturally responsive and authentic assessment guide the practice of practitioners working for the Ministry of Education. Awareness of culture also extended to a practitioner's choice of assessment in play, especially in the Early Years: "[We] generally use play to assess Early Intervention children ... [and] considerate of the child's culture before playing games" (Participant 2). As authentic forms of assessment such as Narrative Assessment and Learning Stories were also used by practitioners working with young people with developmental and complex needs, the concept of using games with all young people was not unusual. Nonetheless, themes emerged after the workshop relating to the challenges using games as a tool for assessment.

Although 13 of the 16 (81%) participants reported being highly motivated after the workshop, using games in assessment presented a number of challenges. On a personal level, three participants (19%) reported a lack of confidence in the process. Anticipated difficulties included understanding how to use games to assess change in learning and explaining the value of games as a tool for assessment to others. For example, Participant 8 expected having difficulty "explaining the benefit to

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staff/teachers/parents and capturing and communicating the data/outcomes in an organised and meaningful way". As they were not static tests, Participant 13 reported that using games did not "seem like 'assessment' - from the top-down and from the bottom-up. You would have to be extremely competent in your explanation [and] purpose to using them".

A range of concerns were noted by the participants when collaborating with others and using games as a tool for assessment:

- Clinical psychologists in health and/or psychiatrists may not understand the outcomes of assessment using games: "[an assessment using games] is not standardised, difficult to report on, and [would] not carry as much weight as a standardised assessment should it be needed for diagnosis" (Participant 6).
- Practitioners (including educators) in education would not see assessment results as meaningful:

    Those who are unaware of how games may be used as assessment/ teaching/ learning tools may perceive that games are just for fun and do not understand how they can be used to teach and gather information. They may not perceive results as valid as the test was not standardised or typical of assessment (Participant 1).

- Family and whānau expectations regarding assessment procedures would need to be managed: "I guess some parents and teachers who are traditionalists may not see the validity in doing an assessment that isn't formal or doesn't take place on a table and doesn't involve the child listening and answering questions" (Participant 14). While this tension was reiterated by another participant, the opportunity this approach to assessment offered all stakeholders was clearly identified: "This is especially true in parents who have been through strict formal schooling. I think it's a good opportunity for them to break away from this thinking that [standardised assessment] is the only way" (Participant 12).

For Participant 13, whose main methods of assessment were observation and discussion, using games as a vehicle for assessment and explaining the use of games to others remained challenging six months after the workshop. The following dialogue

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illustrates how being "unmoored to any theory and position" (Participant 13) poses a
barrier to understanding how games can be used as a mediating tool to assess change:

> Participant 13: There's always doubt with trying to present a framework that's
> new and different.
>
> Researcher: To whom?
>
> P13: Parents and teachers. I do remember one kind of conversation
> with the [young person's] team, where they were expressing
> scepticism about the therapy the child was having, saying: 'They
> just play games. We can do that'. I said, 'that's interesting'.
>
> R: What followed then?
>
> P13: Well, I hesitated to bring up the idea of playing more games …
>
> R: What stopped you from [explaining the value of games] to them?
>
> P13: I don't know. It's that being unmoored to any theory and position
> again …. If you're unmoored, you're just kind of out to sea a little
> bit, rather than having a solid foundation on which to inspire some
> confidence in your abilities and stuff, I guess...
>
> R: Is the barrier familiarity with the process?
>
> P13: It's learning the language.

Although participants identified that they used assessment to contribute to decisions
and interventions with regards to both learning and teaching, reluctance or resistance
from some teaching staff, family and whānau to using games as a tool for assessment or
intervention was frequently experienced:

> That's a challenge. It's really a challenge … We had a really interesting discussion,
> and we were talking about some families who don't want their children to be
> playing games when they should be reading and writing, and when they aren't
> yet able to verbally share ideas. I think [this teacher] finds it difficult not to have
> a more didactic approach and it's quite hard [for him to play games] - it's not
> quite 'natural' for learning to be 'fun' (Participant 9).

Nonetheless, a dynamic approach to assessment using games was seen to be a valuable
addition to the kete [basket, collection] of assessment tools. Immediately after the
workshop, 13 of the 16 participants (81%) indicated their intention to use games in a

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process of assessment after the workshop, with Participant 12 writing that "games will always be in my 'assessment toolkit'".

Participants reported that the RE*Think* framework would help make assessment using games "more efficient" and "less formal ... a more relaxed and enjoyable way of assessing, teaching and learning" (Participant 6), and "not daunting like other assessment measures" (Participant 8). Other participants reflected that using games with the RE*Think* framework would not only extend their skills in building rapport, but as an alternative or complementary tool for assessment as the following quote illustrates: "in place of standardised and normalised assessment - or in addition to - and [as] a useful tool to inform intervention, planning and assessment" (Participant 6). Participant 8 reflected that "games offer so many ways of interacting, assessing non-formally, and teaching in a way that is intentional and reciprocal. All so very positive and accessible". Nonetheless, participants noted that using games purposefully in assessment required planning and preparation, with the need to "[a]ctively deconstruct games with purpose, considering metacognition" (Participant 16).

Using games as a tool for assessment with the RE*Think* framework gave practitioners the language to enhance:
- culturally responsive assessment practice as the "use of this framework can be used with any culturally appropriate activities or games" (Participant 12);
- analysis of assessment outcomes and the use of games as intervention: "I already use games frequently in my practice. [This framework] will provide better analysis of what, why, which and how to use the games ... and [I] will be able to formulate my ideas with greater clarity" (Participant 9);
- conversations with whānau, parents and educators: "I think that we will now be more intentional in our use and be better able to articulate to parents/teachers why we use games as a tool for informal assessment" (Participant 4); and
- conversations with young people: "I have learnt that games are tools for assessment to turn into conversations - I am looking forward to seeing how this can translate in my future practice" (Participant 5).

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Three and six months after the workshop, participants who regularly used games in their interaction with young people, reported less difficulty using games in assessment and shared how these were used in their processes of cognitive and metacognitive assessment with both verbal and non-verbal young people. The following quote illustrates:

> I never say, 'this is the test, and this is what was done' or 'I've done a dynamic test' … I'll often use sequencing cards, or a story and see what they do with a book and retelling, and what they remember … One of my favourite activities is an insect puzzle with 12 pieces, and I'd say, 'which one's fly?'. So, you've got a kite, you've got a bee, something else… a plane … So, in my mind, I'm thinking: language processing, labelling, association, function (Participant 9).

Further, by using targeted questions such as: "*how* do I have to modify the game, or simplify the game for her to be able to engage?" (Participant 9), participants were able to use games to bring about change in learning. Used frequently in dynamic assessment to determine how a young person learns, games were used to observe learning and behaviour: "I have used association cards, sequencing puzzles, barrier games, classifying games, feely bag games to test, teach and observe the child's ability to learn" (Participant 9).

In general, a dynamic approach to assessment using games as a tool for assessment offered practitioners the opportunity for "deep learning, engaging conversations as an opportunity for change - and games as a way to get there" (Participant 13). Nonetheless, despite being commonly used in the field, games in assessment are vastly underutilized in practice:

> And I started showing [a colleague] my resources and talking about games and what you can get out of them and how you can use them. She appeared really appreciative of the ideas and said she hadn't used them like that before and hadn't really thought about it. So there's lots that can be shared (Participant 9).

Prior to the workshop, emerging themes included the use of games to get to know the young person, assess their level of skills across social and physical domains, and as intervention for the development of language and social skills. After the workshop,

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participants anticipated that games would be helpful not only to build rapport, but for informal assessment, and assessment to bring about change in learning. Interestingly, speech-language therapists appeared more confident using games in assessment processes, while participants supporting learning and behaviour were surprisingly challenged, despite recognising the potential value of games. Participants reported using games purposefully in assessment would require planning, involving analysis of the cognitive and metacognitive skills required and the possible mediation needed. Games nonetheless offered participants the means to do assessments with young people that could be engaging and positive, and where outcomes could be culturally responsive and meaningful for all stakeholders as assessment for change.

Concluding Reflections: Part 2

Considering each component of the RE*Think* framework as tool for conversation and observation to operationalise a dynamic approach to assessment:

- The RE*Think* framework offered participants frameworks to enrich their observations, as mentioned by Participant 4, who wanted "a useful and effective framework". Used as steps on their journey towards implementing a dynamic approach to assessment, the individual frameworks of mediation, activity or task, and cognitive and metacognitive skill analyses offered participants ways of observing interactions and identifying opportunities to bring about change, as Participant 11 described:

    you can, at any point in time say: 'well, what's happening with the child?'; 'what's happening with the task?'; 'what am I doing to be able to mediate this thing?' ... And the whole time that's what's happening - it's not secret at all.

    However, for those already familiar with dynamic assessment, participants understood this approach not to be a linear process of individual components but interconnected, as the following quote illustrates:

    Feuerstein put words to what I did as a teacher, and that sense the teacher gets when it does come right: when you match the child and the

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task, and your mediation happens so strongly - that's such a beautiful
feeling (Participant 11).

- While participants reported that games could potentially be a useful tool in their assessment processes, the majority of participants experienced significant difficulty using games as an assessment for change.

Although the motives identified for learning about a dynamic approach to assessment were closely linked to the specific components included within this framework, it became evident that each component of the RE*Think* framework addressed every motive for learning about a new approach to assessment: as a culturally responsive approach to assessment that is authentic, strengths-based and collaborative, with co-constructed outcomes that are educationally useful and meaningful for young people and educators.

As detailed throughout Part 2, challenges and opportunities identified within the different components of the RE*Think* framework were identified by participants across disciplines and through their experiences of assessing young people. Although participants reported seeing the value in using the RE*Think* framework to operationalise a dynamic approach to assessment, despite the positive feedback received in their interviews and questionnaires after the workshop, the reality of making practice dynamic was both challenging and exciting. These experiences are explored in Part 3.

Part 3

Using the CHAT analysis framework, Part 3 presents results related to research question 4, "Did learning about a dynamic approach to assessment bring about change in practitioners' assessment practices?". This section explores the opportunities and challenges a dynamic approach to assessment brought to practice, and the change that occurred for participants during this research, on an organisational level and individually.

The Challenges of Change and Opportunity for Practice

After examining each component of the RE*Think* framework in Part 2, this section explores practitioners' reflections on the potential use of a dynamic approach to assessment in their practice immediately after the workshop, and their experiences of implementation three and six months thereafter. Presented in Table 5.4, comparison is made regarding the use - and potential use - of a dynamic approach to assessment pre- and immediately post-workshop.

Table 5.4

Comparison of Participant's Use of Dynamic Assessment Prior to the Workshop, and Participants' Reported Potential for Use Immediately After the Workshop

Participants (n=16)		SLTs (n=7)	Psychologists, SEA, RTLB(n=9)
Pre-workshop Questionnaire	Mostly	1 (14%)	2 (22%)
	Often	3 (44%)	-
How often do you use Dynamic Assessment?	Sometimes	1 (14%)	2 (22%)
	Seldom	1 (14%)	1 (12%)
	Unfamiliar	1 (14%)	4 (44%)
		SLTs (n=7)	**Psychologists, SEA, RTLB**(n=9)
Post-workshop Questionnaire			
Please rate the following in terms of potential usefulness	Very useful	3 (44%)	6 (67%)
for your ongoing practice:	Useful	3 (44%)	3 (33%)
"Using Dynamic Assessment	Not useful	-	-
*approaches to RE*Think* assessment".*	Not sure	1 (14%)	-
Do you think you will use	Yes	4 (58%)	9 (100%)
a Dynamic Assessment process	No	-	-
in your ongoing practice?	Maybe	3 (44%)	

With the increase in knowledge, the number of participants who considered implementing a dynamic approach to assessment in their practice increased and participants indicated that they intended using a dynamic approach to assessment immediately after the workshop. As can be seen in Table 5.4 above, the increase in the number of practitioners supporting learning and behaviour (psychologists, SEA, RTLB)

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was greater than practitioners supporting speech and language (SLTs), likely due to the fact that dynamic assessment was more widely known among this latter group. However, although numerically this indicated a shift towards better understanding and the intention to use a dynamic approach to assessment after the workshop, participants' responses and their reflections also give qualitative insight into the possible changes participants potentially would make in all aspects of their assessment practices. Although the majority of participants were overwhelmingly positive immediately after the workshop, and opportunities for practice were identified over the three to six months of implementation, there were also concerns and awareness of challenge.

The Activity System of Assessment: After the Workshop

In this section, the challenges and opportunities presented by a dynamic approach to assessment for practice are presented, using the CHAT framework for analysis. As answer to research question 4: "Did learning about a dynamic approach to assessment bring changes in practitioners' approach to assessment?", discussion focuses on the following components of the activity system of assessment: (1) Assessment tools; (2) Community; (3) Division of labour; (4) Rules frame analysis on the organisational level; (5) analysis of the Subject as participants' individual perceptions and experiences of the growth in their understanding of assessment; and (6) the Outcomes of assessment.

As noted, "Assessment is on a continuum - there is room for all types of assessment and through all manners and forms" (Participant 5), participants were challenged as they attempted to incorporate a dynamic approach to assessment within their existing frameworks of practice and to make changes to their assessment processes. While challenges varied across discipline groups and tensions existed on both organisational and personal levels, opportunities for practice were also identified.

The challenge of change and opportunity that occurred in practice was examined using data gathered from questionnaires immediately after the workshop, and interviews conducted three and six months thereafter. Although the organisational tensions identified prior to the workshop remained, participants expanded on these experiences

during the implementation phase of this research, and opportunities for practice are presented in each component of the activity system.

Assessment Tools. Participants were challenged by: (a) an assessment process that is fluid and has no script; (b) a limited understanding of how the theories that underpin a dynamic approach to assessment are aligned with Aotearoa New Zealand's philosophy of learning and teaching; (c) the costs involved and the time to learn were seen as prohibitive barriers to accessing further training in dynamic assessment.

The dynamic nature of this assessment approach created tension for a number of participants. Assessment without a defined script and, as a principled framework and collaborative approach, requires fluid interaction with a young person. These presented difficulties for a number of participants as a dynamic approach requires creativity, an ability to draw on knowledge of assessment practices and a broad skill-set of intervention that could be challenging for a number of practitioners:

> people get very scared because, 'so what do you do, if we don't do this?' and then they don't know what to do. They are taught 'this is what you have, this is what you do' so everything is like a package (Participant 9).

As practitioners tended to gravitate to assessment "packages", one of the greatest barriers to learning about dynamic assessment were the costs involved. Nonetheless, one participant felt that, given the time and support, practitioners only needed the time to understand the process of assessment:

> I think people don't understand it, my colleagues, for example. I've been talking to them for three years and still there are people who say, 'this is too hard for me'. And I wonder, 'how can they *not* [original emphasis] do it?', because it's the answer to your work … It's such a rich process and it doesn't have to be confined to this very expensive programme, and it's so sad that it is … and people think they have to get the training to be successful. But you don't, you just have to understand the theory behind it to be successful (Participant 11).

However, a curious finding was the lack of understanding how the foundational theories that underpin a dynamic approach to assessment also informed the paradigm of

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teaching in the education of learners with diverse needs. This lack of understanding is illustrated by the following response from Participant 10 when asked whether assessment practices match philosophy of learning:

> It doesn't … and that's the thing. And that's the contradiction … there's still a lot of practice out there where they're trying to squeeze everyone into this 'box', and until we realise that kids learn differently – and we did, I don't know why it's all disappeared … Why is this suddenly so new to so many people? What, we don't all learn the same way? (laughter).

The value of a dynamic approach to assessment is captured in participants rethinking (a) standardised assessment; (b) how culture is inherent in assessment; and (c) power imbalances in the assessment process.

Rethinking what's "missing" from standardised assessments, the following quotes illustrate how using a dynamic approach to assessment had the potential to provide:

- qualitative data:

  > Actually, that was the most interesting part of the *WISC*, seeing how she adapted – it was kind of outside-of-the-box in terms of *WISC*-delivery and writing down the number. It was more about *how* she was doing the task as well. And I guess there's a *how* [emphasis added] element to all the *WISC* activities (Participant 13);

- a way to progress learning. As a strengths-based assessment process, positive outcomes for educators and young people were shown to be possible through an assessment process developed to bring about change in learning:

  > The recording of assessment information has been more robust as you are not just writing what the young person is *not* able to do. With using the framework, the teacher has taken the information on *how* to support this young person better (Participant 12).

- collaborative conversations to find the "missing pieces".

  > I find that when I'm doing a standardised assessment, there's a lot of things that you get, yes. And then you go, well, what about *that* [emphasis added]? And then, because when we do assessments we do standardised assessments, and we still do observations, we still talk to people, and

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> that's when you find out those missing pieces that would link up to the
> assessment results that you've got, which I found was really good building
> the big picture" (Participant 12);

- fluid, interactive, child-led assessment that was responsive to need and did not
  follow a rigid protocol:

> So when I'm working with kids, the whole time I'm working the triangle,
> the kids and teachers. So the whole focus is really understanding the child
> in the environment - *how* do you tweak what's happening in that space in
> order to better meet the needs of the child … Whereas before it felt like I
> had to change the world, now I know I can just go in and I have the means
> to be able to tweak what's happening in order to make a difference
> (Participant 11).

As discussed in Part 1, participants were encouraged to articulate their understanding of how culture impacts on the practices of assessment prior to the workshop. As the basis of cultural competency that informs all assessment practice, Participant 16 emphasized the importance of being able to "consider another person's point of view", which leads to rethinking the balance of power in the assessment process. Participant 16 made visible the power imbalances inherent in traditionally western assessment practices when young people are assessed. She suggested that practitioners often take a position of authority and may give little consideration of the need for collaboration with families or whānau, as the following quote illustrates:

> When [assessing] with them their child, I was once again struck by my
> perception of the power imbalance, i.e., mum and dad's belief that 'you/I am the
> expert'. … The important thing is they (parents/the clients, child) get to know <u>us</u>.
> We are so powerful - do you know that? - We are so powerful in these people's
> lives. We walk in, we already know who they are, what their address is, how old
> their children are … And when we walk into their homes, they know nothing
> about us. And then we expect them to do what we ask. We expect them to accept
> everything we tell them is Truth and, actually, it's just not good enough.

Six months after the workshop, Participant 16 reported that while power imbalances remained inherent in the assessment process, a dynamic approach had the potential to

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share that power. Describing an interaction with whānau during assessment, this was achieved by emphasizing that family and whānau "are the experts of their child"; that assessment proceeded collaboratively: "I talked about how we will do the assessment/s together, that their input is crucial to the outcomes"; and bridging mediation into everyday environments: "I discussed with them that optimal intervention would be conducted in context, and not disrupt their quality of life or the way they live day to day, but rather enhance what they are currently doing daily" (Participant 16).

Across the Community. The many challenges participants faced included (a) managing educator expectations and participants' resulting lack of confidence to change their approach to assessment; (b) educators' resistance to change their practice as a result of assessment outcomes; (c) educators' resistance to collaboration; (d) constraints of time to collaboratively assess with educators; and (e) the lack of understanding of the dynamic process of assessment in the teaching profession.

Two of nine participants (22%) suggested that their existing assessment reports were not valued by members of the Community, despite educators wanting support from practitioners. From analysis of participants' responses, educators had few expectations that practitioners could meaningfully contribute to an understanding of young people's learning. One participant, for example, related her experience of providing an educator with an assessment report, who appeared to "put it away", despite wanting to know "'why isn't this kid making progress?'" and what she could do about it (Participant 6). Although intending to use a dynamic approach to assessment after the workshop, a lack of confidence in using a dynamic approach to assessment led this participant to using assessment tools that others expected her to use: "I have done a couple of *WISC*s, or whatever people have been wanting me to do" (Participant 6). However, despite doing what "other people" wanted her to do, she felt that "you're always feeling you're not doing enough, like you could be doing more" (Participant 6). When asked what "more" could look like, she responded:

> It's actually quite interesting. [Schools] have really low expectations of what we can do. So when you go in, they're not expecting you to be able to do that much, actually. It's mainly TA (teachers' aide) hours that they're looking for (Participant 6).

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For young people with diverse learning needs, the role of the teacher's aide is often pivotal, and the person most actively involved in facilitating a young person's inclusion in the classroom programme.

Despite participants reporting that educators wanted to know more about how best to teach young people, participants experienced opposition to change when outcomes using a dynamic approach to assessment highlighted the need for educators to accommodate young people's learning needs. The following example illustrates:

> [It is] sometimes positive, but I often find resistance … a bit of a dilemma when I'm giving feedback to schools and they ask for a score or an age level, and I talk about *how* [emphasis added] a child responds in this situation (Participant 9).

Some participants noted that not all educators wanted support to "shift their practice" (Participant 11). For example: "you're met with blank stares" (Participant 10), and another reported:

> It is the mismatch of the expectation of where a child is at, and what they're expected to do. Often, nine times out of ten, it's the situation we're in … that teachers are wanting kids to be writing or responding to questions when they aren't ready to do it, or it just needs to be done in a slightly different way … and teachers can be resistant (Participant 9).

When educators were invited to be active collaborators in the assessment process, a few participants encountered adversity: "Teachers get really scared because they think you're observing them. I've had teachers say to me: 'you're just going to come into my class and analyse what I'm doing wrong'" (Participant 6). Another participant described some educators as "'paint-by-numbers' teachers … [These are the teachers that will say] 'just tell me what to do and I'll do it'. And they do it, but they don't understand what they've done or why it was successful" (Participant 11).

Time was also a consideration when inviting educators to collaborate in assessment: "It is quite hard to release a teacher for a few minutes to do a one-to-one assessment" (Participant 12), which was why, when a member of the teaching staff was released to be part of the assessment process, teachers' aides were more likely to attend. However,

teachers' aides' poor understanding of the theories underpinning the process of learning contributed to one participant's reluctance to invite them to be part of the assessment process:

> Teachers' aides just get totally confused by what I'm doing even though I'm trying to explain it. They just don't have enough theoretical knowledge to understand the trial-and-error side of it. So when I'm experimenting (because that's what you're doing, right?), that confuses someone who doesn't understand that, and so they don't know what you're doing. And they can't see ... It's just too complex ... I got told off the other day. I dynamically assessed a *Probe*, and got told off by a teacher's aide because I didn't do it correctly ... They couldn't get their head around what I was trying to do at all, [as] they had no theoretical background to be able to pin it to (Participant 11).

Participants reflected on the benefits of a dynamic approach to assessment for young people and educators through the co-construction of assessment and intervention strategies, and which also contributes to developing collaborative relationships with schools, family and whānau. The following quotes illustrate these themes.

Rethinking who benefits from assessment, participants identified the value of this assessment approach for:

- Practitioners. This framework encouraged "deeper thinking about how different concepts and aspects of the child and their environment are interrelated" (Participant 15) and to see assessment outcomes differently: "So I don't see [areas of difficulty] as being deficit as such, it just means 'not yet'" (Participant 11). A dynamic approach to assessment further provided guidance on the skills that young people needed to develop and bridged into different contexts. As pointed out by Participant 5: "[being] able to give clear skills that we focus on, based on the principle we wish to bridge, is empowering. I believe that this can also assist with driving relationships within schools".
- Educators. Giving consideration to the many commitments and pressures that educators face, Participant 10 proposed that the outcomes of a dynamic approach to assessment would be helpful: "It's a 'how to' for so many [teachers], especially when they are so stressed and tired"; Participant 11 suggested that

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"sharing information … inspires action - especially so that teachers can see how they can make changes to maybe make a difference for their learners".

- Young people. Participants considered using this approach for young people who did not respond well to standardised assessments. Participant 7 agreed that: "we cannot use a 'one size fits all' approach", and Participant 6 suggested that this approach "would suit the population that I am working with who would often not perform well or below potential in the standardised assessment". For participants who implemented this approach, Participant 12 reported that "The young person enjoyed the process more. He has taken on the feedback better as he is not pressured … The assessment process has become more relaxed as it does not have to have a testing vibe"; and Participant 11 stated that this approach to assessment can "do no harm", an ethical consideration when doing assessments with young people:

> It doesn't matter where you start, you can start with their strength. And you can mediate a young person's strength and grow it in the same way, but you learn about the child. Then you can demonstrate how it works. So I don't think there's any starting place … there's no way you can go wrong, you can't do any harm - that's what it is.

While all participants considered this approach to be particularly useful for young people with diverse learning needs, Participant 9 further suggested that "dynamic assessment is an essential part of any assessment of a child. One cannot say with authenticity you have made a comprehensive assessment without including dynamic assessment".

Within the Organisation: Division of Labour. Due to a lack of resources, participants were confronted with challenges to implementation; factors largely similar to those identified before the workshop. These included time constraints and high caseload numbers. When trying to implement a dynamic approach to assessment in their work, four of the nine participants (44%) reported that balancing demands and waitlists were barriers to implementation as these created pressures of existing work. The following quotes illustrate: "Immediately [after the workshop], I thought I would use it a lot, especially with new cases, [but due to] a lot of background stuff and not a lot of one-to-one work with young people, I haven't had a chance" (Participant 15).

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"Background stuff" (Participant 15) included waitlists: "for so many [practitioners],

they're governed by this waitlist [and] the pressure to sign them off" (Participant 10),

and the high demand for immediate service:

> Caseloads are quite high at the moment. The cases are complex, and there have
>
> been a lot of schools in crisis this term. So, I'm constantly getting emails and
>
> phone calls, and having to deal with things immediately. So everything else gets
>
> put on the back-burner (Participant 15).

For a few participants, the time to plan assessments was consumed by travel time: "all

this pressure: so many cases ... and I run ... there's no time, and there should be ... there

should be time to plan and think what you're going to do ... it's the travel" (Participant

9). Additionally, the lack of time available to develop confidence in using this approach

was identified as a barrier to implementation:

> from experience, it takes time to learn how to do things, and really reflect on
>
> what you're doing ... I sometimes wonder if I'm doing it as well as I could be, or
>
> should be ... I would like to do it more carefully, more thoughtfully. It's a bit
>
> difficult - it's trying to get through [seeing] our children. So there often isn't time
>
> to reflect about what one does, which is not good practice (Participant 9).

Furthermore, when viewed as an *additional* framework to learn, rather than

understanding that this approach offered a *principled* approach to assessment - a lens

through which observations could be done, conversations framed, and assessment was

collaborative - a lack of time was identified as preventing the use of a dynamic approach

to assessment:

> Lack of experience again, but maybe there is a time factor. Considering what will
>
> be useful in a case, there is part of me that thinks getting the most relevant
>
> material is prioritized. It would be nice to do everything, all the time, but reality
>
> is ... not nice? (Participant 13).

Within the Organisation: Rules. Paired with participants' developing

understanding of a dynamic approach to assessment, the Rules guiding practice created

the following tensions with implementation: (a) the scope to change practice; (b)

historical and societal pressures on service delivery; (c) new directions within the

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organisation and the threat to professional identity; (d) contradicting paradigms within the organisation; (f) the status of dynamic assessment within the organisation, and lack of support to enable change in practice.

Organisational expectations regarding assessments appear to vary among professional groups.

- Speech-language therapists reported being required to do specific one-on-one standardised assessments with young people: "we really have to do a number of assessments that are a necessity" (Participant 16). Being non-standardised, one participant suggested that a dynamic approach to assessment would need to be "adapted … as policy dictates we work" (Participant 14). These quotes reveal participants' perceptions of the limitations imposed on practice by the organisation. Participant 1 further noted: "we are only able to practice within a very small part of our own scope due to service delivery constraints - challenging to think of incorporating another scope due to limitations already in place".

- Participants supporting learning and behaviour described their work as building the capability of adults who support young people, to the exclusion of working *with* young people: "We have too many kids, and it's about upskilling the teachers and teachers' aides who are there working with the child every day, all day, as opposed to doing 1:1 assessment with young people" (Participant 10).

A few participants described in detail the tensions created within the organisation when historical and societal stressors impacted on service delivery. The following example illustrates:

> So when we go in now, we're not just looking at speech-language and communication, we're looking at the whole needs of the family. And we have to come back to the office and start targeting other organisations to help with those families, because we're finding we just can't work with the families until the bigger issues have some kind of resolution (Participant 1).

Together with these challenges, Participant 16 described the new approaches in service delivery that impact on assessment practice, which appeared to be in direct tension with a dynamic approach to assessment. Participant 16 reported, "The Ministry is

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running in two directions": Routines-Based Intervention (RBI), which "all of our early intervention teachers are running - and that framework is very prescribed" (Participant 16); and consultative practice, where some participants considered that most of their work was predominantly systemic, with greater emphasis placed on the wider community (educators, family and whānau) and less focus on the individual young person. Participants had difficulty knowing how to implement a dynamic approach to assessment within these approaches of service delivery.

With increased focus on system-level work and less direct contact with young people, participants indicated concerns that their identities as professionals were potentially threatened:

> It's interesting, you know the Ministry is now getting us to work in a very, very broad way of working, so we can't actually just focus on being speech-language therapists anymore. We are consultants to do with additional learning support needs, with the title of a speech-language therapist (Participant 16).

This perception has led to discontent as, while participants identified the value in working across environments and various contexts, they also identified the need to work *with* young people according to their professional roles, guided by their Codes of Practice. For example, Participant 16 described that, although engaging in "an overall picture/assessment of [families'] daily lives ... I must add that some SLT's (like myself) will still [assess] the child from a speech and language perspective, i.e. [using] standardised [assessments] and checklists". This has potentially further led to further misunderstandings regarding assessment and expectations of service in the wider Community.

An additional factor contributing to the misconception of the assessment practices lies in the inherent contradiction of paradigms within the activity system of assessment. Although lengthy, this quote illustrates the polarity of paradigms within one system and how they impact on service delivery:

> And this is the irony: you've gone through the [Ongoing Resource Scheme] application, where first of all you've got the diagnosis from the hospital (medical model), and then you go through the whole verifying process to get ORS (the

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whole deficit model), and then we turn around and say our whole service delivery is about the ecological model – putting the child in the centre. But every couple of years, we go back to the deficit model and 'it's what's wrong with your kid' so that we can create or generate hours for TA [teachers' aide] support. And every year I have to do that, and it's parents' tears, and that's with me saying, 'I'm sorry, this is a really horrible process'. And you think, there's got to be a better way (Participant 10).

A "better way" (Participant 10) to resolve the dichotomy between participants' philosophy of learning and choice of assessment may be a dynamic approach to assessment, which is based in socio-constructivism, is strengths-based, and more closely aligned with the paradigm of teaching and learning in Aotearoa New Zealand.

However, on an organisational level, the perceived status of a dynamic approach to assessment was a barrier to implementation. Participant 8 suggested the need to "increase its status too, to be part of the psych [assessment toolbox]" as this would likely encourage more interest among practitioners. Participant 12 suggested that greater exposure to a wider community was needed to promote understanding of this assessment process:

> More work [is needed] around getting more people to understand its importance. With the focus being on numbers (outputting; decreasing waitlist) and having a "criteria" (and how do you meet that? by showing what the child can NOT do; low scores on assessment etc.), a lot of people will need help to shift their mindset.

However, when a shift in mindset occurred, transformational change into action was very difficult without ongoing support from the organisation, as the following dialogue illustrates:

> Participant 6: So you go [to the workshop], you do it and you think, "Great! It's going to work out". You're all enthusiastic, you come back, and you carry on doing what you were doing before.
>
> R: What makes it hard to change practice?
>
> P6: That's hard … going through your cases and thinking where you

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> may put it into a schedule. Once you've done it, you're probably
> able to do it. It's that first case ... I kept taking the folder home,
> thinking I'll go over this at home, but then never doing it and
> bringing it back [to work] the next day. So, nothing done, but
> wanting to do something ... Probably I need to have one child and
> do that one child with you, right alongside me.

Participant 13 suggested that this approach could enable practitioners to reflect on their practice and had relevance for every aspect of the assessment process: "I think [the RET*hink* framework] is very useful and can be applied to assessment, intervention, engagement - all fronds of the Poutama [The Ministry of Education's framework for service delivery]". This approach had the potential to "enrich assessment processes" (Participant 3), aligned with the organisational philosophy of being strengths-based, to "bring about positive change" (Participant 13), and to be culturally responsive.

Rethinking culture inherent in assessments after the workshop, Participant 16 noted that the RE*Think* framework offered opportunities for participants to work in a culturally responsive way that was not a "prescribed process":

> 'we do this, then we do that, and it's all done' – we tick the box. So families don't
> come to tick the box, certainly not Māori families anyway. And we fail to engage
> with them when we treat them in that manner.

For this participant, the framework and a dynamic approach to assessment added value to assessment from a cultural perspective:

> I see a great deal of value in something that is able to shift and move, able to link,
> and able to help [practitioners] to see the linkages ... I don't think we can fix
> everything, but this is such an expansive framework and encapsulates
> everything, it's always going to come back down to the individual practitioner as
> to how they're working culturally. The framework itself just leaves it open for
> you to be a damn good practitioner, as you should be (Participant 16).

However, when participants were overwhelmed with the number of cases and constraints of time, Participant 9 had the perception that using a dynamic approach to

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assessment could make a difference not only for practitioners, but also the community they serve:

> Everyone's doing their bit, everyone's struggling, and nothing actually changes, and the teachers are worn down. ... everyone feels so overwhelmed by all the pressures of what you're supposed to do [and] you've got 50 cases. But actually, if you feel you're doing a good job, you can support those people and make a difference, and then support others. Otherwise, we're just floating around the top and not really making the big difference we're supposed to be making (Participant 9).

Finally, participants identified that a dynamic approach enabled them to work more closely with young people and educators to make a difference and bring about change: "[by working] more systematically and dynamically as well as providing more specific strategies for the parent/teacher/caregiver to support the child's learning (Participant 9). For Participant 12, it provided a structure to organise assessment material and feedback that was strengths-based and authentic: "It has given me a framework to organise my process and my thinking for doing assessments".

Learning about a dynamic approach to assessment, therefore, presented participants with opportunities to reflect on their practice. Over the six-month period of this research, participants were able to recognise either their growth, or identify the personal barriers that prevented change in their assessment practices. As one participant said: "So I'm definitely willing. It's taking that next step" (Participant 6).

Subject: Participants' Individual Experiences of Challenge and Growth.

Taking that next step is difficult. Shifting a mindset is challenging. Bridging knowledge into practice is complex. Although identified as two distinct and separate levels of tension, the organisational and personal levels of tension and opportunity are closely interrelated and influenced how participants took "that next step" (Participant 6) in their assessment practice.

Larsen's (1982) utilization scale (see Table 5.5 below), consisting of seven ranked steps of knowledge use and non-use, was used to represent participants' bridging of

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knowledge into practice. In this study, the scale was used to capture how participants managed the challenge of a principled approach to assessment, and how knowledge of the RE*Think* framework and/or a dynamic approach to assessment bridged into practice. Using these steps, "change" included not only a change in behaviour, but also a change in heart and mind.

Table 5.5

Bridging Knowledge into Practice

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1. *Considered and rejected*: Some discussion takes place, but the information is rejected.

2. *Nothing done*: No action, not even discussion, is taken.

3. *Under consideratio*n: Information has not been used but is being discussed and considered.

4. *Steps toward implementation*: Although information has not been used, the decision to do so has been made and initial planning steps have been taken.

5. *Partially implemented*: Certain features of information have been used, whereas others have been disregarded.

6. *Implemented as presented*: The information is used in the form in which it was originally presented. (However, as a few participants were already familiar with dynamic assessment prior to the workshop, they did not require a framework. Therefore, this point has been changed to "Implemented" below).

7. *Implemented and adapted:* Information is modified or adapted to fit the local situation.

Using Larsen's scale, tracking participants' learning and steps of bridging knowledge into practice occurred at three points during this research: (a) immediately after the workshop; and (b) three to six months after the workshop.

Immediately After the Workshop. Data from questionnaires are presented using Larsen's (1982) scale:

Scale	Step 1. *Considered and rejected*	Step 2. *Nothing done*	Step 3. *Under consideration* ("maybe")	Step 4. *Steps toward implementation* ("yes")
16 participants	0	N/A	3	13

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Step 1: *Considered and rejected.* Of the 16 participants who attended the workshop, none reported rejecting the framework and/or process of assessment.

Step 3: *Under consideration.* Three participants recorded that their knowledge regarding a number of the components of the RE*Think* framework were still emergent, and they lacked the confidence to implement a dynamic approach to assessment in their practice. Components identified as challenging included the key competencies of the *New Zealand Curriculum*, and understanding metacognition and metacognitive skills. The following quotes serve as example: Participants 1 and 14, for example, reflected that to link assessment outcomes to the key competencies would require "a lot of thought" (Participant 1), and to incorporate cognition and metacognition in assessment would be challenging: "I feel that my understanding of metacognition is very poor, even with the cue cards. I'll need to go away and have a deep think about how I can use metacognitive analysis in a more intentional way" (Participant 14).

Step 4: *Steps toward implementation*. Introducing a dynamic approach to assessment using games offered participants the opportunity to reflect on (1) their approach to assessment: for Participant 3, for example, learning about this approach to assessment "[changed] my way of thinking about assessment"; and (2) the possible changes participants could make regarding not only *how* they assessed, but *what* they assessed in practice. The following example illustrates:

> There are elements of my current practice that I would like to shift. Seeing behaviour as a possibility for metacognitive coaching is a potential for learning and growth in terms of my own practise ... The learning that has shifted me, is to think about 'bridging principles' and I am left wondering how this can influence my work around behaviour going forward (Participant 5).

It is important to recognize that to effect change in behaviour, affect and emotional motivation are essential. At least four participants (25%) reported an emotional response to learning about a dynamic approach to assessment, as illustrated by the following quotes: Participant 10 felt "engaged and excited to have been a participant"; Participant 13 enjoyed "the great conversations and ... feel better for it"; and Participant 8 reported: "My thinking has been extended, I have been inspired, challenged, excited

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and rewarded … I am leaving with lots to think about and tools I am excited about incorporating into my practice!".

Three to Six Months After the Workshop. Participants were asked to rate their own processes of change, cognitive and emotionally, and using Larsen's scale (1982).

Cognitive and emotional change			
Scale	Step 1. *Considered and rejected*	Step 2. *Nothing done*	Step 3. *Under consideration*
Participants	0	0	3

Of the nine participants who participated in ongoing research, none rejected this approach to assessment, or did "nothing" during the three to six months phase of implementation. Of the three participants, who had not yet implemented this approach to assessment in their practice, but who embraced the possibilities it offered, two left the research project after the first round of interviews.

Step 3: *Under consideration.* The following quotes illustrate participants' changes of perception, thoughts and feelings about assessment:

- I would say cognitive change - it definitely has. Emotionally … I would say that I've never been entirely happy with our assessments that we do anyway, because they're hard for the kids, and they're depersonalised, and they don't capture the true essence of what's happening. So we needed more, but I guess I didn't really know how to add more in, so I think cognitively it was another tool, rather than a running record or behavioural observation … But it did change my thinking with one young person whom I'm working with (Participant 15).
- For Participant 6, a shift occurred in the way she looked at the process of assessment and not only at assessments as "tools": "[shaking her head] A way of assessing … Because I want to feel like I'm doing more than that. There's more to giving instruction than doing it slowly - that's just not enough …". However, a barrier to implementation included confidence in a practice of assessment that

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had served her well "for years", and protocols that were predictable: "I'm so structured, it's scary when I think about it".

Change in assessment behaviour			
Scale	Step 4. *Steps toward implementation*	Step 5. *Partially implemented*	Step 6. *Implemented* Step 7. *Implemented & adapted*
Participants	1	2	3

Prior to the workshop, these six participants were already familiar with dynamic assessment and had been exposed to previous learning opportunities, mostly through their universities. Four participants regularly used a form of dynamic assessment in their practice and are fierce advocates for this approach. One participant left the research group three months into the project.

Step 4: *Steps toward implementation.* Although Participant 10 had not implemented this approach to assessment in her practice, steps towards implementation had been taken by discussing this framework with other practitioners and educators, and planning next steps.

> When I was introduced to dynamic assessment in 2016, I really thought, 'this makes a lot of sense' ... trying to bring the child into the process of being a learner - that's what's exciting ... I think what I came away with from the workshop in January was that this is really how I teach. But I didn't have a name for it, it was just 'my way of teaching'. So, for me, it was like a 'coming home' ... I think I have a narrative to use with it. You know when you are opened up to the discourse and suddenly the narrative fits? And where before it was there, I didn't really have [the language] to describe it. So, I think that's what opens it up to new possibilities (Participant 10).

Step 5: *Partially implemented.* Three months after the workshop, Participant 13 reported that this approach to assessment "made me think more broadly about how I'm assessing - what assessment is ... It's made me think about the way I'm assessing ... For me, this is an Intellectual Exercise because I haven't put it into practice yet". However, a dynamic approach to assessment encourages self-reflection and when assessors

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become reflective practitioners, opportunities for change emerged as described by Participant 13 six months after the workshop:

> I see that I'm often part of the problem rather than part of the solution. And that's a good observation because that means I can change or try to be more part of the solution. What I mean is, so often the work is around the people around the child trying to change the child. I'm too often working with parents and teachers, rather than trying to understand the child. We're developing plans for the teachers and plans for the parents, rather than plans with the child. So that's what I mean by being part of the problem rather than being part of the solution. I'm just contributing to this swirl around the child.

Participant 12's professional career as a speech-language therapist started with dynamic assessment, changed with the move to New Zealand as standardised assessments were reported to be expected in the role, only to find that dynamic assessment provided the answers that standardised assessments could not produce. A description of shifts in practice are recorded below:

> So, I've gone through that phase where every assessment that I did had to be a standardised assessment. Eventually, that shift to 'hmmm, yes, I'm getting information about what they can do', but there's that thinking that they do have a 25% chance of getting it right, really, because there are only four choices. I think what shifted for me at that point was [working] with this other kid … We did the [standardised assessment] with all the concepts - boy, was he getting a lot [right] and he was scoring quite a bit. And so [you think], 'yes, he gets that'. But then I observed him in the classroom, and those concepts that he got right [during assessment], he wasn't understanding the activity in the real world. And this made me go, 'whoa!'. So, if a person is reading my assessment, based on just the [standardised assessment], they will assume that this kid has good receptive language, but when you see him [in class], there is a mismatch. I felt bad at the time, wondering whether I had done the assessment wrong and thinking: 'what am I not doing right?'. And this created a dilemma for me because the standardised assessment was saying something else, and then if you do an observation, you get conflicting results. So that shifted that for me: so, coming from doing dynamic assessment, then going through the standardised

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assessment phase, to eventually going, 'no, wait a minute!'... So that, for me, was a shift again.

Nonetheless, three months after the workshop, Participant 12 identified that change in patterns of practice were difficult to sustain, partly because learning about all the components of the framework was too much: "After the workshop, you go back to the office, and you go back to your default way ... because that's what your brain thinks is easier. You don't stress yourself, but you do miss a lot of things" (Participant 12). Three other participants also felt that learning about all the components of a dynamic framework of assessment was challenging and, six months after the workshop, Participant 8 reported "remembering the specifics is a little more tricky".

Step 6: _Implemented._ For two participants, learning about the RE*Think* framework reinforced their belief in the value of a dynamic approach to assessment for everyone working with young people. Participant 9 used Feuerstein's framework of dynamic assessment in her practice and reported using games as a tool for assessment to be useful: "I find it very satisfying, for want of a better word, and also a very positive experience as you can see when a young person 'gets it'". Also, when young people were non-verbal, games were identified to be particularly helpful:

> What I'm finding is, because I do a lot of work with kids who are non-verbal, you can't do a lot of standardised assessments. So, I'm constantly going back to observing them at home and at kindergarten, and it's games, it's toys, it's a lot of the things / activities that they're doing at kindy, which is playing, and how we learn (Participant 12).

For Participant 11, this research gave marginalised practitioners of dynamic assessment a Voice:

> I think my colleagues get sick of me talking about [dynamic assessment], but there's always a few that understand and want to know more, so it's great ... I just love it - there's nothing I don't like about it ... I just want to be able to do it more, and spread the word, really.

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Step 7: *Implemented and adapted*. A further direction that two participants took was
to look beyond assessment with young people, and adapt a dynamic approach. These
are detailed below.

      Using a dynamic approach to assessment to assess personal barriers to learning.
Participant 10 suggested developing a matrix whereby individuals could mediate their
own challenges to be successful. This meant that you "as learner" became your own
"teacher", analysing the tasks you set for yourself, the skills required to achieve them,
and developing strategies to achieve your goals.

> I've been thinking, how do you set yourself up to succeed? So, there are definitely
> metacognitive skills around that, and it would be good for me to really challenge
> myself to really look at … some kind of matrix, or something would be good to
> position yourself: 'I'm good at this, but not good at that …' Is there something
> like that? (Participant 10).

      *Using a dynamic approach to assess adult understanding and build capability to
teach young people.* Three participants identified that the assessment "triangle" could be
used to dynamically assess adults (educators) who support young people, thereby
building their understanding of cognitive and metacognitive skills and capability to
mediate. In other words, mediating adults as the "learners" and co-constructing
strategies to develop their personal skills as the educators of young people. The
following quote illustrates:

> When you're talking about dynamic assessment, you're also talking about
> scaffolding, for both teachers and young people. So, teachers develop confidence
> in themselves as well as the young people … I realise my shift in focus is going
> from children to the adults – teachers, teachers' aides and parents – and
> questioning their knowledge about inclusion and presumed competence of their
> children, so they can open a door a little wider for them (i.e., the young people)
> and not be one of the barriers (Participant 10).

      *Adapting the RE*Think *framework*. Six months after the workshop, Participant 16
shared the following narrative, using the lens of Matariki [The Māori New Year] to

conceptualise this approach to assessment. Sections of e-mail correspondence are included below.

Email: 9 July 2018

 Matariki is our guiding star. It signals a prosperous season, providing a path towards a good harvest and a safe return. It inspires and protects. An omen of good fortune. Your [model], just like health is many faceted, so your construct
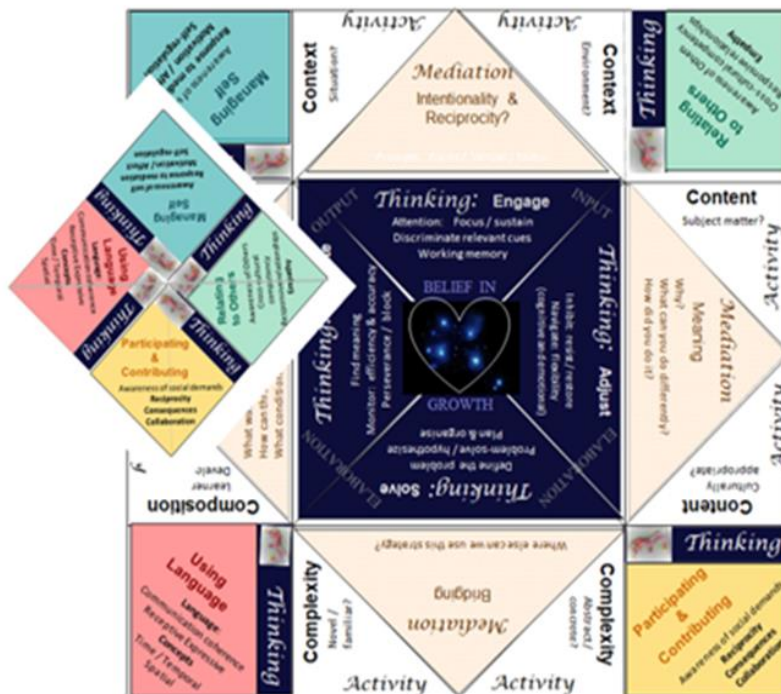
depicts that multiple facets are involved in clinical practice and your construct, like Matariki, has the capacity to provide a pathway to guide others on a safer journey as they work with others to bring about positive outcomes. Within your whetu [stars], at the centre, is the heart or the harakeke [flax] that binds all peoples together that connects your clients and whānau with clinicians.

Follow-up email correspondence 10 July:

 "The flowers on top are great! They come together at the peak, and I feel this indicates or symbolises flourishing, and as you say outcomes. Within [this model], I like the lines that lead to and from the heart, that appear to me to symbolise pathways, and the heart adds the human element of manaaki [care, to cherish]. He whakaaro noa [It's just a thought] - The stars in and of themselves are not confined by boundaries and neither is manaaki, but rather are open to the universe. I feel that the stars and the universe speak of pathways, change, diversity, flourishing, life, death, new beginnings, and growth.

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A dynamic approach to assessment, therefore, has the potential to be a valuable tool for practitioners, providing a way of assessing that is creative, collaborative and authentic. It is an assessment process that demands moving away from the security of standardised protocols and embracing courage:

> [it's about having] confidence to "jump in the puddle" ... It's about being committed to it, and making the effort, and the imperfect action ... It's finding people who are willing to take a risk and try it, and do it wrong, and learn from it. And that, to me, is the biggest thing: You can't do harm – you can only get it wrong, and you'll learn from it. And I think that's the big thing. And because that's the only way you will move forward, by getting past the language of it, and the novelty of it, is by making it familiar (Participant 11).

Outcomes of Assessment. As participants reflected on this approach to assessment, four participants particularly reported that the process of *assessing* young people changed to an emphasis of doing assessments *with* young people, and working collaboratively with educators (family and whānau) to assess *how* to bring about change in young people's learning (Participants 8, 9, 11, 16). The purpose, or *why* of assessment, became more than assessment of young people's engagement with their learning to increase participation, or remove barriers to inclusion to improve their sense of belonging. The focus of assessment to increase engagement and inclusion had as an outcome developing young people as capable learners by facilitating their awareness "of their learning and what they have learnt" (Participant 1), as well as offering "the child some understanding of how s/he can learn. This is about learning to use language for learning" (Participant 9). Of significance are the shifts that not only occurred to develop young people as capable learners by bringing about change through the assessment process, but for some participants, change in their perceptions of a dynamic approach to assessment and for others, confirmation of their practice.

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Comparing Activity Systems After the Workshop

When comparing the CHAT analysis immediately after the workshop, with analysis three- and six-months post-workshop, it became evident that learning about a dynamic approach to assessment using games created both tensions and opportunities in participants' existing activity systems of assessment.

Following discussion of each component of the activity system, Figure 5.3 (see below) shows (1) the tensions identified (on the right) and (2) opportunities for practice (on the left) that occurred in the assessment system with (3) the introduction of a complementary assessment tool. Introducing a dynamic approach to assessment and using the RE*Think* framework at the *Game-Changer for Assessment* workshop created different opportunities that the participants indicated supported their practice. As indicated earlier, the findings showed that a dynamic approach extended (4) participants' own understanding of assessment, and transformed their practice emotionally and/or cognitively. This included a framework of assessment for participants to facilitate authentic assessment which aligned with 15 of the 16 participants (94%) being aware of the need to be culturally responsive.

Being strengths-based and ecological, a dynamic approach had the potential for (5) assessment to be done collaboratively *with* young people within their natural environments. This provided participants with opportunities to explore ways of bridging principles of learning and young people's developing skills into different contexts through observation and collaboration with educators, which ensured rich conversations that produced educationally useful and meaningful outcomes. Providing participants with the opportunity to complete assessments *with* young people, the (6) outcome of assessment moved beyond supporting young people's engagement and inclusion in the classroom to increase their participation and sense of belonging within their learning environments, to developing young people as capable learners and bringing about change in their learning *through* the assessment process (see Figure 5.3 below).

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Figure 5.3

Tensions and Opportunities in the Activity System of Assessment: After the Workshop
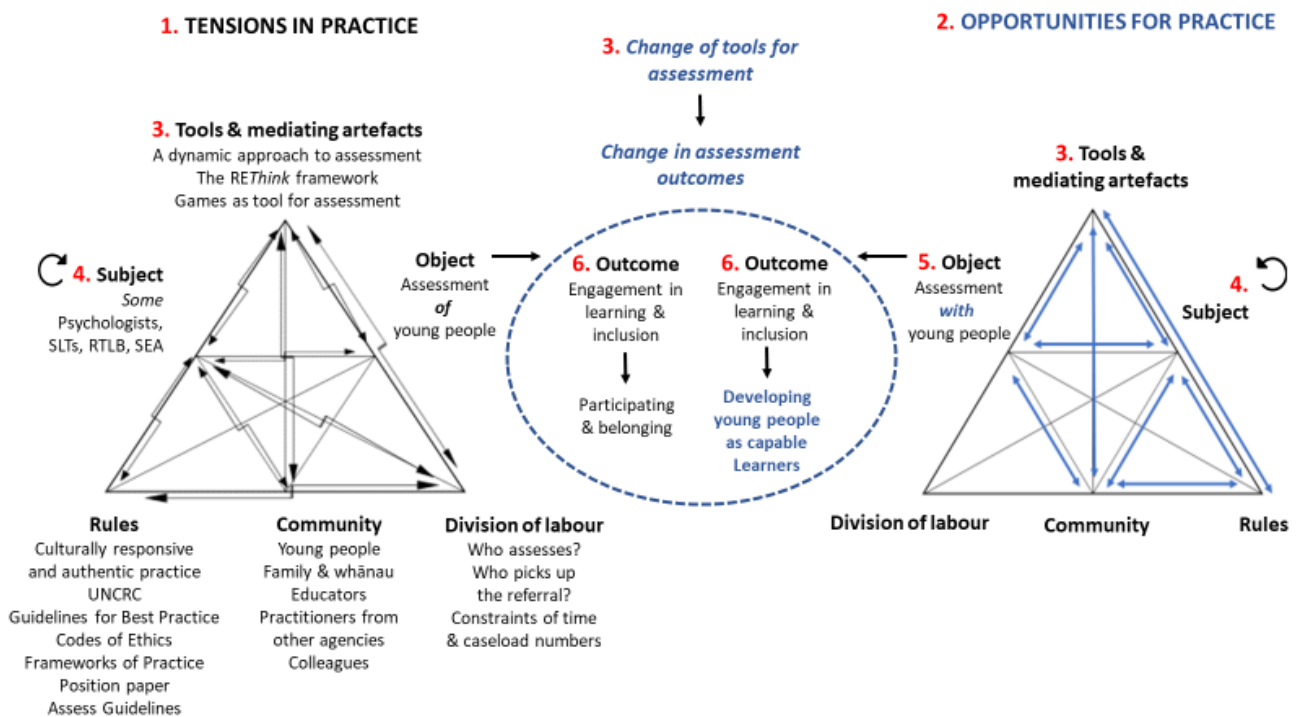
Concluding Reflections: Part 3

Participants identified numerous challenges which impacted on their ability to implement a dynamic approach to assessment in their practice. Limited access to participants after the workshop curtailed opportunities for further collaboration, given that the researcher had negotiated two interviews with them after the workshop. Although participants were invited to participate in an interactive PLD site and online forum, administered by the University, personal factors, organisational constraints of high caseload numbers and time, reduced participants' engagement opportunities. The first opportunity arose at the first interview, three months after the workshop. It quickly became apparent that few participants were afforded the time to revisit the material provided at the workshop. Feasibly, participants may have needed more support to build their confidence to implement an alternative and, for a number of participants, a new approach to assessment. Consequently, the first interview mostly

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consisted of reviewing the RE*Think* framework and revisiting the principles underlying a dynamic approach to assessment by scaffolding learning and encouraging participants to take small steps in implementation. Prepared semi-structured questions were abandoned, and interviews turned into dynamic conversations which mediated this approach to assessment. The second interview, which took place three months after the first, was considerably more successful than the first, with more participants reporting increased willingness to implement this approach in their practice, as evidenced by the findings of this research.

Experienced participants, who regularly use dynamic assessment in their work, implemented this assessment approach intentionally, and with increased reflective practice. However, not having the time to internalise the complexity of the RE*Think* framework and become fluent with every component of the framework, participants instead focused on implementing a dynamic approach to assessment in their practice using familiar frameworks (such as Feuerstein's dynamic assessment), without referring to the RE*Think* framework or using the key competencies of the *New Zealand Curriculum* as structure to analyse cognitive and metacognitive skills.

With limited knowledge of dynamic assessment, participants indicated some difficulty implementing it in practice. This was especially true when (a) participants had a limited knowledge-base of assessment practice in general and developing skills in intervention and mediation strategies, either due to a lack of experience, opportunities for training, or lack of confidence; and (b) systemic tensions were created with the introduction of a new approach to assessment, and participants perceived they were working outside organisational guidelines.

Participants unfamiliar with a dynamic approach to assessment focused on implementing individual components of the RE*Think* framework, using the frameworks to scaffold their learning (such as the cognitive and metacognitive skills), whilst developing an understanding of the interrelatedness of the assessment components of task analysis, educator mediation, learner cognition and metacognition in the process of assessment. These difficulties foreground the lack of training opportunities within Aotearoa New Zealand available to practitioners interested in a dynamic approach to

assessment and, without organisational support of time and finances to attend these sessions, opportunities for learning are further severely restricted.

Summary

This chapter tracked research participants as they embarked on their journey to learn about a dynamic approach to assessment using the RE*Think* framework at the *Game-Changer for Assessment Workshop.*

Part 1 explored participants' existing assessment practices, determining that the purpose of assessment was to engage young people in their learning environments and facilitate inclusion to increase participation and a sense of belonging and success in learning. Their experiences of assessing young people were closely aligned with assessment tools used. It was an unexpected finding how frequently standardised assessments were used, considering how uniformly participants reported the inappropriateness of such assessments for the young people of Aotearoa New Zealand, both culturally and emotionally. Therefore, it was not surprising that a number of participants were dissatisfied with their practice of assessment and wanted to learn about a complementary and/or alternative approach to assessment.

After identifying motives for learning that emerged from questionnaires before the workshop, participants were introduced to the RE*Think* framework as a method for operationalising a dynamic approach to assessment. In Part 2, with the aim of addressing these motives, each component of the RE*Think* framework was unpacked as having value, as well as being interconnected to all parts of the process of assessment, and this included using games as a tool for assessment. Each component has the potential to provide a framework for observation, conversation and collaboration, and participants explored their understanding of each component, prior to the workshop and after. Without exception, all 16 participants expressed increased understanding of the mediator-learner interaction, 15 of the 16 participants (94%) indicated their understanding of the potential usefulness of understanding the mediator-task interaction and learner-task interaction, and 12 of the 16 participants (75%), the analysis of cognitive and metacognitive skills to bring about change, embedded within

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the key competencies of the *New Zealand Curriculum*. Participants identified the value of a culturally responsive and collaborative process of assessment with young people, and co-constructed outcomes. However, while understanding increased and 13 of the 16 participants (81%) reported to be strongly positive about possible implementation in practice, a number were confronted with significant barriers.

Part 3 of this chapter focused on how participants used the dynamic approach to assessment, as some used this approach without referring to the RE*Think* framework. Using CHAT analysis, Part 3 foregrounds the challenges participants confront daily which compromise their practice ethically, but also highlights the opportunities a dynamic approach to assessment afforded them, the community they serve and the organisation for which they work. A dynamic approach to assessment has the potential to transform practice and bring about change by developing learners' skills and building educator capability.

Therefore participants, who attended the *Game-Changer for Assessment* workshop, had the opportunity to reflect on their practice. Learning about the REThink framework gave them the tools with which to engage with a strengths-based approach to assessment to bring about change in teaching, learning and presenting the task. Using games as a tool for assessment provided participants with the means to work with young people in a fun and authentic way in their natural environments. Linking outcomes of the assessment to the key competencies of the New Zealand Curriculum gave them a starting point for assessment, structure for analysing metacognitive skills and for bridging outcomes into various environments that were meaningful and relevant for young people and educators.

In the following Discussion Chapter these findings are synthesized, and implications for practice explored for their relevance to not only practitioners, but the organisation and community of educators.

Chapter 6

Discussion

This research identified the potential of a dynamic approach to assessment to enhance outcomes as assessment for change for young people and educators. By introducing a dynamic approach to practitioners including speech-language therapists, psychologists, a resource teacher: learning and behaviour (RTLB) and a special education advisor, the implementation phase tracked the way these practitioners diversified and broadened their repertoire of assessment. The RE*Think* framework and games as tools for assessment were used to increase participants' understanding of the value of this approach as strengths-based, authentic and culturally responsive. Cognisant that assessment is embedded within a cultural and organisational context, an analysis of participants' existing assessment practices was undertaken and perceptions of the value of these were made with regards to first, each component of the RE*Think* framework and second, a dynamic approach as a complementary process of assessment. This chapter discusses the key findings with links to the existing body of research literature, and implications for practice.

The Relevance for Practice: A CHAT Framework of Analysis

The main themes in this chapter are discussed using the five principles of activity theory: (1) analysis of the activity system as a system embedded within networks of other systems; (2) "multi-voicedness" (Engeström, 2001, p. 136); (3) context and historicity of the activity system; (4) the contradictions and tensions which may come about when a new element is introduced into the system; and (5) the changes that occur when tensions arise (Davies, et.al., 2008). Briefly outlined individually below, these principles guide the discussion which follows.

Although studied independently, when using a CHAT analysis Engeström (2001) argues that activity systems are embedded in other systems. Within the context of this

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research, while it is necessary to explore participants' activity system of assessment, understanding participants' perspectives of their work within educators' activity system is relevant. When evaluated as an isolated activity between assessor and a young person, Schneider and Flanagan (2015) caution that assessment may become "a stale enterprise when it becomes an end in itself" (p. 335). Critically, this research argues that assessment practices need to have relevance not only for the young person and assessor, but also for the educator who wants to know *how* to meet the needs of a young person in order to bring about change in learning and teaching.

In this study, the "multi-voicedness of activity systems" (Engeström, 2001, p. 136) include the multiple perspectives of participants who came from various professional backgrounds within the Ministry of Education, practiced from diverse paradigms, experienced different professional learning opportunities, and held certain expectations of assessment. Their voices are captured in the rich descriptions of their experiences of practice. As participants also spoke about their perceptions of young people's and educators' experiences of assessment which impacted on their practice, these contribute to the "multi-voicedness" of the activity system, and contribute to understanding the relevance of this assessment approach for the teaching community.

Engeström (2001) explains that the "problems and potentials [of activity systems] can only be understood against their own history" (p. 136). While the history of the activity system of assessment is addressed in the Literature Review, the shifting paradigms of assessment in Aotearoa New Zealand is more broadly understood through the findings of this research. Problems, tensions and contradictions occurred when the complementary - and for some a new - assessment approach appeared in participants' existing activity system. For some participants, these tensions created barriers, and they could not accommodate change in their practice. Ironically, at the same time, others noted the new approach brought opportunity, and the same tensions, problems and contradictions became "a source of change" (Engeström, 2001, p. 137). The nuanced changes when participants began thinking about assessment suggests more transformative change would be possible over a longer period.

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In the following sections, CHAT is used to foreground the relevance of a dynamic approach to assessment for practice. Building on the analysis presented in Figure 5.3 in the previous chapter, Figure 6.1 (see below) offers a broad overview of how (1) practitioners' activity systems of assessment (using a dynamic approach to assessment as a formative approach) overlaps with (2) educators' activity systems (when educators use formative assessments). Both assessment approaches are complementary as assessment is done *with* young people to not only increase their engagement with learning and facilitate inclusion, but to determine (3) *how* to bring about change to build educator capability and develop young people as capable learners (as represented in the centre of the figure in the overlapping outcomes).

Figure 6.1

The Relevance of a Dynamic Approach to Assessment for Practice
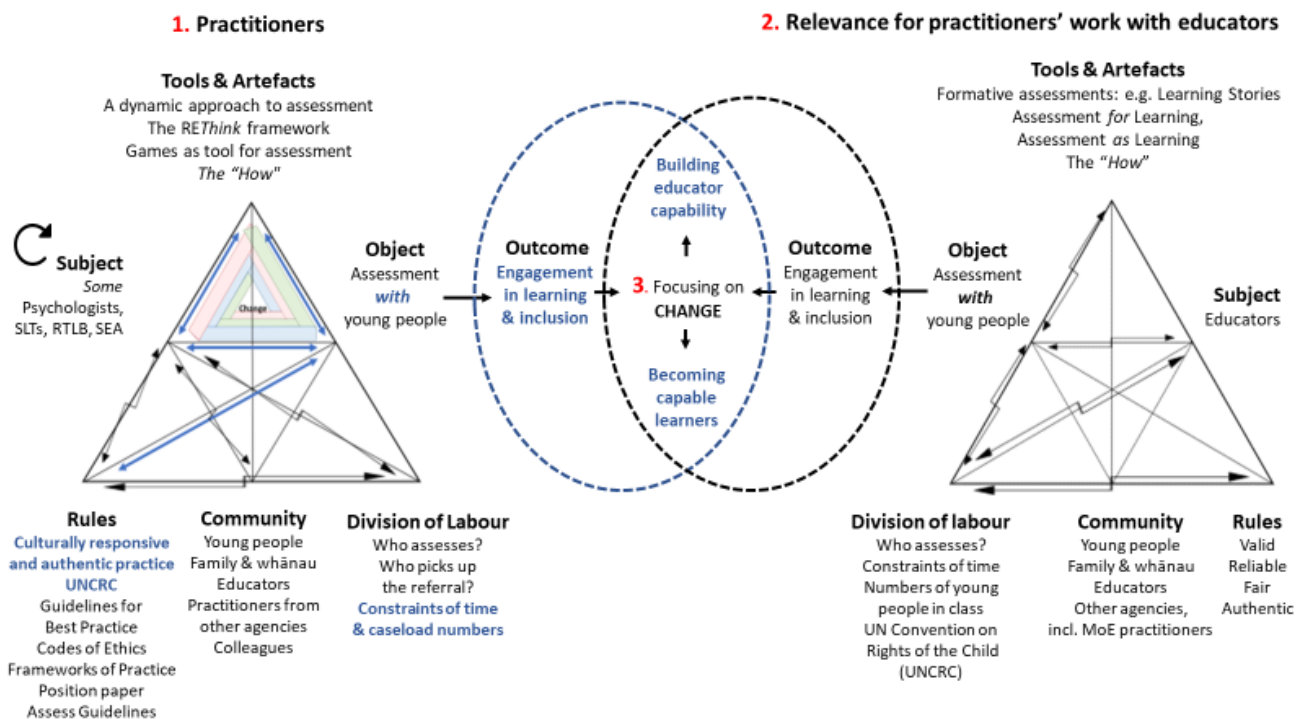
However, this diagram also foregrounds the tensions and contradictions in participants' existing practices which served as catalysts for change (research question 1); the relevance of a dynamic approach to assessment for practitioners in their work with

young people and educators as assessment for change (research question 2); using games as a tool for assessment (research question 3); and the challenges and opportunities of bridging knowledge into practice (research question 4). Concluding reflections summarise the value of this approach to assessment, and why implementation in practice is so challenging.

Catalysts for Change: Assessment at Risk of Institutionalisation

This research was based on the premise that a new and/or complementary approach to assessment would enhance the experience for young people and their ability to demonstrate their learning, and strengthen their practice as indicated in their consent to take part in this research.

Although it was somewhat unexpected that as many as half of the participants were *slightly satisfied* with their practice, these results are reflected in similar studies, such as Shannon and Posada (2007). The level of dissatisfaction expressed by participants was not related to their years of experience. A quarter of the participants who noted they were *slightly satisfied* with their practice had been practicing for more than three years, suggesting that tensions in practice emerged over time and with experience. Therefore, using CHAT as a framework for analysis was useful for revealing those tensions and contradictions contributing to dissatisfaction in practice as potential catalysts for change.

Participants who were disillusioned with their current assessment practices or institutional assessment requirements were well positioned to learn about a dynamic approach to assessment. In this section, discussion (a) foregrounds the tensions of choice as participants identified the contraindications inherent in their use of existing tools and frameworks of assessment; and (b) focuses on how systemic issues can shape assessment practice. Edwards and Daniels (2012) argue that for practitioners, the tensions between practice and organisational expectations are often challenging to navigate:

> Professional work therefore involves an aligning of personal motives, such as keeping children safe, with the motives to be valued within the practices

inhabited by the professionals such as the service ideal. This alignment is never straightforward for the individuals or for the practices, which are themselves shaped and reshaped in response to changing social conditions (p. 41).

Tensions of Decision-Making: Practitioners' Options for Assessment

Functional behaviour assessment (FBA) has long enjoyed a privileged position in the toolkit of practitioners supporting young people with challenging behaviour, labelled as the preferred approach for assessment by the Ministry of Education (2012). As identified in this study, although useful for determining environmental factors, specific triggers and reinforcement for the extinction or increase of behaviour, further assessment is often required. Young people who display behaviours that challenge educators often have underlying learning difficulties and, therefore, standardised assessments were mostly used to assess young people's cognitive skills. However, as this study also showed, the use of standardised assessments presented four specific contradictions in practice:

1. Although the Ministry aligns philosophically with an ecological and dialogic approach, the psycho-medical model of assessment continued to feature relatively strongly in practice.

2. While used frequently, standardised assessment was not seen as strengths-based or culturally appropriate, and results often showed young people as less capable.

3. Assessments were often conducted with young people in response to requests from practitioners from other agencies, rather than based on professional judgement of need.

4. Results from standardised assessments did not show an individualised way forward for educators or young people, although the outcomes of such assessments aimed to engage young people in their learning and remove barriers to inclusion.

Contrary to expectation, almost half of participants either *mostly* or *often* used standardised assessment in their practice, seen as necessary in the absence of an alternative; as profession-linked; and due to organisational expectations.

Tensions Within Individual Practice. Depending on the assessment paradigms that participants were exposed to during and after their undergraduate or postgraduate tertiary education, standardised assessments offered profession-linked assessment tools practitioners were able to confidently use in their daily practice, that are prescriptive and offer the chimera of a gold standard in assessment practice. Nonetheless, as mentioned earlier, contradictions appeared in practice which prompted participants to question their assessment practice. As these findings find resonance in the ongoing debate between paradigms, their relevance for practice deserves further discussion.

Given Gipps (2012) identified concerns around "false dichotomies: criterion-referenced assessment versus norm-referenced assessment, standardized tests versus performance assessment" (p. 137), there is an urgent need for the purpose of assessment to be clearly identified. Regardless of paradigm, practitioners working in education need to consider whether tests can provide the answers needed that are educationally relevant, meaningful and useful. The research literature questions the benefits of standardised assessments for young people with diverse learning needs within the education system (Haywood & Lidz, 2007; Reschly & Ysseldyke, 2002). There is ample evidence that the protocols of standardised assessments and the results obtained are often not appropriate, relevant, meaningful or useful for young people with severe behavioural challenges, learning disorders, and/or developmental delays, which describes young people typically referred for speech-language therapy, learning and behaviour support, or for young people who require support through the Ongoing Resourcing Scheme.

The guidelines on psychometric testing (New Zealand Psychologists' Board, 2015; 2020) clearly states that standardised assessments have limited relevance for young people with sensory challenges, those who have difficulty with sustained attention, developing abilities to follow adult instruction, or have diagnosed disabilities to which norms may not apply. Furthermore, debate continues regarding assessment in education and the question of causality (Fletcher & Miciak, 2017; Thomas & Glenny, 2002). Fletcher and Miciak (2017), for example, questioned whether cognitive tests are

even necessary for identifying learning disabilities, arguing "The fact that cognitive and achievement tests are correlated cannot indicate causal direction. A cognitive deficit does not indicate 'why' a child has a learning problem; it is also possible that the learning problem causes the cognitive processing problem" (p. 4). Of greater value for young people's learning, they propose, are the curriculum-based assessments already being used by educators in the classroom.

Consistent with the literature, findings of this research found that assessment which locates the "problem within the child" does not necessarily show an educationally useful way forward for young people or educators. Teaching to a category of disability is of little value to young people (Kaufman, et al., 2016; Mitchell, 2015) and of limited use to guide intervention (Fletcher & Miciak, 2017; Rose, 2018). The guidelines on the use of psychometric tests (New Zealand Psychologists Board, 2015; 2020) suggests that as the results of standardised assessments do not direct intervention, alternative methods are recommended (Lebeer et al., 2011). One possibility, for example, is to focus on young people's abilities and their response to intervention: "The child with [a learning disability] is harder to teach—not unable to learn" (Fletcher & Miciak, 2017, p. 6) - "they just learn in a slightly different way" (Participant 11). Exploring failure to learn within the social context, rather than relying on identification of individual deficit, calls for a different process of assessment (Thomas & Glenny, 2002).

Tensions Created Within the Community. Evidenced by participants' reports, following the above-mentioned international and organisational guidelines were not as clear-cut, with tensions emerging both from within the organisation and across the community having considerable impact on assessment practices. For example, standardised assessments were reported to be a requirement for speech-language therapists. However, four of the seven speech-language therapists (57%) were keenly aware that such assessment results often found young people less capable than they are, possibly for the reasons detailed before. Conversely, participants were able to use such assessments and outcomes to argue for service, without sharing information with the family and whānau. In their research, Edwards and Daniels (2012) found similar examples of "rule-bending" common in practice, especially when "professionals

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had a strong sense of what mattered in work with children which was at times in tension with institutional expectations" (p. 48).

However, participants experienced tensions from not only within the organisation, but from practitioners unrelated to education. Specialists from other agencies used assessment tools founded on different principles and from opposing paradigms, and had expectations that practitioners working in education would use the same. As Leadbetter (2011) argues, "Throughout the history of the profession there is a theme that educational psychologists' roles have always been defined by others rather than by themselves" (p. 137) and, although research is emerging that practitioners have a greater sense of their role in education, participants reported using assessment practices that were required or determined by others.

By foregrounding the complexity surrounding practitioners' assessment practices, emerging themes also revealed participants' experiences of dilemmas produced by time constraints and high caseload numbers within the activity system of assessment, which not only impacted on their choice of assessment tools and frameworks, but which potentially also shaped their practice.

Tensions Related to Organisational Constraints. All nine participants (100%) who took part in the implementation phase of this research expressed concern how organisational constraints of time and high caseload numbers impacted on their assessment practices in some form. For example:

- Limited resources and increasing administrative duties impacted on the time practitioners were available to commit to young people and assessments, which were tensions similarly experienced by both participants and educators.
- Without the time to develop robust and cohesive understanding of a young person's learning and teaching needs, intervention was frequently put in place without fully understanding the underlying causes of difficulty.
- Service delivery became fragmented when assessment and intervention were developed by different people, compromising learning and teaching opportunities.

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Recognised widely as a concern, researchers (such as Shannon & Posada, 2007; Stacey, 2016) have identified that high caseload numbers and time constraints impact on the time practitioners have available to provide a service. Time constraints have been linked to limited resources of funding (Stacey, 2016), a chronic shortage of practitioners (Barback, 2018; Lebeer, et al., 2011), the additional factor of travel time over large geographical areas in Aotearoa New Zealand (Participant 9), and increasing administration and paperwork demands. Responsible for submitting resource applications, practitioners are often seen as the gatekeepers of funding which, although commonly experienced in the field (Davies et al., 2008; Lebeer et al., 2011), does not only have a negative flow-on effect on relationships with stakeholders, but also impacts on the time practitioners have available for assessment.

Constraints of time for practitioners and being governed by a waitlist influenced professional judgement and compromised ethical practice. When Guerin (2015) asks, "How can fly in – fly out approaches to assessment be justified as supporting learner needs when an assessor may not even recognize the unique communication strategies of the person being assessed?" (p. 204), she highlights the organisational pressures that practitioners face daily. These included not having the time to get to know the young person referred, determine which assessments to use, plan assessments, ensure assessments were accurately analysed, and share outcomes with stakeholders appropriately. Moreover, the findings of this research also support previous studies which suggest that educators have similar difficulties finding the time to consult with practitioners (Law, et. al, 2008), and follow-up after assessment (Yeomans, 2008). Analysis, therefore, revealed the commonality between practitioners and educators regarding the tensions of a lack of time and the high numbers of young people requiring support.

Therefore, the question is raised whether assessment practices are increasingly being influenced to a greater extent by organisational requirements and structures, rather than determined by the identified needs of young people. The structure of service delivery in New Zealand is pertinent to this discussion (Hornby, 2014). A young person, for example, with learning and behaviour difficulties are typically supported by two groups of professionals: one group that works with young people with learning and

social-emotional difficulties (the RTLB Service) and the other, young people with intellectual disabilities and challenging behaviour (Learning Support, Ministry of Education). Situations where assessment and intervention are "separated in time and place… [and] delivered by different people" (Jeltova et al., 2007, p. 273) are not uncommon, but can create a fragmented service. Without time for collaboration, cohesive case conceptualisation is unlikely to be comprehensive, and intervention more likely to be compromised.

The implications of such practices are significant, especially with regards to not only ethical practice but practitioner accountability. Assessments determined by time constraints and caseload numbers bring limited value to stakeholders' understanding of *how* young people learn, and challenge the potential of consultative practice to bring about change and make a difference for young people and educators.

Questions of Consultation

Analysis of tensions within the activity system of assessment revealed the diversity of consultation in service delivery. Consultative practice is used internationally (Law et al., 2002; Leadbetter, 2011; Ysseldyke et al., 2009) and has increasingly gained traction in New Zealand. However, in education, the use of the term "consultation" has to be interrogated. Participants indicated that

- there was a wide range of understanding what "consultative practice" meant for practitioners and educators;
- system-level work was seen as an integral component of consultative practice, and embraced by participants and educators;
- assessment which included a component of coaching was also highly valued by educators;
- understanding each other's roles was essential for developing trust and the ability of participants and educators to engage in a collaborative relationship of assessment, without judgement; and
- consultation was strained when educators did not have confidence or sense of agency in their teaching practice to bring about change for young people. In

these instances, responsibility was placed on participants to find the "problem within the child" through assessment, and to "fix" them.

Within the organisation, consultative practice is regarded as the panacea for a system straining under high caseload numbers and time constraints. Offering a pragmatic solution (Law et al., 2002), increased focus on system-level work aims to build the capability of educators working with young people (Ysseldyke et al., 2009). In this research, there was ample evidence of system-level work being done with the provision of *Language and Learning Intervention* (LLI), the delivery of the *Incredible Years* programs, *Routines-Based Intervention* (RBI), *Understanding Behaviour and Responding Safely* (UBRS), and a wide range of workshops delivered on various topics. For practitioners trained in dynamic assessment, feedback during assessment meant collaborative solution-focused conversations with young people and educators which were well-received. This was also true for participants whose assessment feedback and workshops embedded coaching opportunities for schooling staff, family and whānau. Furthermore, participants whose language mirrored, or whose work aligned with those of educators, created opportunities for meaningful consultation.

Findings from this research showed that for some practitioners, consultative work meant minimal contact with a young person, reduced profession-linked assessment opportunities and, with that, the potential loss of professional identity and sense of professional worth. However, tensions arose when the focus fell on the place of assessment within a consultative framework, and what form assessment should take. Diverse interpretations of what "consultation" meant in practice - for participants and for those with whom they work - was spread widely across the continuum. Contradictions occurred when practitioners and educators had different expectations from service delivery, and educators continued to expect that practitioners' assessments would necessarily be with young people, individualised and standardised. Such expectations revealed further anomalies in the system.

Regarding their work, a number of participants reported their perception that educators had limited expectations of their work with young people: "It's actually quite interesting. [Teachers] have really low expectations of what we can do. So, when you go

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in, they're not expecting you're able to do that much, actually" (Participant 6). Nonetheless, despite a sense that their work was not valued, participants frequently felt pressured to do more. Additionally, educators themselves often became barriers to assessment, for example, one teacher mentioned to a participant her concern about being judged during observations. Educators' nervousness of being observed and engaging in collaboration with others is consistent with other research findings, such as Davies et al. (2008). Although Davies et al. focused on collaboration among teachers, it indicates the sense of unease and possible distrust when practitioners and stakeholders do not hold a shared understanding of each other's respective, professional roles. The resultant fear of being judged is experienced by both participants and educators.

Depending on the level of responsibility educators took for the education of the young people in their care, along with their own sense of agency to make a difference, practitioners were expected to find solutions as soon as possible by locating the "problem within the child", to be "fixed" by others (Davies et al., 2008). This perception is also inadvertently reinforced in the "Position Paper" (Ministry of Education, 2011a) which states: "Feedback from educators has frequently identified dissatisfaction with the amount of time spent on assessment. Anecdotal feedback from parents has been similar to comments, such as 'too much assessing and not enough doing'" (p. 2). This path of service delivery is contradictory to the position of assessment-informed, data-driven intervention, and has historic roots in the scientific world which endeavours to "analyse and fix instead of seeking to understand and include" (Thomas & Glenny, 2002, p. 363). Evidenced in this research, this view contributed to the tension experienced by some participants when individual knowledge of practice came into conflict with the knowledge valued on organisational and community levels.

Drawing on these tensions, contradictions, opportunities and strengths identified in participants' existing assessment practices, discussion follows regarding the potential of a dynamic approach to assessment to realign practice to better serve practitioners, young people and educators.

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Assessment for Change: Learner-Centred and Educationally-Useful

In her research, Guerin (2015) questions: "What makes an assessment valid and valued?" (p. 204). The literature suggests that assessment is shaped by what is valued in education (Baird & Black, 2013; James, 2008), and in this research, three key themes emerged: (a) culturally responsive and responsible assessment for change; (b) to build educators' capability; and (c) to develop young people to become capable learners. Although artificially separated to ease discussion, each theme informs and influences the other.

A Culturally Responsive and Responsible Assessment for Change

This section discusses the value of a dynamic approach to assessment for practitioners as (a) a culturally responsive assessment process; (b) responsible assessment; and (c) assessment for change: removing barriers to inclusion.

A Culturally Responsive Assessment Process. Any discussion on assessment in Aotearoa New Zealand is fundamentally flawed without consideration of the impact of culture on practice. In New Zealand, consideration of the principles of Te Tiriti o Waitangi/the Treaty of Waitangi is an imperative. Given what is valued by governments or organisations in education shapes assessment practices (Baird & Black, 2013; James, 2008), results of this research strongly indicated participants' awareness of the cultural situatedness of young people, the need to consider the cultural relevance of assessments, and adapt their practice accordingly.

The Psychologists' Board (2020) advises that "Tests which rely heavily on formal western education and have culturally alien concepts should be avoided when assessing Māori or Pacific people until any cultural biases in the tests are clarified" (p. 30). Given that all participants in this research reported working with young people who identify as Māori, being culturally responsive is imperative and practitioners would do well to heed Macfarlane et al.'s (2011) caution for practitioners to "listen to culture" (p. 12). All practitioners carry the responsibility of working with young people, their families and

whānau to use culturally safe assessments, and to develop appropriate and culturally responsive intervention programmes (Bevan-Brown, 2006; Bishop & Berryman, 2006; Bishop et al., 2014; Macfarlane, 2009; Macfarlane, 2015). The importance of creating "culturally-safe" environments for students is well documented (Feuerstein et al., 2002; Macfarlane et al., 2007), creating spaces of whanaungatanga [where shared experiences strengthen connection] and where educators "care for students as culturally located human beings above all else" (Bishop et al., 2014, p. 194), are as necessary for those who work with young people in a relationship of assessment as they are for educators in a classroom.

This research proposes that a dynamic approach to assessment aligns with Bevan-Brown's (2006) "keys to effective practice" (p. 14) which include:

> positive teacher-student relationships; interactive teaching strategies that engage students in their own learning; teaching that builds on students' strengths and interests; high teacher expectations of Māori students; the inclusion of cultural input; and the involvement of parents, whānau and peers.

In terms of assessment, this means a culturally safe assessment process which promotes a sense of connectedness through the collaborative and interactive process of mediation or ako, which also aligns with the principles of "Ka Hikitia" (Ministry of Education, 2013a).

Responsible Assessment. As a strengths-based and ethical approach, a dynamic form of assessment is also psychologically safe as young people learn more about themselves as learners, tasks are adapted to meet their learning needs, and assessment ends in success. As this process can do no harm, this assessment process is especially relevant for young people who have experienced complex trauma (Mainwaring, 2015).

This approach is designed to create hope, negate the Pygmalion Effect (Rosenthal & Jacobsen, 1968; Szumski & Karwowski, 2019) and raise expectations of young people's abilities through assessment. Although Edwards and Hedegaard (2021) refer to the imperative for current education systems to be forward-looking using the concept of "moral imagination", their statement that "The idea is to reach beyond what is to what

might be" [p. 3 of 4] could be written for a dynamic approach to assessment. When practitioners include the "search for the optimistic alternative" as part of situational mediation in assessment, the learner is supported in developing the belief that a positive outcome is indeed possible (refer Table 3.2).

This also touches on issues of power in assessment, and one participant reported how the process within a dynamic approach to assessment should make practitioners aware of the balance of power in practice. This approach has the potential to create opportunities for collaboration with young people, family and whānau as the experts of their child, and to legitimise situated knowledge (Leino & Peltomaa, 2012). Being aware of power relationships in assessment requires practitioners to consider whose interests are best served, which potentially creates tension within the organisation.

As identified earlier, the risk of institutionalisation was evident in practice, with the interests of the organisation foregrounded rather than the interests of young people. Although criticised for taking more time than standardised assessments (Gillies, 2014), the outcomes of a dynamic approach to assessment negate this criticism by (1) progressing learning by developing tailored interventions with young people and educators, and (2) enabling practitioners to be more accountable to not only young people, but the educational community and the public purse. As one participant said, using this approach to assessment offers practitioners an alternative to "just floating around the top and not really making the big difference we're supposed to be making". However, the concept of accountability within the education system cannot be ignored or disregarded (Archer, 2017) when considering assessment practice. Gillies (2014) identifies that assessment is pivotal to accountability with regard to budgets and educational service provision.

Assessment for Change: Removing Barriers to Inclusion. As a concept well-established and a focus in education, facilitating inclusion featured in participants' responses regarding the purpose of their assessments. However, understanding what "inclusion" means in practice has been fiercely debated, both locally and on an international scale (Farrell, 2010; Hornby, 2012; Kauffman & Hornby, 2020). Despite New Zealand being recognised as having one of the most inclusive education systems in

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the world, researchers have identified that there are still significant shortcomings in the system, and young people's needs are increasingly not being met (Barback, 2018; Guerin, 2015; Hornby, 2015).

This research focuses on *how* to support young people in the school environment of their choice, wherever that might be. Aligning with work done by Farrell (2012), Hornby and Kauffman (2020), this study advocates for a concept of inclusion which does not mean physical placement in a mainstream classroom, but inclusion "in the sense of [young people] being engaged in a program of instruction that is meaningful and challenging … Appropriate instruction is by far the most important task of education for all students, including those with disabilities" (p. 10 of 13). Determining "appropriate instruction" is the role of the practitioner, working collaboratively with young people and educators, using relevant methods of assessment.

According to the "Position Paper" (Ministry of Education, 2011a), "Overall practitioner judgment is central in the choice of assessment approach while taking into account the views and preferences of the child or young person and relevant others" (p. 5). This statement can be broken down into three components: (a) "practitioner judgment", (b) "preferences of the child or young person" and (c) "[preferences of] relevant others". In this research, "practitioner judgment", typically included conversation, observation, and the use of both functional behaviour assessment and standardised assessments.

Preferences of "relevant others" were identified and discussed earlier, with participants often being called on to do assessments for practitioners from other agencies, and meet the expectations of educators and, sometimes, family and whānau. However, participants made little reference to the "preferences of the child or young person", with the exception of those participants who embedded practices of dynamic and other forms of authentic assessment in their practice. For other participants, despite identifying that young people's experiences with standardised assessment could be negative, this did not necessarily deter them from completing these assessments, with the preferences of "relevant others" often appearing to take precedence over "practitioner judgement" and "preferences of the child or young person".

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The "preferences of the child or young person" touches on a deeply neglected aspect of assessment. Such "preference" should include the concept of "psychological safety" in assessment, and consideration of the Rights of the Child. The Rights of the Child are encapsulated in the *Code of Ethics* for psychologists (New Zealand Psychologists Board, 2012), which states that practitioners "should discriminate between the needs and the wishes of children/young persons: wishes should be heard, understood and taken into account, within the context of their needs, general welfare, and wider social environment" (p. 7), and, importantly, should "do no harm" (p. 13). However, while the *Code* guides assessment practice theoretically, what does inclusion look like in practice?

One way of challenging inclusive practices which focus predominantly on the "space" a young person occupies is through an assessment process which delivers more than a number, and has the potential to remove barriers to inclusion when considering Lundy's (2007) elements of Voice, Audience and Influence in practice. Elwood and Lundy (2010) note that "in spite of significant public and academic attention given to the consequences of assessment for children and governments committed to working within children's rights standards, the two are rarely considered together" (p. 336).

   Voice. Young people "must be facilitated to *express* [emphasis added] their views" (Lundy, 2007, p. 933). An increasing body of research is being done on capturing student voice as catalyst for inclusion (Messiou, 2019). Seen as a "valued practice" (Ministry of Education, 2015, p. 4), in this research, student voice was reported to be used in assessments such as narrative assessment, writing learning stories and developing learning profiles with young people. Yet, as Dann (2014) wrote, "giving a pupil a voice does not necessarily mean that anyone is listening, understanding and responding appropriately to it" (p. 159). Therefore, inclusion also requires an "Audience" (Lundy, 2007) and must have "Influence" (Lundy, 2007).

   Audience. Children's views "must be *listened* [emphasis added] to" (Lundy, 2007, p. 933) and, in the context of assessment, it is *how* a young person responds, both in observation and in conversation, that is often more informative and meaningful than the actual results of assessment. In this research, participants using a dynamic approach to assessment in their work with young people valued mediation, described by one

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participant as "the dance of teaching and learning". Practitioners, therefore, are in a unique position to facilitate adult understanding and build capability through the assessment process. When educators were able to be present during assessment or participate in collaborative conversations, participants reported an increase in educators' awareness of how young people learn, and how best to teach.

Influence. Young people's views "must be *acted* [emphasis added] upon, as appropriate" (Lundy, 2007, p. 933). Findings in this research indicated that this was an area creating both tension and opportunity in the activity system of assessment. Participants identified that although co-constructed assessment outcomes provided adults with individually tailored intervention strategies developed with young people, when it came to sharing information with stakeholders, participants often met with resistance to change. This occurred when (a) educators located the "problem within the child" by asking for scores from a standardised assessment when participants were keen to share information about *how* a young person responded in the assessment situation; (b) educators lacked the time to listen to assessment outcomes; and (c) educators ignored recommendations.

These findings are common in the wider research literature (Barback, 2018), but factors contributing to this in New Zealand include schools not being legally required to take heed of professionals' recommendations, and justify this by reporting a lack of funding to implement them (Hornby, 2014). However, in this research, although the focus appeared to be the lack of value stakeholders placed on participants' assessments, when viewed through the lens of the Rights of the Child, the implications of young people's views not being "*acted* upon", place educators in direct contravention of young people's Rights.

Building educator capability, therefore, has to be foregrounded, which aligns with the practice of consultation and partnership. In this research, speech-language therapists typically used more coaching in their practice than the participants who work with learning and behaviour, and this is an area which should be further researched. Although participants reported trying to include educators in the assessment process, they not only experienced resistance due to other school commitments, but where

educators were involved, a lack of theoretical knowledge potentially also acted as a barrier to their understanding of a dynamic approach to assessment. Therefore, for this assessment approach to gain traction in the field, stakeholders need to be exposed to the theories underpinning assessment practice, and shown how these align with the broader approach in the education system. Only then may young people have "Influence", and New Zealand move beyond policy to meet their obligations to the Rights to Child in practical terms, assessment being "one of the ways in which children can have their needs and rights recognised" (McLachlan, 2018, p. 49).

Conversations with Educators to Build Capability

Absolum (2010) states "there should not be any assessment at all that is not also directly useful to the students and teachers in supporting learning" (p. 116). Where "learning" is seen in its broadest sense, the case for a dynamic approach to assessment is compelling:

> Despite steady progress towards inclusion of students with special learning needs, ERO (2015) found that monitoring of their progress tended to be focused on participation rather than on analysis of student learning or the identification of teaching strategies that had been effective for particular groups of students (Hipkins et al., 2018, p. 32).

The findings of this research reflect Hipkins and Cameron's (2018) report on assessment practices that focus on participation to the exclusion of learning and teaching analysis. Across the disciplines supporting learning and behaviour, the focus of participants' assessments was reported to include the interplay between young people and educators using frameworks of observation and discussion to focus predominantly on young people's participation in their learning environments. Although valued as the "least intrusive" forms of assessment, participants also identified that educators wanted more from assessment and, more specifically, assessment that had practical relevance to learning and teaching.

Gordon and Rajagopalan (2016) advocate for the "integration of assessment, teaching, and learning as symbiotic pedagogical processes [and] a necessary paradigm for the

future" (p. 78). Embedding the principles of Te Tiriti o Waitangi/The Treaty of Waitangi within this paradigm makes such practice equally relevant to educators and practitioners in Aotearoa New Zealand. Although the focus of this research started with exploring participants' existing assessment practices and their learning about a dynamic approach to assessment, the relevance for practice is seen in its value for others (Engeström, 2001; Young, 2001).

Although participants expressed concern that educators would not understand or value the outcomes of a dynamic approach to assessment, favouring quantitative results over qualitative descriptions of *how* young people learn, the research literature in New Zealand reveals that many educators report a preference for formative assessment that reveals *how* young people learn, rather than *what* they know. Irving et al. (2011) stated: "In New Zealand, our approach is very different from that in other countries. We have a deliberate focus on the use of professional teacher judgment underpinned by assessment for learning principles rather than a narrow testing regime" (p. 414). Therefore, the potential for stakeholders to understand the outcomes of a dynamic approach to assessment in New Zealand is greater than in other Asian-Pacific communities as formative assessment has been actively promoted by the New Zealand Ministry of Education (Irving et al., 2011).

A dynamic approach to assessment has the potential (a) for practitioners to build educator capability by inviting educators to observe the interactive process of a dynamic approach to assessment that co-constructs learning and teaching with young people using mediation of cognitive and metacognitive skills; and (b) for educators, who use formative assessments, to work collaboratively with practitioners to bring about change in learning.

Mediation in a Dynamic Approach to Assessment. Using a lens of social constructivism where learning is "jointly created" (Baird et al., 2017) to reveal *how* young people learn, one of the foundational components of a dynamic approach to assessment is mediation and, for educators, the principle of ako. Learning through ako is essential for realising the potential of Māori young people (Bevan-Brown, 2006;

Ministry of Education, 2013a), and mediation similarly provides the "right kind of interaction" (Mentis et al., 2008, p. x) to progress young people's learning and bring about change.

For practitioners, young people are released from failure through mediation and a process of collaborative interaction in a dynamic approach to assessment. This not only results in young people's greater engagement with assessment but, significantly, young people become more aware of their ability to learn, and their potential by *how* change occurs through mediation. "Mediation" is not synonymous with "teaching" or "feedback" in assessment (Feuerstein et al., 2002; Flavian, 2019). Mediation occurs within Vygotsky's zone of proximal development (ZPD), but is not based on an instructional "tell and do" (Participant 10) type of interaction or feedback on performance. It is a collaborative interaction that reveals *how* young people learn on a psychological level, and aims to bring about change in young people's cognitive and metacognitive skills. The development of co-constructed, learner-centred strategies is one of the main attractions of this approach to assessment (Lauchlan & Carrigan, 2013; Stringer, 2018; Tzuriel, 2011). The research literature suggests that, as a form of formative assessment, a dynamic approach has the potential to align with the principles of Assessment *for* Learning (A*f*L) (Lauchlan & Carrigan, 2013; Leung, 2007; Yeomans, 2008) and may be viewed as complementary, but not interchangeable, systems of assessment.

Feedback in Formative Assessment. For educators there has been a distinct shift in paradigm, promoting formative assessment in New Zealand schools (Bourke & Dharan, 2015; Irving et al., 2011) through the framework of Assessment *for* Learning (A*f*L). Similar to a dynamic approach to assessment, formative assessment is based on constructivist learning principles (Spiller, 2015) and serves the main purpose of assessment in schools, which is to improve the quality of learning and support decisions around teaching (Brown, 2018; Hargraves, 2020; Mutch, 2012). Frey and Fisher (2011) note that "Even though high-quality instruction, innovative technology, motivation, high expectations, and passion are important in the teaching and learning process, they are not sufficient to ensure that learning occurs" (pp. 1-2). Educators whose teaching is culturally "safe" (Macfarlane et al., 2007), and who are described as positive, who build young people's confidence and sense of competence (Frey & Fisher, 2011) are likely to

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be more successful in engaging young people in their learning. Hattie and Timperley's (2007) research identified teacher feedback as one of the most influential strategies for learning, which is a cornerstone of Assessment *for* Learning.

Complementary Assessments: Working Together. Despite researchers advocating for the use of feedback in formative assessment (Dann, 2017; Hattie & Zierer, 2019; Pitt et al., 2020; Wiggins, 2012) , the effectiveness of feedback as intervention has had mixed outcomes. Hattie (2011) notes that "it is not sufficient to claim that feedback works. Under some conditions, feedback information had no effect, or indeed debilitated performance" (p. 2 of 14), thereby creating negative outcomes on learning (Leighton, 2019; Lipnevich et al., 2016). Eriksson et al. (2020) identify that while the impact of feedback can be influenced by the relationship between learner and teacher, and past experiences of the learner and current expertise of the teacher, another factor that significantly impacts on feedback efficacy is how young people receive feedback (Leighton, 2019). As the process of feedback is "thought to work through cognitive, motivational and meta-cognitive mechanisms" (Eriksson et al., 2020, p. 1), Leighton (2019) proposes that "psychological expertise" (p. 798) is required.

While educators are well-equipped to provide "instructionally relevant assessments" (Leighton, 2019, p. 798), these assessments may not be "psychologically relevant". Leighton (2019) submits that such assessment requires expertise to (a) determine how young people emotionally and cognitively process information, which impacts on how they interpret and engage with feedback; (b) look past behaviour which suggests learning has occurred, to determine whether changes have occurred regarding their emotional and metacognitive processes; and (c) assess the motivation of young people to engage with assessment and feedback. Therefore, while formative assessment and feedback in the classroom are valuable teaching practices, without understanding a young person's learning profile of cognitive and metacognitive skills that "psychologically relevant assessment" can provide, the teaching-learning process may not be successful and young people may not receive educators' feedback as it was intended.

The evidence from this research proposes that a dynamic approach to assessment can fill the "gap" identified by Leighton (2019), to provide a "psychologically relevant assessment" process that complements "instructionally relevant assessment" and/or teacher feedback in Assessment *for* Learning. Both assessment processes adhere to the core belief that all young people can learn (Feuerstein, et al, 2002; Absolum et al., 2006). These assessment processes remove the barriers to collaborative opportunities as stakeholders work together to develop young people as capable learners (see Figure 6.2 below). It is through ako and mediation in assessment that young people's cognitive and metacognitive skills are revealed, and the metacognitive attributes of tasks understood that show a way forward for educators and young people when young people do not respond to educators' feedback interventions within the learning and teaching process.

A dynamic approach to assessment offers practitioners a framework to analyse the changes required for learners to access tasks with consideration of the required cognitive and metacognitive skills. In Hattie and Timperley's (2007) study, although feedback about the task was found to be the most common form of teacher feedback in assessment practice, the most powerful forms were of task *processes* [emphasis added], self-regulation and the *metacognitive attributes of tasks* (Butler & Winne, 1995; Irving et al., 2011; Leighton, 2019). Here, links may be made to Assessment *as* Learning (A*a*L), described as an aspect of Assessment *for* Learning (A*f*L) (Dann, 2014; McLachlan, 2018a). Assessment *as* Learning focuses on the learning gap that exists between assessment, learning and teaching (Dann, 2014), explores how young people make sense of the feedback provided by educators, and the metacognition involved as young people make sense of new learning (McLachlan, 2018b).

Therefore, this research proposes that by incorporating a dynamic approach to assessment in their practice, practitioners have the potential to work with educators to progress young people's learning by not only changing the task, but also identifying whether a young person has difficulties with the cognitive and metacognitive aspects of the task. Aligning with both Assessment *for* Learning and Assessment *as* Learning, a dynamic approach to assessment may well meet the need for an approach to assessment that informs both the teaching and learning of metacognitive strategies.

A potential collaborative process between practitioners and educators, therefore, is presented in Figure 6.2 where, to bring about change, co-constructed (1) analysis of the mediator-learner interaction (mediation) supports educator feedback and reflection; (2) analysis of the mediator-task interaction unpacks the additional cognitive and metacognitive requirements of the task; and (3) analysis of the learner-task interaction facilitates and develops learner cognitive and metacognitive skills as young people engage with tasks, and the skills embedded with the key competencies that are the foundation of all learning.

Figure 6.2

Embedding a Dynamic Approach to Assessment Within the Wider Framework of Assessment in Education (Teaching and Learning) as a Complementary System of Assessment
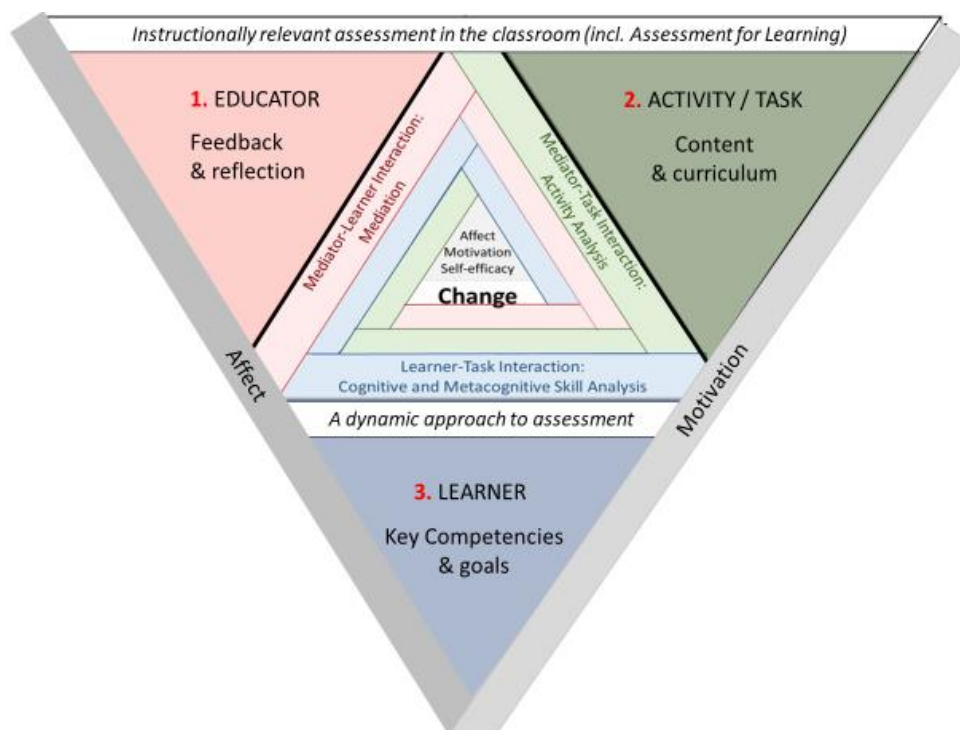
The question emerges as to why more practitioners - who are core members of a young person's support network and who play a unique role in education (Hill, 2015) - do not embed analyses of learning and teaching in their assessment practices. The opportunity exists to build educator capability to bring about changes in teaching, using the criteria

of mediation (detailed in Tables 3.1 and 3.2) which informs *how* best to teach young people the skills they require to be success learners (Stringer, 2018).

Collaboration with Young People Becoming Capable Learners

This section investigates how a dynamic approach to assessment has relevance for (a) equipping young people for learning in the 21st-century, and (b) enriching assessment of young people's behaviour that reduces their learning opportunities and challenges educators.

Assessment for 21st-Century Learners. A rapidly changing workforce, use of technology and explosion of knowledge have necessitated a shift from knowing the *what*, to knowing the *how* to access knowledge and apply it (Fullan & Scott, 2014; Saldaña, 2004). There is a growing body of research literature which states that

> cognitive and metacognitive skills are critical ... as well as transferring these skills to different domains and learning to think critically. These skills allow [young people] to reflect on their learning process, enable them to set their own goals, and monitor the progress on these goals. This forms a strong and important foundation for learning for nonexisting jobs and lifelong learning (Kirschner & Stoyanov, 2020, pp. 502–503).

These are the skills that bridge into all areas of young people's development and have the potential to influence their psychological well-being (Norman, 2020; Norman et al., 2019). Affect, motivation, cognitive and metacognitive skills are often factors "missing" from standardised assessment and, in the sociocultural view of learning, the collaborative conversations which are sensitive to need, moderate anxiety to show what young people are able to achieve, and how responsive they are to mediation to progress learning. An aspect identified in the literature, and supported in this research, is the importance of young people's involvement when practitioners offer feedback on assessments (Landor et al., 2007; Lauchlan, 2012). One participant reported on how her assessment process involved young people in the development of their Learning Profiles, foregrounding the "thinking" involved in their learning. This had a significant

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flow-on effect emotionally which motivated young people to engage with their learning, and increased their sense of being competent learners.

The current *New Zealand Curriculum* key competencies foreground the importance of developing young people's cognitive and metacognitive *thinking* skills (Hipkins, 2007) as the foundations of learning in several domains of development, such as *using language, symbols and text, managing self, relating to others* and *participating and contributing*. In this research, however, it was unexpected that half the number of participants supporting young people's learning and behaviour reported not knowing the relevance of cognitive and metacognitive skills for their assessment practice. These participants viewed these skills as less important, and expressed their confusion over terminology, unlike the speech-language therapists who reported studying metacognitive skills as part of their coursework and training. However, participants' confusion is easily understood, given the diverse theoretical frameworks and myriad definitions of cognition and metacognition, and what constitutes cognitive and metacognitive skills (Azevedo, 2020). Therefore, following their reported limited knowledge of cognitive and metacognitive skills, it followed that the majority of participants were uncertain how to progress assessment. There is little argument that understanding the skills embedded within the key competencies and their assessment is complex.

Hipkins and Cameron (2018b) also report the difficulties educators experience with the assessment of the key competencies, stating that it is not yet clear how assessment in the classroom is to progress, and "How best to assess key competencies is an unresolved question internationally" (p. 25). However, it is also important to acknowledge that many educators find themselves in a position similar to that of practitioners, with heavy workloads and time constraints impacting on their ability to bring about change in their teaching to incorporate the key competencies in young people's learning and "equipping students with the ability to learn to learn" (Wylie & Bonne, 2016, p. 2). Therefore, with regards to 21st-century skills, assessment tends to be limited. For young people with diverse learning needs, reporting in schools typically consists of the assessment and development of social and life skills (Hipkins & Cameron, 2018b).

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Gordon (2013) proposes that the complexity of 21st-century competencies render familiar assessment traditions "dysfunctional to the needs of education in the 21st century" (p. 9) and, therefore, new assessment thinking is required. The findings from this thesis illustrate how a dynamic approach to assessment has the potential to work collaboratively with educators and young people to contribute to stakeholders' knowledge of (a) the cognitive and metacognitive skills embedded within the key competencies of the *New Zealand Curriculum*; (b) *how* young people learn; and (c) *how* to progress learning and teaching.

"Thinking" Beyond Functional Behaviour Assessment and Diagnosing for Disability. Relevant and meaningful assessment to develop young people's *thinking* skills is a priority for all learners with the understanding that cognitive and metacognitive skills underpin all activities and behaviour (Hipkins & Cameron, 2018b). As cognitive and metacognitive skills tend to be associated with academic learning, participants expressed less understanding how these skills impact on *how* young people also learn how to behave in social situations, and *how* they develop competence when interacting with others.

As discussed earlier, all participants working in the field of Learning and Behaviour reported using functional behaviour assessment (FBA), which aligns with the positive behaviour for learning (PB4L) approach used in schools to address problem behaviour, which is "not about changing the students; it's about changing the environment, systems and practices you have in place to support them to make positive behaviour choices" (Towl, 2007, p. 33). While functional behaviour assessment (FBA) was typically used to assess behaviour, in accordance with Church and the Education Department Team's (2003) recommendation to the Ministry of Education, the participants in this research identified that for those young people who require additional support, behaviour cannot be seen only as a response to environmental antecedents. This is consistent with other studies (Dimmitt & McCormick, 2012; McCloskey & Perkins, 2013; Meltzer, 2010) and recent research which suggests that "radical behaviourists err when they fail to

acknowledge that neuronal, cognitive, and linguistic information processing play a central mediating role in such behaviours" (Henriques & Michalski, 2020, p. 347).

Frith (2012) describes the metacognition of social behaviour as the "monitoring and control of cognitive processes [which link] closely with concepts such as working memory and executive control" (p. 2219). McCloskey and Perkins (2013) propose that any assessment using functional behaviour assessment (FBA) should include assessment of executive functions (EF). They argue that if behaviour is seen purely as a response to antecedent conditions and not all young people respond to similar conditions in similar ways, then there have to be other mediating factors that enable young people to respond differently, and these include executive functions. In terms of this research, these would correspond to young people's metacognitive skills that monitor and adapt cognitive functions (Conn et al., 2018), and viewed by Feuerstein et al. (2006) as the "main determinant of behaviour" (p. 6). Such an approach enriches a functional behaviour assessment by offering young people, educators, family and whānau an understanding of the role cognitive and metacognitive skills play in tasks and activities, and how the learning and teaching of either social or academic skills may progress.

The document analysis carried out on the Draft Discussion Document on *New Zealand Education in 2025* (Ministry of Education, 2015b), identified that "learning to learn" is a key component of the *New Zealand Curriculum*. This research offers a step towards an assessment approach that is future-focussed, grounded in the here-and-now activity of learning, while teaching the skills of learning how to learn, and developing young people how to become capable learners. This makes this approach to assessment invaluable when collaborating with educators, and using games as an authentic approach to assessment.

Games as Assessment Tools for Change

Using games for assessment was based on the assumption that games potentially were (a) responsive to culture; (b) useful for assessing and teaching cognitive and metacognitive skills within the framework of a dynamic approach to assessment; and

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(c) an alternative to standardised assessments, offering practitioners an authentic tool for assessment.

Findings of this research revealed that prior to the workshop, speech-language therapists reported using games most frequently in their assessment practices. Participants supporting young people with learning and behaviour issues, however, typically used games to establish rapport before using formal and standardised assessments, as reward after assessment, to informally assess skills across developmental domains such as fine and gross motor skills, to observe social skills among peers, as distraction to support young people's self-regulation, teach skills, and to build in an element of "fun" in their interaction.

Immediately after the workshop, three of the 16 participants (19%) expressed their reservations. However, 13 participants (81%) undertook to employ games using a dynamic approach to assessment. The most immediate and obvious barrier to implementation was the lack of time participants had available to them to analyse games for use in assessment, and to plan their assessments accordingly. One participant explained that using games would need a clear purpose and have a learning goal in mind. However, this is also true when considering games for purposes of intervention. As Moseley (2014) warns, games run the risk of being too far removed from the skills to be taught, which is more likely to occur when assessment has not clearly informed intervention.

Other participants reported lacking confidence that stakeholders would understand assessment using games as a tool for assessment. However, the research literature suggests that practitioners and stakeholders in the schooling sector in New Zealand increasingly favour authentic assessment (Bourke & Dharan, 2015; Bourke & Mentis, 2014), and using games appears to be a natural choice for assessment across age groups. Recognising that "all measures of skill are based on performance of some task" (Kautz et al., 2014, p. 2) and for assessment of skills to be authentic, aligning play-based assessment with the philosophy that children learn best through play is more likely to lead to collaborative assessment across developmental domains, resulting in outcomes for intervention that are meaningful and useful for all stakeholders in the assessment

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process (McManis, 2016; Russ & Niec, 2011). However, it is worth noting that in their research on using computer games in assessment, Mislevy et al. (2012) warn that when considering using games as a tool for assessment,

> Assessment situations, no matter how authentic they seem, are never exactly the same as the real-world situations we ultimately care about. We want to make sure we include in the assessment settings those features that are most critical to eliciting the knowledge and skill we care about. Leaving them out threatens validity (p. 71).

While the speech-language therapists were already using games in their assessment processes, there were very few participants who had attempted to transfer their newly acquired knowledge of games into their assessment practices three and six months after the workshop. Given games have been identified as holding inherent value of being authentic, engaging and potentially motivating in assessment, it was curious that few participants chose to pick them up as an assessment tool. This suggests other environmental or organisational variables may have influenced their decisions.

Cassie (2018) writes, "Games uniquely inspire and motivate players to engage" (p. 61), and Collmus and Landers' (2019) research on game-framing cognitive assessments is relevant. Their research found that framing cognitive tests as games increased participants' motivation and, with the decrease of test anxiety, improved young people's performance. This raises the question why games are not used as a tool for assessment when, as one participant wrote, games "hit the 'enjoy and laugh a lot' button in kids" (Participant 12).

Reducing the young person's or practitioner's fear in testing is also partly the motivation for increasing the use of technology in assessment. Landers (2015) suggests that the long-term goal for cognitive assessment is to replace "many traditional assessments with game-based variations of equal psychometric strength. One day, perhaps 'assessment' will be synonymous with 'fun'" (p. 2). Computerised cognitive assessments are already being used by practitioners who support learners with diverse learning needs (such as the *Lucid LASS* tests used mostly by resource teachers: learning and behaviour). While other technological options for "personalised assessment"

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(Hipkins & Cameron, 2018a) are being explored, such assessment - like their traditional pen-and-paper standardised counterparts - will still only report on the *what* of learning and offer limited individualised guidance on *how* best to teach, with the additional, and potential drawback of attracting "vested commercial interests in play" (Hipkins & Cameron, 2018a, p. 6).

This suggests yet another trend in the prescriptive commercialisation of assessment where the possibility exists not only for the "tail to wag the dog", thereby losing invaluable information that can only be gathered from qualitative data, but the loss of (a) the social skills involved and connections made when playing games, (b) identifying the potential for mediation, (c) developing and teaching cognitive and metacognitive skills, and (d) co-constructing assessment outcomes with young people, all at minimal cost. Although discussing learning and assessment for educators, the following quote would be as relevant for commercialisation of assessment using games as has happened with standardised assessments, where "the technocratic knowledge and power that come with psychometrics and their industry-backing mean that there are significant power struggles over what kinds of learning are to be valued" (Baird, et al. 2017. p. 329). Moreover, as soon as assessment practices are "colonised" by the commercial world, the question has to be asked how culturally relevant such assessment practices could be.

As games are linked to culture, they offer the possibility for culturally situated and appropriate assessment. Dame Tariana Turia, in her Foreword to *Ngā Taonga Tākaro II: The Matrix* (Brown, 2016), writes: "To our people play was a tool to shape the mind as much as the body" (p. 6). Therefore, further research on the use of culturally relevant games in a culturally responsive assessment process is clearly needed. Games in assessment offer practitioners the potential to (a) complete meaningful assessments with young people with diverse needs (also studied by Hill, 2015; Hussain, 2017; Russ & Niec, 2011; Tzuriel, 2000); (b) use a "range of tools [that is] almost limitless," (Stacey, 2016, p. 127); and (c) assess the 21st-century skills of thinking, problem-solving, collaboration and communication. These are not skills that can be rote-learned but skills that need to be learnt through experience, and Portnow (2014) suggests that "games can provide a platform for that experience".

This research proposes that using a dynamic approach to assessment can guide educators, family and whānau so that mediation between game (experience) and learner may be made visible, making it possible to bridge cognitive and metacognitive skills into all areas of the New Zealand *Curriculum*, the key competencies, and the environments of home, school and the wider community.

Although this approach to assessment is an alternative way of working with young people, participants in this research found incorporating the novel and fun components of games into their assessment practices challenging, whilst recognising the unique opportunities that using games could bring to young people, educators, family and whānau and colleagues. Introducing games as a tool for assessment to participants who had prior knowledge of dynamic assessment meant that they were able to implement this approach in their practice with greater confidence than those participants who had limited or no knowledge of dynamic assessment. Exploring participants' experiences of bridging knowledge into practice is further discussed below.

The Challenge of Change: Bridging Knowledge into Practice

This research showed that there remained a "practice-based" gap for practitioners between knowledge (explored at the workshop) and practice (in the "real world"). The research foregrounds the complexity of this socially-constructed process (Davies et al., 2008; Graham & Tetroe, 2007; Hansen et al., 2020; Sudsawad, 2007), and CHAT is a helpful tool to analyse the implications of new learning when a mediating artefact is introduced into an existing activity system of assessment.

Systemic Challenges of Change

Discussed earlier in this chapter, systemic factors of time constraints and high caseload numbers influenced participants' choice of assessment tools and approaches. This section expands on the organisational policies that impacted on assessment practice. Findings of this research revealed inherent contradictions in the system where

participants from one discipline group were constrained by time or theoretical persuasion to do one-on-one assessments, while participants from another group reported organisational expectations to do the necessary, standardised, formal assessments with the young people on their caseloads. As one participant reported, a dynamic approach to assessment would need to be adapted "as policy dictates, we work" (Participant 14) and to occur within service delivery constraints. However, all nine participants who continued with ongoing research supported Elwood and Lundy's (2010) finding which argues that "a 'one-size-fits-all' assessment system is not in all children's best interests" (p.339).

Listed among the principles of assessment, as described in the Ministry of Education's "Position Paper" (2011) and "Specialist Service Standards" (2015a, p. 11), the principle to be "as unobtrusive as possible" has led to the following potential risks for: (a) young people who are not aware of being assessed, which raises ethical concerns regarding children's rights; (b) educators, who in consultation with practitioners embark on teaching and intervention, without taking into account a young person's learning profile; and (c) practitioners who potentially become averse to forms of assessment which involve one-on-one interaction with a young person. Without support to learn, a dynamic approach is unlikely to be understood as an authentic and collaborative form of assessment. despite the "Position Paper" (Ministry of Education, 2011a) lamenting "that for some students in Special Education services there has been a notable lack of evidence of collaborative assessment" (p. 2).

Such support includes giving practitioners time to learn and develop skills in alternative forms of assessment. Comparable to Stacey's (2016) research, the lack of time consistently impacted on participants' existing assessment practices and, in this research, affected participants' scope to change or enhance practice. Participants noted that the lack of time they had available to consolidate their learning gained at the workshop, impacted on their confidence when trying to implement this approach in practice. Unfortunately, the restricted support provided to participants due to the organisation's limited understanding of the potential a dynamic approach brings to assessment - being largely unknown in the community and judged by misconceptions - posed considerable barriers to participants' learning and implementation opportunities.

Individual Perceptions and Commitment to Change

The challenge of change reflects the complexity of a dynamic approach to assessment (Corcoran, 2014), and learning to use and interpret co-constructed outcomes requires expertise which takes time and training. Therefore, it is important to evaluate the results of this research regarding the personal changes participants experienced with new learning, within the context and constraints of practice, given that historically practitioners' knowledge and experience of dynamic assessment can influence their beliefs in the efficacy of the approach (e.g., Deutsch & Reynold, 2000).

Hansen et al. (2020) propose that the challenge for change also includes individuals' capacity to transfer new knowledge into practice, how new information aligns with existing belief systems and culture, and whether new information is perceived to be relevant to practice. Additionally, Edwards and Daniels (2012) contend that emotional commitment is necessary for change and, given the complexity of transferring knowledge into practice, change is likely to occur incrementally. Therefore, Larsen's utilisation scale (1982) was used to capture the subtle nuances of individual change.

Although the majority of participants recorded their commitment to using this process of assessment in their practice after the workshop, three to six months after, participants struggled to implement this approach predominantly due to the systemic issues which impacted on their daily practice, a lack of confidence to implement a new approach and, with the idea of changing practice as being "scary" (Participant 6), most participants reported that change predominantly occurred on emotional and cognitive levels. Only a small number of participants reported using a dynamic assessment approach actively in their practice, and their experiences of assessment have been captured. However, new knowledge changed the way participants thought about assessment, and they were inspired by the opportunities this assessment process presented for collaborative assessment, encouraging reflection on an authentic approach using games as a natural way of doing assessments *with* young people that has the potential to be culturally responsive, emotionally and psychologically safe.

A change in practice requires more than professional learning or of specific training of individuals, as it does require strong organisational support (Engeström, 2001). This current research shows that a dynamic approach to assessment adds value to the practitioners' assessment as they work with (a) young people in their development as capable learners, (b) educators to build their capability to teach young people with diverse learning needs, and (c) the organisation, as accountable, responsible and culturally responsive practitioners. The potential for the use of a dynamic approach to assessment in education is compelling.

Summary

As participants recorded the purpose of their assessments was to identify factors influencing young people's engagement in their learning and to remove barriers to inclusion, it was necessary to determine how this was achieved. Participants reported using observation, discussion and conversation as the basis for all assessments, functional behaviour assessment (FBA) to determine contributing environmental factors, and standardised assessments to identify individual learning delays, when needed. Yet tensions were identified (a) when assessment paradigms clashed within individual practice and participants' awareness of their responsibility to be culturally responsive in their work with young people; (b) within the community, when others' expectations superseded practitioner judgement; and (c) within the organisation, when constraints of time and high caseload numbers shaped assessment practices, and practitioners questioned the role of assessment in a service framework of consultation and collaboration.

The research findings suggest that a dynamic approach to assessment, based on conversation, observation and collaboration, has the potential to be an assessment process for change for practitioners, young people and educators. For practitioners, this approach to assessment is culturally responsive, responsible - which means that assessment with young people is ethically and emotionally sensitive, and accountable to the public purse - and an assessment process that has the potential to remove barriers to inclusion. Using Lundy's (2007) framework identifying the importance of voice, space, audience, and influence, in order for children's rights to be upheld, and their

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voices to be heard and influence decisions, this research highlights the need for the inclusion of young people in their own assessment and response to these assessments.

Including learners more intentionally in assessment, can reveal how educators may develop young people to become capable learners, examining the cognitive and metacognitive skills they require to be motivated 21st-century learners (Norman, 2020). As outlined in the Literature Review (Chapter 2) and following discussion on the RE*Think* framework (Chapter 3), these skills also impact on a young person's ability to regulate their emotions and behaviour. The importance of incorporating young people's cognitive and metacognitive skills as critical thinking skills during the process of assessment, therefore, has implications for

- functional behaviour assessment, as behaviour is not only triggered by environmental factors (McCloskey & Perkins, 2013; Feuerstein et al., 2006);
- standardised assessments, as thinking is culturally-mediated (Feuerstein et al., 2015) and socially-constructed (Cole et al, 1978). Standardised assessments are also potentially limiting when they indicate that young people are "less capable than they actually are" (Participant 16); and
- all learning and teaching of academic tasks and social competencies, as they impact across foundational curriculum areas (Hipkins, 2007) and adaptive functioning skills, and bridge into different environments of home, school and the wider community.

Furthermore, where interventions are designed that use games to teach strategies and develop skills, extending the use of games further as a tool for assessment is perhaps the next logical step. Being a novel and fun way of doing assessments with young people (McManis, 2016; Russ & Niec, 2011), using games in a dynamic approach to assessment is authentic and respectful, and provides information "close to reality and therefore has the potential to make a difference" (Participant 11). This research proposes that making a difference is critically important in assessment. This assessment approach aims to support young people develop the 21st-century skills needed to become successful life-long learners. However, despite the potential of this approach to assessment, participants identified a number of barriers which influenced and prevented implementation.

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Using a CHAT framework of analysis, the findings of this research revealed practitioner and systems' level tensions and contradictions within the activity system of assessment. Although highly motivated to use this approach to assessment in their practice and games as a tool for assessment, participants noted tensions in both practice and policy, between participants and the organisation, and out in the community. Importantly though, this approach also created opportunities for practice as discussed above with its potential to offer practitioners, young people, their families, whānau and educators an individualised, meaningful and relevant service that is also accountable.

This research broadens the understanding of application of dynamic assessment practices, rather than replace any forms of assessment methods. It argues that practitioners' assessment repertoires, can successfully incorporate a complementary approach as assessment for change.

Chapter 7

Conclusion

When a young person is referred to the Ministry of Education, practitioners work within stipulated and pre-determined policies in education, codes of practice and frameworks of service delivery. Integral to their work, practitioners' assessment practices are intended to contribute to an understanding of a young person's learning, to inform and guide appropriate evidence-based intervention. Aligning with the shift in assessment and identification practice from the use of psychometric assessments to a dialogic approach, collaborative engagement between young people, practitioners and the whānau aims to create a shared understanding of a young person's learning through assessment to inform decision-making and ultimately intervention. Although practitioners have several assessment frameworks available to them, participants in this study reported that assessment continues to remain a contentious and challenging process in their practice.

This qualitative study, grounded in the social constructivist paradigm, used a CHAT framework of analysis to explore practitioners' use of dynamic assessment principles and practices, their learning from a PLD session and the resultant impact on their practice. This enabled a deeper understanding of the individual activities of participants and the networked activity system of assessment, revealing both tensions and contradictions inherent within the system, as well as suggesting the potential for transformative practice.

Re-Thinking Assessment and the Potential of a Dynamic Approach

This thesis began when, through my experience of working as an educational psychologist, I identified patterns and tensions that were difficult to resolve through simply changing my practice. In the context within which I work, alongside speech-language therapists, special education advisors, resource teacher: learning and

behaviour, our work is impacted by a myriad of tensions and contradictions within and outside the organisation. These inadvertently threaten to unintentionally sabotage the work of practitioners, particularly with regards to assessment. Calling for a service, which has been perceived as consisting of "too much assessing and not enough doing" (Ministry of Education, 2011a, p. 2), the educational community demands intervention. However, without relevant assessment, intervention may fail, putting further pressure on an educational system already under significant pressure.

The organisational response to demands for service is often to encourage practitioners to work "smarter" and more "efficiently", with the end-goal of reducing waitlists and moving young people through the system. Inevitably perhaps, practitioners increasingly experience higher levels of dissatisfaction with their work, created by tensions between dedication to their work with young people, educators, families and whānau, and their commitment to a government-based organisation limited by financial and human resources. Practitioners become engaged in negotiating often conflicting community and organisational expectations and constraints, delivering an ethically-driven and culturally responsive service, and the reality of finite time to complete the work.

A dynamic approach to assessment that puts the young person at the centre of practice has the potential to be culturally responsive, educationally meaningful, useful and psychologically safe. At the same time, such an approach to assessment also has to be accountable and compatible with the expectations of the organisation, whilst giving practitioners an assessment approach to broaden their experience.

This section provides summaries of the key findings and the implications of this assessment approach for practice within Aotearoa New Zealand. As participants in this study reported being dissatisfied with their assessment practices, they were receptive to learning about components of the RE*Think* framework and a dynamic approach to assessment as "missing parts of the puzzle". They saw the potential of games as a tool for assessment, and reflected on the challenges and opportunities a potential change in practice presented.

Views Around Assessment Practices

Situated in a culture that values diversity in all forms, participants reported that the purpose of their assessment practices was to inform intervention that focused on increasing young people's engagement with their learning and to facilitate inclusion. To achieve this, participants determined triggers, strengths and influences using different assessment tools and frameworks, ranging from the least intrusive to the most intrusive practices. Assessment typically involved observation of the teaching-learning interaction and activity or task analysis, which involved identifying areas of strength and weakness as possible triggers for challenging behaviour.

As this research also focused on the assessment of cognition and metacognition, the first finding of this study was that reliance on standardised assessment to assess cognitive skills and functional behaviour assessment (FBA) produced outcomes that provided predominantly static descriptions of the educator-learner interaction and the *what* of learner performance. Although participants were from different disciplines, they were keenly aware of the need to determine why assessment should inform their decisions regarding the use of frameworks or tools for assessment, they reported being uncertain how to proceed with assessment, using tools because they were available, or because other people held expectations that they should be used. This meant that standardised assessments were used with unexpected frequency. This finding points to the importance of developing practitioners' assessment literacy to enable them to make informed decisions about their assessment practice, to move beyond given and 'typical' assessment tools, and afford them the opportunity to grow their competence and confidence to advocate for alternative options.

The second key finding showed that while one-on-one standardised assessments gave participants a degree of confidence by being prescriptive and profession-linked, emerging dissatisfaction with assessment practices occurred. Dissatisfaction related to (a) practitioners' perceptions of young people's negative experiences with culturally inappropriate, confronting standardised assessments and potentially unethical practice; (b) the number of educators, family and whānau who had difficulty using the results of such assessment to inform intervention; (c) participants managing community

expectations that assessments would provide rapid answers to the significant challenges with which young people presented; (d) organisational constraints of time and participants' high caseload numbers, which significantly impacted on the time participants had available to build rapport prior to engaging young people in the assessment process; and (e) participants' perceived constraints of consultation as a model of service delivery.

Given the reported dissatisfaction with current assessment practices, these findings indicate the need for more culturally appropriate, whānau-centred, solution-focused and relational types of assessment. A dynamic approach offers such assessment, and is the first contribution of this research to practice.

The third finding was that although the majority of participants reported to philosophically adhere to a socio-constructivist paradigm of practice, they used assessments from the paradigms of behaviourism and cognitive psychology the most, and assessment methods and approaches from the socio-constructivist paradigm the least, possibly as alternatives were either largely unknown or unfamiliar to participants. Therefore, participants were keen to learn about an alternative and/or complementary approach to existing assessment practices within the paradigm of socio-constructivism, and the need for an assessment process that was culturally-responsive, ethically-driven and safe, collaborative, fun and respectful. Participants also wanted an assessment process that provided educators with a way forward to promote learning, that focused on potential, and was relevant to education. The opportunity presented with the *Game-Changer for Assessment* workshop, and learning about a dynamic approach to assessment gave participants the opportunity to reflect on their practice and consider (a) the purpose of their assessments, (b) who benefited from assessment, (c) what was "missing" from their assessment practice; (d) the cultural relevance of assessments for young people; and (e) to consider the balance of power in practice.

The implications of these findings suggest the need for more professional learning and development opportunities (PLD) around assessment with a focus on the *how* and *why* rather than the *what* of assessment. A dynamic approach and frameworks - such as RE*Think* - can provide deeper insight and analysis which is grounded in a socio-

constructivist paradigm. The RE*Think* framework, therefore, is the second contribution of this research to practice, and further discussed in the following section.

Finding a "Missing Part of the Puzzle"

As an emerging assessment field in education and psychology in Aotearoa New Zealand, relatively little research has been done on the use of dynamic assessment. The contribution of this study is embedded in the findings related to the second research question: "Did knowing about a dynamic approach to assessment enhance practitioners' understanding of cognitive and metacognitive assessment, learning and teaching in their work with young people, educators, family and whānau?".

The fourth finding to emerge from this study showed the benefits of supporting new developments in assessment approaches for practitioners which align with wider recommendations in the community of practice, where

> the challenge for psychologists is to use their strong background in developmental psychology, developmental psychopathology, and knowledge and sensitivity about language and cultural differences to synthesize the data from the family, school and community contexts, formal and informal tests, observations, interviews, and dynamic assessments to develop a formulation that appropriately reflects the child's abilities (Geva & Wiener, 2014, p. 130).

The contributions of this research, therefore, included offering practitioners who work in education: (1) a dynamic approach to assessment that could contribute to a collaborative formulation of a young person's strengths and abilities; (2) the RE*Think* framework, which made visible the cognitive and metacognitive aspects of mediation and the implications for (a) the mediator-learner interaction, (b) activity or task analysis, and (c) young people's skill development; (3) a framework focusing on cognitive and metacognitive skills embedded within the key competencies of the *New Zealand Curriculum*; (4) a framework for conversation, observation and collaboration, engaging young people in their learning, and removing barriers to inclusion; and (5) the capacity of games as a tool for assessment.

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The present study found that participants valued an assessment process embedded within a socio-cultural and constructivist paradigm. With a focus on the assessment of cognitive and metacognitive skills as one of the essential skills for 21st-century learners, further contributions of a dynamic approach to assessment practice follows.

Mediating cognitive and metacognitive skills: Building educators' capability.
Understanding that a dynamic approach to assessment is grounded in the fundamental belief that all young people can learn, participants reported that intentional, purposeful, future-focused mediation had the potential to be culturally responsive as a process encapsulated by the reciprocity embedded within the concept of ako.

Through mediation, the process of assessment created implicit possibilities for building rapport and a sense of safety, emphasising the importance of whanaungatanga, which impacted positively on young people's emotional well-being and motivation to engage with assessment. Mediation explicitly focused on how to progress learning and inform the teaching of cognitive and metacognitive skills, thereby making young people's learning "visible". Mediation, if used in intervention, enables young people to learn more about themselves as learners, and for educators to become more creative in their teaching to meet the needs of young people with diverse learning needs. Mediation, therefore, also has the potential to support educators with formative assessments and their use of Assessment *for* Learning and Assessment *as* Learning.

Activity or task analysis. Participants reported that a dynamic approach to assessment had the potential to be used for the analysis of all tasks and activities. Understanding that all tasks have cognitive and metacognitive requirements, participants learned that task analysis is more than identifying steps in learning for curriculum modification and skill development, or breaking tasks or activities down by chunking. Through mediation, task requirements and young people's cognitive and metacognitive skills were bridged, revealing *how* to progress learning. This aligns with educators' focus on the feedback of task processes, self-regulation and metacognitive attributes of tasks which Hattie and Timperley (2007) identify as the most useful form of task feedback for young people.

Understanding learners' cognitive and metacognitive skills: Developing young people to become 21st-century learners. Participants reported a shift in understanding that every activity has cognitive and metacognitive requirements and, for intervention to be successful, activities have to be tailored to a learner's profile of cognitive and metacognitive skills. Therefore, after learning about cognition and metacognition, participants reported a shift in their knowledge-base, recognising that thinking was the premise of all their action, and understanding the value of co-constructing an understanding of *how* young people learn, strategies to progress their learning from *what is* to *what might be.*

Using a framework which educators understood and analysing a young person's cognitive and metacognitive skills using the key competencies of the *New Zealand Curriculum* as a structure for analysis, participants' increased knowledge of the key competencies eased collaboration with educators by making assessment outcomes educationally relevant. Using the key competencies as a framework for cognitive and metacognitive skills provided participants with in-depth insight into the key competencies, rather than paying lip-service to a valuable and useful educational framework to develop young people as 21st-century learners.

Games as a Tool for Assessment

Investigating whether games were perceived as useful to practitioners as a tool for a dynamic approach to assessment resulted in the fifth finding of this research. While speech-language therapists frequently used games in the assessment of receptive and expressive language skills, memory, cognition and metacognition, participants supporting learning and behaviour, more often used games to build rapport with young people, observe play, and as intervention for developing social skills.

Using games as a tool for a dynamic approach to assessment presented both challenges and opportunity. Challenges included the lack of time practitioners had to plan assessment and analyse games for their relevance to the referral question, and their concerns regarding the limited understanding of the value of games from within their communities of practice and members of the wider community. However, games as an

authentic approach to assessment may be used with young people for whom standardised assessments are culturally inappropriate and who do not respond well to the protocols of standardised assessment. Taken from their natural environment, games that are culturally appropriate present the opportunity to make assessment activities less anxiety-provoking and more relevant within young people's learning contexts. However, despite the Ministry of Education advocating for authentic assessment and for learning to best occur through play, games are vastly underutilized by practitioners who support young people with diverse learning needs.

The positive experiences of participants who already use games in their assessment practices indicate the potential that exists for games to be used as authentic and culturally responsive tools for assessment and shows promise for use with young people as a practice-informed, fun and respectful approach to assessment.

Change in Practice

Relating to the question of whether learning brought about changes in practitioners' approach to assessment, the sixth finding of this study, was that although the majority of participants were highly motivated, connected on an emotional level to the principles of a dynamic approach to assessment, and practitioners intuitively understood the value for young people, educators, family and whānau, changing practice was challenging on both organisational and personal levels.

Individually, change after learning about a dynamic approach to assessment occurred not only on different levels (emotionally, cognitively and behaviourally), but also incrementally. Using Larsen's (1982) scale, and participants' self-reported measure of their transfer of knowledge, it was possible to capture the nuanced changes in their practice, and each level of change is briefly detailed below.

Emotionally. The literature suggests that for change to occur in practice, affect and motivation are essential. None of the nine participants who participated in the ongoing research rejected the framework or the process of assessment after three and/or six months after the workshop. A dynamic assessment approach can be embedded and

aligned with existing assessment approaches to strengthen and enhance practitioners' assessment practice. This offers promise for practitioners' ongoing satisfaction with assessment practice that is meaningful and useful.

Cognitively. A dynamic approach to assessment gave participants the ability to answer the *so what* question from educators, young people, families and whānau, and to show a way forward for learning and teaching. This offers promise for practitioners to be knowledgeable about assessment practices, giving them confidence to advocate for alternative and complementary forms of assessment, such as a dynamic approach to assessment, in the face of controversy.

Changing practice (Behaviour). Although participants were highly motivated, connected on an emotional level to the principles of a dynamic approach to assessment and understood the value of this approach for young people, educators, family and whānau, changing practice by transferring knowledge into practice is acknowledged to be a complex and time-consuming process.

For participants with limited knowledge of dynamic assessment, learning something new, incorporating it into an existing framework of practice, and implementing it in practice was complex. This was especially true when participants had a limited knowledge-base of assessment practice in general and developing skills in intervention and mediation strategies, either due to a lack of experience, opportunities for training, or confidence. For experienced participants, who regularly used dynamic assessment in their work prior to the workshop, implementing this assessment approach was done intentionally, with increased reflective practice. However, not having the time to internalise the complexity of the RE*Think* framework and become fluent with every component, experienced participants instead focused on implementing a dynamic approach to assessment in their practice without necessarily referring to the RE*Think* framework or using the key competencies of the *New Zealand Curriculum* as structure to analyse cognitive and metacognitive skills.

Participants, for whom a dynamic approach to assessment was completely new and unfamiliar, focused on implementing individual components of the framework to

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scaffold their learning, such as mediation, whilst developing an understanding of the interrelatedness of the assessment components of task analysis, educator mediation, learner cognition and metacognition, and the process of assessment. This foregrounds how necessary it is for new approaches to assessment to be introduced systematically, learning to be scaffolded and that ongoing support and training is required to embed skills.

Furthermore, for change to occur in practice, affect and emotional motivation are also essential, influenced not only by individual capacity but systemic challenges. Edwards and Daniels (2012) write that

> 'what matters' or the 'why' of practices needs to be to the fore in any decision-making at both institutional and individual levels. Our argument is that this can be achieved by promoting a combining of the affective with the cognitive in professional practice and establishing work systems which make visible the purposes of institutional practices offering opportunities for a dialectic which recognises the engaged expertise of knowledgeable Professionals (p. 16).

Questions, therefore, have to be asked whether practices of assessment are at risk of being "institutionalised" to fit the constraints of the organisation, rather than meeting the needs of the young person; whether practitioners are willing to "give up" traditional practices, despite their awareness of the power imbalances inherent in standardised assessment; and, at the expense of young people, to embrace the temporary loss of confidence that change brings.

This study further showed potential to deepen practitioners' use of assessing via, conversation, observation and collaboration: Not only is keen observation essential during assessment with a young person, the RE*Think* framework was found to offer participants a framework for observation that can be used in any context and situation, in addition to observation of the one-on-one teaching-learning interaction in assessment; and a dynamic approach to assessment offered practitioners a framework to "coach" educators on *how* best to teach young people with diverse learning needs through conversation and collaboration. Opportunities for coaching are inherently embedded within this assessment approach as, unlike the protocols for static

assessment, conversation and collaboration with stakeholders are encouraged during assessment.

The positive experiences from participants in this study of using this framework for conversation, observation and collaboration can be extended to other practitioners as a valuable approach to incorporate key aspects of assessment into their practice.

Limitations of the Study

There were some limitations that impacted on the findings of this research. Participants were recruited from one District of the Ministry of Education and the small sample size, while allowing for rich, in-depth and contextualised understanding of the phenomenon, is not intended to be generalised. Further research with a larger group of practitioners and across agencies could add to, and extend these findings.

A further limitation of this study was an assumption that participants would have sufficient understanding of assessment in general, and dynamic assessment in particular as a principled approach, as well as in-depth knowledge of the key competencies of the *New Zealand Curriculum*. When participants were introduced to, and requested to implement the RE*Think* framework using a dynamic approach to assessment, it was clear this wider assessment and cognitive knowledge was not shared by all. This impacted on their ability to analyse cognitive and metacognitive skills using the structure of the key competencies and use mediation as part of the dynamic assessment process.

Participants' developing understanding goes some way to explaining tensions when trialling the approach, and possibly also aligns with the finding of their over-reliance on standardised assessments. Dynamic assessment requires the ability to analyse a task, understand learner cognition and metacognition, and use the process of educator mediation to bring about change in the learner from pre- to post-mediation. Without this knowledge and understanding, practitioners are ill-equipped to use this assessment process and are more likely to fall back on standardised protocols. Without ongoing

professional learning and support, it is unrealistic to expect practitioners to implement this approach to assessment with any confidence (Haywood & Lids, 2007).

The voice of young people, educators, family and whānau in this research is not present. Given this research focused on the practitioners change of practice, the participants were all specialists working in education. However, while participants' perceptions of young people's experiences of assessment were recorded, this research would have been enriched by capturing feedback from young people regarding their experiences of this approach to assessment, and including feedback from educators, family and whānau. While links have been identified to explore culturally responsive practice, further research is required to strengthen the cultural relevance of this approach to assessment with Māori practitioners, young people, educators, family and whānau.

Notwithstanding these limitations, this research foregrounds the potential of a dynamic approach to assessment for practitioners who work with young people from diverse cultures and who do not respond to standardised assessments; for educators, to support their understanding of how to change the learning-teaching interaction to progress young people's learning, socially and academically; and the use of the key competencies as a foundational document of the *New Zealand Curriculum*. It also offers some insight into the tensions and challenges organisationally, when contradictions within the system work against the very philosophy of change. Nonetheless, despite the difficulties and challenges participants experienced, participants viewed this approach to assessment as not only valuable in its own right, but as having the potential to be a complementary approach to existing frameworks and methods of assessment.

Given the positive findings in this study that a dynamic approach to assessment has ecological validity in Aotearoa New Zealand, and that the RE*Think* model provides a useful tool to operationalise this assessment approach, this research also lays the groundwork for future research to extend this investigation further as a more culturally-responsive, whānau-based, solution-focused assessment approach overall.

Further Implications for Practice

Assessment is not a neutral or culture free activity; rather it is embedded in a social, historical, cultural and political context. Therefore, issues of accountability cannot be ignored when a system is funded by the public purse and under pressure due to limited human and financial resources.

Accountable to young people, the community, and the UN Convention on the Rights of the Child, this approach encourages practitioners to consider the *why* of assessment, *how* this can be achieved, and *what* has been achieved by assessment. The UN Committee recommended in February 2011 that "New Zealand should do more to consider the views of children and young people at all levels of decision-making" (Ministry of Social Development, 2018, p. 8), and a dynamic approach to assessment places the young person at the heart of assessment practice.

Greater efforts are needed to ensure that assessment moves away from doing assessments *to* young people, to doing assessments *with* young people. It also needs to have the ability to modify interventions to develop young people as capable learners. In addition, there is a necessity to build adult capability to tailor the teaching-learning interaction in a context that is culturally relevant, safe and inclusive.

The Ministry of Education in Aotearoa New Zealand does not require the results of psychometric tests to access resources for young people eligible for funding from the Ongoing Resourcing Scheme. As Haywood (2012) argues, "It is precisely this kind of insistence on the importance of the ways in which individuals differ from each other that lead inexorably to the possibility and indeed the necessity of a dynamic approach to psychological and educational assessment" (p. 219). Therefore, as an ethically responsive framework, a dynamic approach can be used with static assessments.

In general, the results of this study suggest that a dynamic approach to assessment aligns with "He Pikorua" guiding principle of collaboration, the new practice framework currently developed by the Ministry of Education (Learning Support) and the resource Teachers: Learning and Behaviour service. Here, assessment consists of collaborative

information-gathering from multiple sources, including a young person's self-assessment; and making sense of information using a "socially and culturally mediated process [which] involves encouraging input from all members of the team, including the mokopuna [grandchild, descendent] and their whānau, to collectively analyse the information gathered from various sources" (Ministry of Education, 2021a). Therefore, as a dynamic approach fits within the new model and framework of practice, it is an approach to assessment which may resolve the tensions practitioners currently experience in their practice.

This study has raised important questions about the nature of assessment practices in Aotearoa New Zealand. Although dynamic assessment has been criticised for being time-consuming, not spending the time to complete meaningful assessments with young people may be more costly in the long-term (Haywood & Brown, 1990), leading organisations that discourage dynamic assessment due to time constraints to be potentially penny-wise but almost certainly pound-foolish. As evidenced in this study, a dynamic approach to assessment, can fulfil the three purposes of assessment proposed by Brown (2018) with regards whether assessment is useful, takes place naturally in the educational process, and is aimed at improvement in learning and teaching.

Therefore, while the findings of this research support the use of a dynamic approach to assessment in practice, there is a definite need to create opportunities for practitioners to develop competency in this approach as an alternative and/or complementary approach to assessment. The RE*Think* framework was found to be a useful framework for this in study and signals the potential for this, and other similar dynamic assessment approaches to be more widely used for assessment PLD.

Future Directions for Research

As this research proposes a dialectic approach to assessment, where the professional expertise of practitioners is valued and assessment practices are focused on supporting young people *in education*, the following recommendations are made:

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*Embedding the RE*Think *framework within a model of consultative practice.* The evolving changes in practice leading to blurred boundaries (Leadbetter, 2011) resulted in the reported loss of professional identity, increasing constraints of time and "where the old rules which have shaped discrete practices are no longer viable" (Edwards & Daniels, 2012, p. 15). The opportunity presents a renewed look at a dynamic approach to assessment, which is intertwined with the motives participants identified for practice at the workshop (Part 1, Chapter 5), and supported by "practitioners' emotional engagement with knowledge" (Edwards & Daniels, 2012, p. 15). The challenge for practitioners is how to move forward and work with changing and evolving systems and remain relevant for young people and educators, thereby maintaining their sense of professional worth and ability to adapt to community and organisational expectations.

As this approach to assessment aligns with the new practice framework of "He Pikorua", the findings of this research may provide a basis for embedding the RE*Think* framework within practice. Further understanding that the Ministry of Education is moving in the direction of consultative practice, this research proposes that the lens of a dynamic approach to assessment using the RE*Think* framework would be a valuable tool for practitioners to guide conversation, inform observations and facilitate collaboration with young people, educators, family and whānau within the consultative model of service delivery, thereby addressing the difficulties Yeoman (2008) identified regarding the follow-through of assessment outcomes into teaching practice and the school environment.

Using a dynamic approach for assessment when games are used for intervention.
Considerable work has been done on developing evidence-based interventions for young people, and games have increasingly featured with the recognition that they are engaging, motivating, and ideal for authentic intervention in the education system. An example of such an intervention currently supported by the Ministry of Education includes "Brick Club", an adapted version of LEGO Therapy, which offers a holistic and playful approach to developing young people's social skills, language, knowledge of concepts, cognitive and metacognitive skills. This approach has considerable appeal for educators as LEGO is already found in most classrooms.

Interestingly, though, two areas have been identified that have not been sufficiently addressed. These are assessment prior to intervention, and the question of transfer after intervention. Assessment recommended prior to implementation of this intervention is the use of a standardised assessment (such as the *WISC-V*), recording observations and/or use of rating scales. While these may provide information on *what* young people can do or may know, for those who are supported by the Ministry of Education or who have diverse learning needs, this type of intervention may fail without appropriate assessment detailing *how* young people learn that will inform both the learning and teaching of this intervention. This is where a dynamic approach to assessment excels and would be a fruitful area for further work using games as the tool of assessment.

Using a dynamic approach to assessment with young children in the Early Years. Although Hussain's (2017) research outcomes in the United Kingdom on dynamic assessment using play-based materials in the early childhood years (birth to five years) have been mixed but showing promise, this is an area that deserves to be replicated in Aotearoa New Zealand. Despite the focus on Early Intervention and the increasing awareness of the critical period of the first 1000 days of a child's life, the development of cognition and metacognition has been largely underestimated in younger children (Marulis, 2014). With the recognition that young children respond well to authentic and play-based interaction, the use of a dynamic approach to assessment using games - and particularly those that are culturally authentic games - could be further explored as an alternative approach to assessing the learning-teaching interaction as a valuable tool for assessment in the Early Years.

Exploring the use of a dynamic approach to assessment as a culturally responsive approach. Considering that all practitioners who are employed by the Ministry of Education could work with young people, their whānau and educators who identify as Māori, further research is needed to determine whether a dynamic approach to assessment would add value as it potentially aligns with a te ao Māori approach to teaching-learning assessment.

Re-thinking behaviour as more than Functional Behaviour Assessment (FBA). As Functional behaviour assessment (FBA) is seen as one of the cornerstones of assessment for practitioners, this research offers a framework through which to observe and understand both the learning and teaching of academic skills and social behaviour through a lens of cognition and metacognition. Based on Feuerstein et al. (2015) and McCloskey and Perkins' (2013) work, embedding the RE_Think_ framework within the Antecedent-Behaviour-Consequence (A-B-C) observation chart of a Functional behaviour assessment has the potential to enrich observations and understanding of young people's behaviour.

As the manifestation of a "thinking being" whose behaviour is not only contingent on reinforcements and consequences, but understood to be influenced by emotions, motivation, cognitive and metacognitive skills in reciprocal interaction with others, this framework offers practitioners an enriched lens through which to understand young people's behaviour. This assessment approach has the potential to change the way practitioners interpret young people's responses, provide depth to understanding the challenges presented by tasks or activities, and give practitioners the opportunity to re-think the practice of assessing learner-educator interaction. As such, further research would be highly valued.

Final Reflections

As a researcher and practitioner working with young people in education, there is compelling evidence to introduce a dynamic approach to assessment in Aotearoa New Zealand. Given the country's history of working towards inclusion, embracing cultural diversity and Human Rights, and the principles of Te Tiriti o Waitangi/the Treaty of Waitangi, this approach to assessment in education can effectively work in a bicultural and multicultural authentic way to enhance the learning and teaching for young people and educators.

The findings of this research showed that a dynamic approach to assessment is an invaluable complementary tool in practitioners' kete [basket, collection] of assessments. It directly addresses the power imbalance inherent in standardised assessments and is

a child-led assessment process responsive to need, that is authentic and culturally sensitive. A dynamic approach generates qualitative data which enriches assessment outcomes, is strengths-based and, as assessment based in the social-constructivist paradigm, shows a way forward for educators to progress learning through an assessment process to provide a "missing part of the puzzle".

The RE*Think* framework operationalises a dynamic approach to assessment, providing a guide for observation and collaborative conversation which co-constructs young people's understanding of themselves as they become capable learners, and based on the belief in change. Using the key competencies of the *New Zealand Curriculum*, this research does not aim to "assess" the key competencies but provide participants with an authentic curriculum-based starting point for assessment, structure for analysis, and for bridging outcomes into different areas and contexts.

This research challenges practitioners to consider an assessment process which is a flexible and theoretically-driven approach. It argues for a partnership approach between practitioners, young people, educators, family and whānau to the assessment of metacognition and learning potential. Such an approach is educationally useful and ethically sound: it does not intend to generate a score or result in the categorisation or ranking of a young person's learning. It is an assessment of and for change, challenging standardised testing that limits change by inaccurately considering a low functioning score as predictor of future capacity. The focus shifts to the observation of learning and teaching, a belief in the optimistic alternative and the potential of learners to learn and to change.

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Appendices

Appendix 1. Invitation to the Workshop

A Game Changer for Assessment:

Assessing Learning Potential using Games

You are invited to a 3-day professional learning workshop to examine the use of games as a tool to assess thinking, learning and teaching across different contexts. A 4-tiered framework will be presented to illustrate how games can be used to co-assess learning potential. Games will be used as way to 'think-about-thinking' and dynamically assess learning and teaching for change.

Come play games - and reflect on how they can be used for dynamic assessment

Alongside to the workshop you are invited to further participate in a research project investigating the value of using the 4-tier framework to dynamically assess thinking, learning and teaching in your contexts. (*Note*: *You can attend the workshop without committing to ongoing participation in the research.*)

Who is this for?
The workshop is for professionals working within Learning Support (e.g., Psychologists, SEAs, AODCs, SLTs and Kaitakawaenga) in the ▮▮▮▮▮ Region, who support learners attending school. A cohort of 25 interested participants will be selected to attend the workshop and alongside this, invited to participate in the research.

What will participation in the research involve?
The workshop participants who agree to be part of the research will complete pre- and post-workshop surveys at the start and end of the 3-day workshop and a follow-up survey after 6 months of trialling the approach. A further five practitioners interested in discussing their implementation of this assessment framework in more depth will be invited to a follow-up one hour interview.

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What are the benefits?

This approach has the potential to enhance assessment practices through:
- offering a co-assessment framework completed in partnership with the learner
- providing an analysis framework for learners, teachers, whānau and practitioners
- offering a different assessment lens to bring about changes in teaching and learning
- using games as a playful and intrinsically motivating assessment tool

When and Where?
- Massey University, Albany Campus, Auckland (room tbc)
- 16-18 January 2018, 9.30 am – 4.30 pm

The project team:
- Ann Terry: Educational Psychologist, Ministry of Education, PhD Candidate
- Dr Mandia Mentis: Associate Professor, Massey University, Educational Psychologist
- Dr Roseanna Bourke: Professor, Massey University, Educational Psychologist

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Appendix 2. Information Sheet Sent to Workshop Participants

MASSEY UNIVERSITY
INSTITUTE OF EDUCATION
TE KURA O TE MĀTAURANGA

A Game Changer for Assessment:
Assessing Learning Potential using Games

Dear …...

Thank you for registering for the *Game Changer for Assessment* workshop to be held:

16 to 18 January from **9.30 am – 4.30 pm**,
Massey University Auckland - Albany Library – Level 3 Seminar room
Enter Gate 1 – park in student parking and then Building 6 (Library) on map here
http://www.massey.ac.nz/massey/fms/About%20Massey/contact-us/maps/Auckland-Campus-maps.pdf?32DC3514131DF0707F153861EF3052E3

As a participant attending the workshop, you will be asked to complete a short survey about your assessment practice prior to and after the workshop, as well as 6 months post workshop. You can elect to join with others in an online community of practice to further discuss the implementation of the assessment framework.

As a follow up of this workshop, we would like to invite a smaller cohort (10 participants) to participate in the piloting and evaluation of this dynamic games-based framework of assessment in practice. The evaluation of this framework will contribute to my PhD study**,** *A Dynamic Approach to Metacognitive Assessment Using Games.* This study aims to analyse the potential of a collaborative approach to assessment focusing on the nexus of learning, teaching, activities and context, foregrounding metacognition. Your involvement in this follow-up evaluation will include two one-hour interviews on the effectiveness of the assessment framework held a couple of weeks after the workshop, and then again at the end of the first school term (during the holidays in April / May 2018). You are under no obligation to accept the invitation to participate in the ongoing implementation and evaluation (two 1-hour interviews). This will be further outlined and decided at the end of the workshop. Contribution to the evaluation will not impact in any way on your participation at the workshop.

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Please don't hesitate to contact us should you have any questions about the workshop, evaluation or any other aspect of this project.

So, come play games - and reflect on how they can be used for dynamic assessment.

Ann Terry - ann.butler.3@uni.massey.ac.nz;   Mandia Mentis - m.mentis@massey.ac.nz

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Appendix 3. Informed Consent Form

MASSEY UNIVERSITY
INSTITUTE OF EDUCATION
TE KURA O TE MATĀURANGA

A Dynamic Approach to Metacognitive Assessment Using Games

PRACTITIONER CONSENT FORM

I have read the Information Sheet and have had the details of the study explained to me. My questions have been answered to my satisfaction, and I understand that I may ask further questions at any time.

I understand that I have no obligation to accept this invitation and if I decide to participate, I have the right to:

- decline to answer any particular question;
- withdraw from the study up to the point of data analysis;
- ask any questions about the study at any time during participation;
- provide information on the understanding that my name will not be used;
- be given access to a summary of the project findings on request.

I agree to participate in this study under the conditions set out in the Information Sheet.

Signature:………………………………………………   **Date**:…………………………………………

Full name printed: ……………………………………

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Appendix 4. Workshop Resources

4.1 Set of cards. An example of the set of cards provided to participants, linking the key competencies of the New Zealand Curriculum to the RE*Think* framework.

Each coloured card details a cognitive and/or metacognitive skill and explains:
- What? (this skill involves)
- Why? (this skill is important)
- Where else? (prompts the user to bridge this skill into the home, school, community environments)

Each charcoal-coloured card details the elements of activity/task analysis.

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4.2 A Reference Sheet.

Contextualising: The RE*Think* Framework and the Key Competencies of the *New Zealand Curriculum*.

A reference sheet was given to participants at the workshop. However, since then and over the past three years, the RE*Think* framework has continued to develop. The information below provides tables linked to the key competencies, with a narrative how each key competency may be used with RE*Think* framework.

As the key competency of **Thinking** has been discussed within the main text of this dissertation, the other key competencies are discussed further.
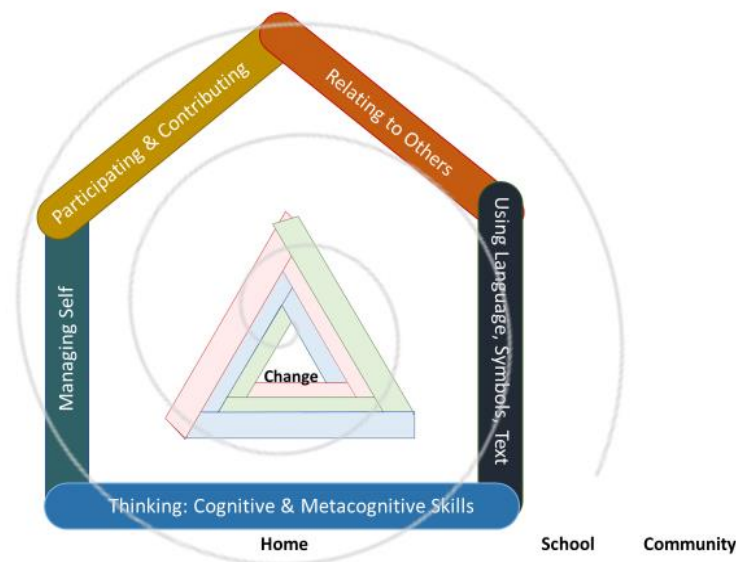
The RE*Think* Framework and the Key Competency of *Using Language, Symbols and Text*. Although clearly concerned with reading, writing and arithmetic, Hipkins (2006) describes the use of language as more than academic literacy and the knowledge of numeracy. It is "about understanding and knowing how our perceptions of the world are constructed through language, and how we use language in different ways to do different things" (p. 22). It is also how "we make meaning of Language, Symbols and Text" (KCP Curriculum Group, 2011, p. 9), which are culturally mediated.

The key competency of *using language, symbols and text* includes (a) *Language*: involving a learner's ability to communicate: to comprehend received information, articulate responses clearly, interpret and use non-verbal language correctly; (b) *Codes*: involving a learner's knowledge of the signs, symbols and mottos of their community, which influences how they relate to others and impacts on their sense of belonging; (c) *Literacies*: involving a learner's literacy in specialist domains, such as mathematics or

poetry, digital literacy and academic skills; and (d) *Concepts*: involving temporal concepts (of time), which involves a learner's ability to sequence events and understand causal relationships; and spatial concepts, which includes the ability to follow directions and locate oneself in space.

In a dynamic approach to assessment, the assessor uses flexibility to mediate concepts and language, and develop the cognitive and metacognitive skills required for tasks such as reading. Co-constructing a cognitive profile with the learner that identifies their capacity to change, a dynamic approach to assessment finds ways to bring about that change through mediation to develop a young person's knowledge and ability to use language, symbols and text, outlined in the table below.

*The RE*Think *Framework and the Key Competency of Using Language, Symbols and Text*

Using Language, Symbols and Text		
A working definition of the key competency, *Using language, symbols and text:* "Use words, symbols, numbers, images, sound and movement, and technologies as systems for representing and communicating information, experiences and ideas in a range of contexts." (*Key Competencies Pathway*, 2011, p. 9)		
Language To comprehend and articulate	Receptive language	Expressive language	Non-verbal language
Codes To express knowledge	Signs	Symbols	Mottos
Literacies To develop	Specialist languages	Digital literacy	Academic literacy
Concepts To understand	Temporal concepts	Spatial concepts	

An example follows how cognitive and metacognitive skills play a role in the developing competencies of reading, writing and arithmetic, which frequently are a focus for practitioners supporting young people with diverse learning needs. Kaufman (2010) explains that decoding a text requires skills such as sustaining attention (the ability to focus sufficiently on the letter-sound associations and hold them in working memory adequately for word reading), discriminating and paying attention to detail (where superficial attention to detail may obscure crucial visual features of letters and words, resulting in inconsistency of visual discrimination), impulse control (to prevent guessing what the word might be, prompted by the first letter, or structural similarity), and ordering (sequencing word sounds consistently from left to right).

The RE*Think* Framework and the Key Competency of *Managing Self*. As an intrapersonal competency, the ability of young people to manage their emotions and

behaviour is one of the challenges that teachers, family, whānau, and young people themselves experience at home, school and out in the community. Contributing factors may include how young people perceive themselves, how they feel and how they think about themselves, which potentially influences how they respond to others. With dysfunctional patterns of thought directed inwards, young people's quality of life (McCloskey & Perkins, 2013) is threatened, influencing their behaviour towards others and their ability to learn. The risk exists of creating a cycle of failure, impacting on a young person's confidence, sense of self-efficacy and, ultimately, leading to disengagement from education. Developing metacognition has been identified as one of the "protective, or resilience, factor[s] for children at risk" (Marulis, 2014, p. 213), and may contribute to increased learning and achievement academically.

The table below summarises the key competency of *managing self*, and includes (a) *Awareness of self*: relating to the learner's awareness of their own competence: their strengths and personal goals, ability to organise their learning and monitor their progress; (b) *Response to mediation*: determining whether young people are open to learning, how they engage in an interactive process, demonstrate perseverance, and show pleasure with success; (c) *Motivation*: relating to whether young people are intrinsically motivated or the degree to which they are extrinsically motivated; and (d) *Self-regulation*: determining whether young people are able to self-regulate or depend on others to support their regulation and manage their impulsivity, and whether they are able to express their emotions accurately and appropriately.

*The RE*Think *Framework and the Key Competency of* Managing Self

Managing Self				
A working definition of the key competency, *Managing self* (ARMS): "Have a 'can-do' attitude and be enterprising, resourceful, reliable and resilient" (*Key Competencies Pathway*, 2011, p. 9)				
Awareness of self Sense of competence	Develop personal goals	Organise learning	Self-monitor progress	Identify personal strengths
Response to mediation Reciprocity and resilience	Be open to learning	Engage in iterative processes	Demonstrate perseverance	Show pleasure in success
Motivation	Intrinsically motivated		Extrinsically motivated	
Self-regulation Self-control and self-management	Be self / mutually regulated	Manage impulsivity	Express emotions accurately and appropriately	

Working within the framework of *managing self*, assessors using a dynamic assessment process are able to develop an understanding of *how* to develop a young person's confidence and self-belief that they can succeed. Working with young people to co-

construct their profile of cognitive and metacognitive skills, the assessment-intervention process has the potential to identify ways to bring about change in motivation and affect, manage impulsivity and address fear of failure through mediation. For example, this could include mediation of behaviour and emotional regulation to widen the window of tolerance for frustration, which is essential for young people to be "self-motivated", "act independently" and able to "meet challenges" (KCP Curriculum Group, 2011, p. 9). However, for these changes in assessment to be sustained, bridging has to occur to various home, school and community environments that reinforce personal strengths, and develop self-management skills to increase engagement in education.

The RE*Think* Framework and the Key Competencies of Relating to Others *and* Participating and Contributing. The key competency of *managing self* is interrelated with the competencies of *relating to others* and *participating and contributing* (see tables below). Although separate, these competencies are discussed together as they are both social, interpersonal competencies. From a socio-constructivist perspective, learning is a social, authentic activity that occurs within a cultural context. This competency involves how young people relate to others, solve problems, resolve conflict, develop theory of mind and empathy. Theory of mind "enables a person to understand, infer and predict the motivations, needs and desires of others; and to find ways to balance the needs of the self with the needs of others" (McCloskey & Perkins, 2013, p. 21). These skills enable young people to participate successfully in activities with others, to work collaboratively and appreciate diversity (Hipkins, 2006; KCP Curriculum Group, 2011).

To be able to participate in society, work alongside others, collaboratively problem-solve, and be a contributing citizen are "future-building" goals (Keri Facer; cited in Hipkins et al., 2014, p. 118) of the key competencies of the *New Zealand Curriculum*. The competencies of *thinking*, *using language, symbol and text*, and *managing self* are critical skills to develop, but as Bereiter and Scardamalia (2012) warn, "adaptability at the individual level does not ensure adaptability at higher systemic levels" (p. 11). Therefore, the key competencies of *relating to others*, and *participating and contributing* are essential skills of development.

The table below summarises the key competency of *relating to others*, which involves a young person's ability to work with a diversity of people (Hipkins et al., 2014). Skills include (a) developing *cultural insight* - to show competency when relating to others and demonstrating respect for cultural difference; (b) Having an *awareness of self with others* - involving being aware of their response to others, their ability to express emotions appropriately and accurately, ask for help, take turns, and to take responsibility for actions directed towards others; (c) *Responsive relationships* - relating to a young person's skills in developing friendships, listening to others, showing respect by valuing others' contributions, initiating conversation and sustaining relationships;

_____

(d) Showing *empathy* - involving understanding others' feelings, giving them space when needed and the ability to resolve conflict successfully.

*The RE*Think *Framework and the Key Competency of* Relating to Others

Relating to Others					
A working definition of the key competency, *Relating to others* (CARE): "Interact effectively with a diverse range of people in a variety of contexts" (*Key Competencies Pathway*, 2011, p. 9)					
Cultural insight Cultural responsiveness, showing	Competency		Respect for difference		
Awareness of self with others Interpersonal skills	Be aware of own responses	Express emotions accurately	Ask for help	Take turns	Take responsibility
Responsive relationships Develop friendships	Listening to others	Valuing another's contributions	Initiating conversation	Sustaining relationships	
Empathy Recognise others' points of view	Understanding others' feelings		Giving others space	Being able to resolve conflict	

The table below offers a summary of the key competency of *participating and contributing*, the skills young people need to function in the wider world (Hipkins et al., 2014). These include (a) *Awareness of social habits* - relating to a young person's knowledge about their own culture, ability to pick up on the social cues of others, and follow their social customs respectfully; (b) *Reciprocity* - involving a young person's ability to participate in a team, share and take turns within a wider group and learn in authentic environments; (c) *Consequences* - involves young people understanding the consequences of their actions not only regarding others but also on the environment, and to take responsibility; and (d) *Collaboration* - relating to a young person's ability to negotiate and cooperate with others, and embrace inclusion.

*The RE*Think *Framework and the Key Competency of* Participating and Contributing

Participating and Contributing
A working definition of the key competency, *Participating and Contributing*: (ARCC) "Have a sense of belonging to communities drawn together for purposes such as learning, work, celebration or recreation. Contribute appropriately as a member of these diverse groups." (*Key Competencies Pathway*, 2011, p. 9

Awareness of Social Context Customs & practice	Know your own culture	Pick up on social cues	Follow social customs
Initiate and respond	Initiate and participate in a team	Share and take turns in a group	Learn in authentic environments
Cause and effect	Understand consequences of your actions on others and the environment		Take responsibility
To cooperate	Negotiate and collaborate	Cooperate in team activities	Embrace inclusion

Using the RE*Think* framework, a profile of cognitive and metacognitive skills can be co-constructed with young people regarding their knowledge of social skills, and *how* they are implemented. For example, by considering whether: their perceptions of others are accurate; they've gathered sufficient information about a conflictual situation and the details gathered are relevant to the situation; they are able to manage their impulsivity to inhibit an immediate reaction, and sufficiently flexible (both cognitively and emotionally) to change their response. Finally, are they able to define the problem causing distress, make sense of information gathered, solve the problem using appropriate strategies, and evaluate the outcome. A dynamic approach to assessment has the flexibility to develop the skills needed during the process of assessment.

A dynamic approach to assessment is inherently a process of assessment based on trust, developed from the reciprocity of *ako*. Mediation may involve the regulation of behaviour and emotion, while developing young people's metacognitive knowledge, the cognitive and metacognitive skills and strategies to adapt to all challenges individually, academically and socially.

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4.3 Template for recording observations.

META ASSESSMENT FRAMEWORK — ◯RETHINK

Activity analysis

ACTIVITY ANALYSIS		COMPETENCY	LEARNING	TEACHING	CONTEXT
Battleships					**Key Competencies and Bridging**
ACTIVITY					
To assess problemsolving strategies, cognitive flexibility, working memory, etc. Asking for help		THINKING	Sustain attention;Discriminate Working memory; Inhibit impulsivity Problem-solve; Plan & organise; cognitive flexibility; Communicate; Hypothesise; transport; selfregulate	Problem-solve; scaffold strategies Plan & organise: Where to start Self-regulate: prompt to check	Engage; Adjust; Solve; Evaluate: *Bridge*: Writing an essay, cooking a meal
CAUSE					
2 players; Board and pegs	Paper, reduce # of blocks	UNDERSTANDING	Lang: Coordinates; Lit: Grids Codes: Orange & white pegs Concepts: Spatial (grid; horizontal / vertical / diagonal) ; Temporal: sequencing	Lang: teach language needed Lit: how to use grids Codes: Red (hit) & white (miss) Concepts: Spatial (grid; horizontal / vertical) ; sequencing	Language: Literacy; Codes; Concepts *Bridge*: Maths; football; art
CONTEXT					
Symbol (ships); visual / motor Code: red / white	Change codes: x/√	PARTICIPATING			
COMPOSITION					
Abstract / complex	Simplify	RELATING	Turn-taking		Awareness of self with others; Responsive relationships; *Bridge*: playground games
COMPLEXITY					
Game of strategy; Random; Hunt / Target; Probability density function	Peers	MANAGING	Perseverance; Inhibit impulsivity	Prompt: stop and think!, etc. Find evidence of previous success / use	Awareness of self; Response to mediation; Motivation; Selfregulation (emotions)
CONTENT					

Bridge: Ask for help in the classroom

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Appendix 5. Questionnaires

Pre-Workshop Questionnaire

Q1 Please indicate whether you are willing for the information shared in this survey to be used for the research project.

Yes

No. (Although you have indicated that you would not like information in this survey to be used for the research project, please complete the questionnaire as we hope it will contribute to your own professional development and give you an opportunity for reflection)

Q2 Name.

(You may choose to write a pseudonym instead of your real name. However, please remember to use the same pseudonym for the post-workshop survey, which will allow for comparison between the two surveys.)

Q3 What is your highest qualification?

Diploma
Bachelor's Degree
Postgraduate Diploma
Master's Degree
PhD
Other (please specify)

Q4 From which country did you gain your professional qualification?

Q5 What is your field of practice?

Psychologist
Speech-language therapist (SLT)
Special education advisor (SEA)
Resource teacher: learning and behaviour (RTLB)
Teacher

Q6 How long have you been practicing?

0 – 3 years
3 – 10 years
Over 10 years

Q7 Please list both formal and informal Professional Development opportunities that have informed your assessment practice.

Q8 With which ethnic group/s do you identify? Please tick all that apply.

New Zealand Māori
European New Zealanders (Pākehā)
Pacific peoples
Asian New Zealanders
Middle Eastern, Latin American and African (MELAA) ethnicities
Other (please specify)

Q9 In which geographical area do you currently work?

Auckland area
Tai Tokerau area
Waikato area
Bay of Plenty - Waiariki area
Hawke's Bay/Tairāwhiti area
Taranaki, Whanganui, Manawatu area
Wellington area
Nelson, Marlborough, West Coast area
Canterbury area
Otago, Southland
Other (please specify)

Q10 With which cultural group/s do you mostly work? Please tick all that apply.

New Zealand Māori
European New Zealanders (Pākehā)
Pacific peoples (Pasifika)
Asian New Zealanders
Middle Eastern, Latin American and African (MELAA) ethnicities
Other (please specify)

Q11 With which age-group/s do you mostly work? Please tick all that apply.

Early Childhood
Primary School
Intermediate School
Secondary School

Q12 What are the most predominant reasons for you to use assessment in your casework?

Q13 Thinking about your assessment practice, what role does cultural relevance play?

Q14 What assessment tools or processes do you currently use? Please list your top 5 most used assessments.

_____

Q15 What determines your choice of assessment?

Q16 What theoretical frameworks, philosophical approaches or lens do you use to inform your assessment practice? (e.g., ecological, behaviourism)

Q17 When doing observations of a young person in class at work or at play, what framework, approach or questions do you use to guide your observations, if any?

Q18 On a rating scale of 1 to 5, how satisfied are you with your current assessment practices?

	1	2	3	4	5
Not at all satisfied					
Slightly satisfied					
Satisfied					
More than satisfied					
Very satisfied					
Please explain your response.					

Q19 What areas or types of assessment do you feel confident /competent undertaking?

Q20 In what areas or types of assessment do you feel you'd like further knowledge, skills, experience?

Q21 What do you consider to be your top two most critical questions, wonderings, concerns or issues relating to assessment in general?

Q22 How do you think the young people you support generally feel about doing assessments with you?

Q23 How often do you use the following assessments:

	Unfamiliar	Seldom	Sometimes	Often	Mostly	N/A
Norm-based assessment						
Criterion-based assessment						
Ipsative assessment						
Formative assessment						
Summative assessment						
Psychometric / standardised						
Dynamic assessment						

_____

Q24 For the assessments you "Mostly" use, please explain why.
Q25 For the assessments you use less often, please explain why.

Q26 How often do you use the following methods of gathering information to inform decisions?

	Unfamiliar	Seldom	Sometimes	Often	Mostly	N/A
Observation						
Functional behaviour assessment						
Interviews / discussions						
Rating scales						
Narrative assessment						
Portfolios						
Authentic classwork						
Reviewing previous documents / records						
Other (Please specify)						
Q27 For the methods you "Mostly" use, please explain why.						
Q28 For the methods you use less often, please explain why.						

Q29 In your assessment practice, are the concepts of cognition' and 'metacognition' important, and if so, how do you assess these and give feedback?

Q30 In your assessment practice, is it important to assess teacher interactions with learners, and if so, how do you assess and give feedback on this?

Q31 In your assessment practice, is it important to analyse learner tasks or activities, and if so, how do you assess and give feedback on this?

Q32 In your assessment practice, are the NZ curriculum Key Competencies, important, and if so, how do you include these and provide feedback on them?

Q33 Do you think games are a relevant tool for assessment, learning and teaching? Have you ever used games, and if so, please explain which games and how you have used them.

Q34 What are/ could be the tensions and opportunities in using games for assessment, teaching and learning?

Q35 How do you share information from assessments with learners, family/whānau and teachers?

_____

Q36 What, for you, are the challenges in reporting on assessment, learning and teaching?

Q37 Do you have any further thoughts, comments or questions you would like answered over the next few days?

Post-Workshop Questionnaire

Q1 Name (please use the same name as you used for the pre-workshop self-assessment)

Q2 Reflecting on the 3-day RE*Think* Workshop, please rate the following in terms of potential usefulness for your ongoing practice:

	Not sure	Not useful	Useful	Very useful
Assessing the ACTIVITY/ TEST / GAME as part of the RE*Think* framework				
Assessing TEACHING and LEARNING via METACOGNITION				
4. BRIDGING the principles to home, school, community as part of the RE*Think* framework				
5. Using GAMES as an assessment tool				
6. Having a framework and language to talk about metacognition				
7. Using Key Competencies as structure for analysing metacognition				
8. Using Dynamic Assessment approaches to RE*Think* assessment				
RETHINKING report writing and feedback				

Q3 Do you think you will use a DYNAMIC ASSESSMENT process in your ongoing practice?

> Yes
> No
> Maybe
> Please elaborate on your answer

Q4 Do you think you will focus on METACOGNITVE analysis in your ongoing practice?

> Yes
> No
> Maybe
> Please elaborate on your answer

_____

Q5 Do you think you will use GAMES in your ongoing practice?

    Yes
    No
    Maybe
    Please elaborate on your answer

Q6 What are your top three "take-aways" from the workshop?

Q7 Have you changed your thinking about assessment as a result of the workshop, and might you assess differently in the future? Please elaborate.

Q8 Any further comments about the workshop?

Q9 If you are joining us for the research journey - please leave your preferred email/ phone details below