Dynamic Assessment in New Zealand: Knowledge, Application and Utility Amongst Resource Teachers of Learning and Behaviour

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Abstract

Many types of educational assessment have relied upon summative assessment that focus on the products of learning. In contrast, Dynamic assessment (DA) is a type of assessment that links assessment and intervention. The key features of DA are interaction and embedded intervention. The outcome of DA is information pertaining to the processes of learning and the generation of information for intervention. There exist a wide variety of uses for DA, however, DA is not applied with as much frequency as other types of assessment. Among the suggested reasons for the lack of application of DA is a low level of knowledge of DA.   A survey was developed to gather information on the   level of knowledge, application and utility of DA amongst Resource Teachers of Learning and Behaviour in New Zealand. The results indicated that most participants were not at all (43.5%) or barely (33.9%) familiar with DA. Articulated understanding of DA was found to be lower than the reported level of familiarity. Application was also limited with 15.1% of all participants and 32.9% of participants familiar with DA indicating that they apply DA. It was also found that actual rates of application of DA are likely to be lower than reported rates of application of DA. Most RTLB (92.5%), indicated that DA was, or would be useful to their practice suggesting that DA is seen to have utility amongst this group. These results, combined with levels of contentment with current knowledge and application of DA suggest that there is a need for training on DA in New Zealand. The results of the current research were congruent with prior research finding limited levels of knowledge and application of DA. Further, the suggestion of limited DA application being partially due to limited knowledge on DA was supported. It is hoped that training in DA would see the application of DA become more frequent in New Zealand in the future.

Declaration

I certify that this thesis entitled "Dynamic assessment in New Zealand: Knowledge, application and utility amongst Resource Teachers of Learning and Behaviour" and submitted as part of the degree of Master of Educational Psychology is a result of my own work, except where otherwise acknowledged, and has not been submitted, in part or in full, for any other papers or degrees or to any other university or institution.

Signed _____

Date ____1/1/2014_____

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Chapter One: Introduction

Participation in assessment occurs throughout one's lifetime, with assessment forming a large and central part of many education systems. Assessment practices in the field of education have traditionally consisted of summative, or endpoint assessments (Atkins, 2010). In summative assessment the amount of knowledge a person already has is measured. This results in a focus on the products of learning.   The outcome of the reliance on summative assessment is a disconnection between instruction and assessment (Atkins, 2010) which has been described as an instruction assessment dichotomy (Poehner & Lantolf, 2010). Tests of intelligence are one group of assessments that are summative and focus on the products of learning (Lidz, 1991). In some countries intelligence tests have been used to inform educational placement or to categorise and define learning difficulties (Elliott, 2000; Merrell, Ervin, & Gimpel Peacock, 2012). For example, in the USA performance on a standardised test determines which College or University students can attend. Further, intelligence tests have historically been used as the basis for decisions on whether to place students in special education environments (Merrell et al., 2012). It should be noted that this is less common in the United Kingdom education system (Elliott, 2000) and by association the New Zealand education system. These examples do, however, show that standardised summative assessments, that focus on the products of learning, have been widely applied in an education context.

Throughout the current research, standardised assessment that focuses on the products of learning is referred to as traditional static assessment. The terminology 'static' may come from the procedure of the assessment in which the person being assessed receives little or no feedback on their performance (Sternberg & Grigorenko, 2002). Equally the terminology may derive from the assumption of intelligence tests, that cognitive abilities are stable or static in nature (Gould, 1996). This terminology is used to provide a contrast with the process orientated form of assessment that is the focus of this research.

Although assessment has traditionally focused on the products of learning, the idea of measuring the processes of learning has been contemplated for a considerable length of time. For example, Binet (1911, as cited in Haywood & Tzuriel, 2002) suggested, and Rey (1934, as cited in Haywood & Tzuriel, 2002) wrote about assessment of learning processes (Haywood & Tzuriel, 2002). Although summative assessment has been, and remains popular (Merrell et al., 2012), the emphasis of assessment has been shifting to a stronger focus on learning needs, with assessment used to inform teaching and learning (Ministry of Education, 2011). In a position paper on assessment, the Ministry of Education (2011) outlined key qualities of effective assessment. These qualities include responsiveness to the learner as an individual as well as the learners context, collaboration, and exchange of information between the participants.

One form of assessment that encompasses these qualities is Dynamic Assessment (DA). DA approaches the assessment situation differently to summative type assessments. In the DA approach interaction and intervention are embedded into the assessment (Lidz & Elliott, 2000; Lidz, 1991). Through this, assessment is linked to instruction and intervention (Lidz, 2002; Poehner, 2008). The focus of this type of assessment is on the processes of learning (Elliott, Lauchlan, & Stringer, 1996; Elliott, 2000). The resulting information can help to inform, and is closely linked to intervention information (Elliott et al., 1996; Elliott, 2003; Lebeer et al., 2012; Lidz, 1991, 2009; Murphy & Maree, 2006; Yeomans, 2008).

DA has been implemented in a number of different areas, both within education and in other fields (Haywood & Tzuriel, 2002). Possibly due to its close links with intervention, DA is most well known in the field of education for its application with, and relevance to students with various difficulties in learning (Poehner & Lantolf, 2010). The links between assessment and intervention make DA a very relevant tool for educational professionals who regularly assess and provide intervention for students who are experiencing difficulties. Commonly, these professional's are Educational Psychologists. The term Educational Psychologist, used in New Zealand and the United Kingdom, is synonymous with the

term School Psychologist, used in the USA. Both terms are used throughout the current research, dependent upon the origin of the research that is being discussed.

In the New Zealand context, Educational Psychologists who engage in casework work with the 3% of school aged children who present with the highest needs (Smart, 2013). In addition to Educational Psychologists, the New Zealand education system also has a group of specially trained teachers, Resource Teachers of Learning and Behaviour (RTLB). The role of an RTLB is to work with schools, teachers and students to provide support for students with learning and or behaviour difficulties ("What RTLB do," n.d.). RTLB typically engage in work with the 4% - 6% of school aged children with moderate to high needs (Smart, 2013). In the New Zealand context, therefore, both Educational Psychologists and RTLB regularly engage in casework which involves the assessment of, and providing intervention for, students who experience difficulties with learning. Thus, due to the nature of RTLB work DA is likely to be of use to RTLB.

In spite of the apparent congruence between the information desired for students with learning difficulties and the information that DA is able to provide, DA is applied with less frequency than other forms of assessment (Lebeer et al., 2012; Mccloskey & Athanasiou, 2000; Woods & Farrell, 2006). A number of reasons for the low levels of application of DA have been suggested (Elliott et al., 1996; Lidz, 2009; Murphy & Maree, 2006). These reasons include variability within DA, a lack of evidence regarding the psychometric properties of DA, the time it takes to apply DA as well as other pressures on those who conduct assessments, and the level of knowledge and training available (Elliott et al., 1996; Lidz, 2009; Murphy & Maree, 2006).

Any and all of these reasons are likely to affect the level of application of DA. Of these reasons, however, lack of knowledge of DA and lack of training in how to implement DA represent fundamental issues. Without knowledge or training one is not able to apply DA. If one is to use a concept or procedure, one must first have knowledge of the said concept or procedure. This suggests that knowledge of DA is fundamental to its use. Several studies have investigated the knowledge of DA amongst Psychologists in the USA (Haney & Evans, 1999; Lidz, 1992; Molano, 2007). The results of these studies show that the knowledge and application of DA is low.

The current research is descriptive in nature as it was designed to gather information on the current status of DA in New Zealand. It drew on the methodology of Lidz (1992), Haney and Evans (1999), and Molano (2007) in that a survey was developed and utilised to gather information. Two areas of focus for the current research were knowledge and application of DA. In the current research knowledge refers to the extent of familiarity and understanding of DA whilst application refers to the act of using DA. The utility of DA was another area of focus. Utility refers to the extent that DA was considered useful. It was included as an area of focus due to the relationship that is often found between utility and application (Wolf, 1978). That is, if DA was not considered to have utility it is unlikely that it would be applied. By including knowledge, application, and utility in the current research it was thought that an understanding of the status of DA could be determined.

In addition to information on the knowledge, application, and utility of DA in New Zealand, differences in the levels of knowledge and application based on demographic variables were also investigated. It was thought that investigation of differences in knowledge or application on the basis of demographic variables would enable a deeper understanding of the status of DA in New Zealand. Finally, from investigation into the knowledge, application, and understanding of DA the current research aimed to extrapolate if there exists a need for training in DA in New Zealand.

RTLB were chosen as the participants of this study as they regularly engage in case work that includes the assessment of and intervention planning for students with learning and or behavioural difficulties. Initially it was also intended to include Educational Psychologists as participants, however, Educational Psychologists were not available to act as participants for this research. With the concepts of knowledge, application, and utility being central to understanding the status of DA in New Zealand the research questions were based around these concepts.

It is thought that this is the first research to investigate the status of DA amongst RTLB in New Zealand. The information provided will inform interested parties if DA is known about and applied by RTLB. It also aims to indicate the level

of training that may be required on DA. It is hoped that this may serve as the impetus for a higher level of application of DA in the future.

 This chapter has presented an overview of the current research. The topic of this research was described as was the basis for the interest in this topic. The areas of focus were defined and the importance of the research was outlined. The remainder of this research is structured into four further chapters. Chapter Two will present a review of the literature of DA, with the focus on understanding DA. A description of DA is outlined, as are the theoretical bases of DA. A comparison between DA and traditional static assessments is presented alongside common criticisms of DA. The literature review will then turn to a outline of different areas in which DA has been applied and reasons for the lack of DA application are presented. Chapter Three presents the methodology of the current research, outlining survey methodology, the development of the survey and other key methodological aspects, including the participants, procedures and ethical considerations. Chapter Four presents the results of the responses to the survey. Concluding the thesis, Chapter Five will present a discussion of the results. This will focus on the meaning of the results and how the results relate to prior research. The implications of the results, for both the New Zealand context and the context of research into DA are discussed. In addition, limitations and areas for future research are suggested. Chapter Five closes with a final summary of the current research.

Chapter Two: Literature Review

Dynamic assessment (DA) is a form of assessment that focuses on the processes of learning and has strong links to intervention strategies (Lidz, 2002; Poehner, 2008). It appears that this form of assessment is relevant to educational settings and in particular students with learning and or behaviour difficulties. In spite of the apparent relevance of this type of assessment little is known as to the extent of knowledge, application and utility of DA amongst professionals who regularly engage in the assessment of students in New Zealand. Thus, the focus of this research was to ascertain the status of DA amongst Resource Teachers of Learning and Behaviour, in New Zealand.

The intent of this literature review is to provide a basis for understanding DA. The initial focus is on the key characteristics of DA. As DA is a theory driven form of assessment (Elliott, 2003; Lidz & Gindis, 2003) the discussion then turns to the theoretical bases of DA. A comparison with traditional static assessment is included as are some of the commonly cited criticisms of DA. The applications of DA are discussed including the areas in which DA has been applied as well as the frequency of application. As DA is implemented with less frequency than other forms of assessment, the suggested reasons for the lack of DA usage are explored. This leads to the presentation of the research questions that formed the basis of the current research.

Definition and Characteristics of Dynamic Assessment

There is no single, definition or description of DA (Caffrey, Fuchs, & Fuchs, 2008). Most proponents of DA agree upon the basic concepts and characteristics of DA (Lidz, 2009) however models, theoretical bases, procedures, formats, contents, and information derived from DA vary (Elliott, 2000; Grigorenko & Sternberg, 1998; Grigorenko, 2008; Lidz, 1992, 2002; Robinson-Zanartu & Aganza, 2000). This has led DA to be described as a general concept (Elliott et al., 1996), an approach (Lidz, 1991), or range of approaches (Poehner, 2008), and a type (Haywood & Lidz, 2007) of assessment. DA has also been labelled an umbrella term (Lidz & Elliott, 2000), a generic term (Lidz, 2009), and as well as a collection (Snow, 1990), group (Lidz,

2002), and family (Lidz & Gindis, 2003) of assessment procedures. These descriptions of DA suggest that proponents of DA vary in how they interpret DA, from a defined set of tools and outcomes to a generalised approach or philosophy of assessment. DA is not specific to, or limited by a domain, content, activity, or age (Lidz & Gindis, 2003) thus, DA has the flexibility to be utilised in a variety of areas and situations.

Although there is not a single unitary definition of DA, there are several key characteristics that help to set DA apart from other forms of assessment. These characteristics, as outlined by Lidz, (1991), Lidz and Elliott (2000) and Lidz and Gindis (2003) include, that interaction between the assessor and the person being assessed occurs, that feedback or intervention is imbedded within the assessment, and that the resultant information is focused on the processes of the individuals learning and provides information on intervention and possible responsiveness to intervention.

The key characteristic of interaction occurring between the assessor and the person being assessed has been described as the most defining feature of DA (Lidz, 2002). This interaction places the assessor as an active participant in the assessment process (Lidz, 1991). The assessor works with the person being assessed offering support and guidance on the assessment tasks (Elliott et al., 1996). Learning takes place through this interaction (R. Feuerstein, R.S. Feuerstein, & Falik, 2010; Lidz, 1991).

There are differing views on the type of interaction that should occur within DA (Haywood & Lidz, 2007). The types of interaction can be conceptualised on a continuum with highly standarised interactions representing one end of the continuum and non-standarised interactions representing the other end of the continuum. Poehner (2008) suggested that standarised forms of interaction should be termed interventionist DA, where the outcome is quantification of the amount of help the person being assessed requires. Conversely, at the other end of the continium sits interactionist DA, where a wide array of interactions are used to maximise the development of the person being assessed, without regard to the amount of effort of the interaction (Poehner, 2008). This type of interaction is more closely associated with the terms mediation or a mediated learning

experiences developed by Feuerstein (R. Feuerstein, 1979; Lidz, 2002). This continuum of interaction, with interactionist DA at one end and interventionist DA at the other end, shows that the type of interaction that occurs can differ significantly within the parameters of DA.

Another key feature of DA is the embedding of intervention into the assessment process (Lidz & Elliott, 2000; Lidz, 2002). This is closely related to the key characteristic of interaction as for intervention to occur there must necessarily be interaction between the assessor and the person being assessed. The embedding of intervention results in the person being assessed receiving active teaching that results in change (Haywood & Tzuriel, 2002). A common way intervention is incorporated into assessment is through a test-intervention-retest format (Elliott, 2003; Lidz, 1991, 2009). This was described by Sternberg and Grigorenko (2002) as a sandwich format. In this format the intervention is placed or 'sandwiched' between two administrations of a test (Sternberg & Grigorenko, 2002). Another format of DA described by Sternberg and Grigorenko (2002) was termed cake format. In this format interaction occurs as needed during the assessment (Poehner, 2008). The successive levels of intervention were likened to layers of icing on a cake, thus the term 'cake' format (Sternberg & Grigorenko, 2002). These formats are not representative of all formats of DA (Sternberg & Grigorenko, 2002). Rather they illustrate the variation in the formats of intervention that can be applied within DA.

The result of the characteristics of interaction and intervention being amalgamated into DA is that the focus of the assessment is on the processes of learning rather than the products of learning (Elliott et al., 1996; Elliott, 2000). The outcome of this is information on the amount of learning and change the person being assessed is capable of (Lidz, 1991) as well as information on what barriers there are to learning (Haywood & Lidz, 2007; Murphy & Maree, 2006). Thus, information regarding the responsiveness of the person being assessed to intervention, is provided (Lidz & Elliott, 2000; Lidz, 2002, 2009). In addition the type of support and the amount of support that is needed so that learning and performance are maximised is able to be ascertained (Elliott et al., 1996; Murphy & Maree, 2006). This means that the information that is produced by DA is of a

prescriptive nature (Haywood & Wingenfeld, 1992). It is therefore, highly useful in generating ideas and evidence for planning and implementing learning and intervention programmes (Elliott et al., 1996; Elliott, 2003; Lebeer et al., 2012; Lidz, 1991, 2009; Murphy & Maree, 2006; Yeomans, 2008). These outcomes and the embedding of intervention into the assessment also results in the assessment and intervention being inextricably linked (Lidz, 2002; Poehner, 2008).

The incorporation of interaction and intervention within the assessment and the resulting link between assessment and intervention are key characteristics of DA. Within the boundaries of these key characteristics there exist a wide array models, methods, procedures, and instruments that can and have been classified as DA (Elliott, 2000; Lidz, 1991, 2002, 2009; Poehner, 2008; Robinson-Zanartu & Aganza, 2000). These differences can be large (Elliott, 2000). Procedures vary in the age ranges they target, content domains, formats, and countries in which they were developed and implemented (Lidz & Elliott, 2000).

One way to illustrate the large variation is to compare two types of DA that are on opposite ends of the interaction continuum, described above. At the end of the continuum representing non-standardised interaction lies the Learning Propensity Assessment Device, developed by R. Feuerstein (1979). In this form of DA, interactions, in the form of mediated learning experiences, are individualised for each person who is assessed (Lidz, 1991). It is based on R. Feuerstein's (1979, 1980) theory of structural cognitive modifiability (discussed below). It is a clinical procedure that allows for analysis of adequacies and deficiencies in cognitive functioning, modifiability and effective interventions (Lidz, 1991).

In contrast, Budoff and colleagues (1987a, 1987b, as cited in Lidz, 1991) have developed DA measures that contain standardised interactions (Lidz, 1991). The motivation for Budoff's form of DA was to provide an alternative to IQ testing (Lidz, 1991). The information produced by Budoff's measures is quantification of the gains made during assessment, which can provide an estimate of potential (Lidz, 1991).

This comparison illustrates that there are large differences in the measures developed by R. Feuerstein and Budoff in terms of interaction, theoretical basis and resultant information. If these measures are conceptualised as sitting at the ends of

the continuum of non-standardised to standardised interactions, there exist a myriad of approaches between these measures (Murphy and Maree, 2009).

The interpretation of DA can be so broad that any assessment can potentially be conducted in a dynamic way (Poehner, 2008). As there is wide variation within DA and no singular definition, at times researchers have relied on self evaluation that procedures are actually DA (e.g. Lidz & Elliott, 2000). The variations in DA exist both to meet the needs of the various stakeholders developing and implementing DA and as a result of the differing interpretations of the theories upon which DA is based (Poehner, 2008). It is the theoretical bases of DA to which the discussion now turns.

Theoretical Bases of Dynamic Assessment

DA is a theory driven form of assessment (Elliott, 2003; Lidz & Gindis, 2003). The researchers most often credited with being the fathers of DA are R. Feuerstein and Vygotsky (Lidz & Elliott, 2000) as their work has provided the foundations for DA (Sternberg & Grigorenko, 2002). Vygotsky provided a theory of learning which highlights the importance of social interactions in learning. Additionally he advocated for assessment to focus on potential as well as current level of functioning, through his concept of the Zone of Proximal Development (ZPD) (Lidz & Elliott, 2000). R. Feuerstein (1979, 1980) described his theory of Structural Cognitive Modifiability and also highlighted the importance of interactions in learning and development which resulted in a method for assessing potential, known as the Learning Propensity Assessment Device.

The work of Vygotsky.

When the Russian psychologist, Vygotsky, died in 1934 much of his work was unpublished (Gindis, 1995a). Translations of Vygotsky's work into English in 1962 and 1978 sparked interest in his work in English speaking countries (Chaiklin, 2003; Cole, 2004). In considering Vygotsky's work it should be noted that English translations produce, at best an interpretation of his ideas (Rieber & Robinson, 2004). This can be seen in the differences between the different English translations of Vygotsky's work (Glick, 2004). For example, the amount of text on the ZPD differs between the 1962 and the 1978 translations (Glick, 2004). Glick (2004) suggests that the differences in the translations of Vygotsky's work may be

accounted for by the context for which the translations were made. Thus, some concepts may have been interpreted in different ways due to societal differences between the times of translation (Glick, 2004).

Vygotsky's work occurred at a time of social upheaval in Russia (Kozulin, 2003). This resulted in diverse groups, both socially and ethnically, being placed into the same educational institutes (Kozulin, 2003).   Further, traditional approaches to learning had been found 'wanting' (Kozulin, 2003). That is, the idea of passive learning was becoming less accepted and thus, another model for learning was required (Kozulin, 2003). These circumstances led Vygotsky to his conceptualisation of the sociocultural theory of learning (Kozulin, 2003) which became the basis of his work (Kozulin, Gindis, Ageyev, & Miller, 2003).

The sociocultural theory of learning suggests that learning occurs as a product of social processes (Glick, 2004; Kozulin et al., 2003). Social activities or interactions with others results in development. This development occurs because what is learnt via social processes is then internalised (Gindis, 1995b). Thus, sociocultural forces shape a child's learning and development (Kozulin et al., 2003). Peers, teachers, parents, and others play an important role in providing the types of interaction or social activities that occur (Kozulin et al., 2003). Interactions between the learner and others occur in different forms (Das, 1995). These forms of interaction include; immative learning, where the learner imitates another; instructive learning, where the learner complies with given instructions; collaborative learning, where learning occurs in the absence of a hierarchical relationship; and direct teaching/structured learning experiences (Das, 1995).

Vygotsky also suggested that psychological functions occur twice during in the process of development (Gindis, 1995b; Glick, 2004; Kozulin & Presseisen, 1995). In the first instance the function appears as an inter-personal process (Glick, 2004). This means that children first learn socially, from other individuals, models and objects (Gindis, 1995b). It is only after learning has occurred in this social way that concepts are internalised and become intra-personal or within person (Glick, 2004). Once internalised the psychological function becomes a part of the learners repertoire of functions (Gindis, 1995b).

The sociocultural theory, developed by Vygotsky, represents the theoretical basis of DA (Lidz & Gindis, 2003). It does this by the implication that, because development is dependent on social interactions (Lidz & Gindis, 2003; Poehner, 2008) cognitive functioning is therefore not representative of innate abilities, rather cognitive functioning is representative of sociocultural input (Lidz & Gindis, 2003). This suggests that changing sociocultural input could potentially change cognitive functioning. Given this, DA aims to assess the change that is possible (Lidz, 1991) or the ability to master new learning (Lidz & Gindis, 2003). By making change occur the features of interaction and intervention that created the change are able to be discovered and used to inform future intervention (Lidz, 1991).

Within the sociocultural theory of learning, sits the concept of the ZPD. This is one of Vygotsky's most well known concepts (Lidz & Gindis, 2003). The ZPD arose from the observation that children are able to achieve more with assistance than alone (Lidz & Gindis, 2003). It has been characterised as the difference between a child's performance unaided and what they can achieve with the help of a more experienced other (Chaiklin, 2003; Glick, 2004). Thus the ZPD describes the difference between the present level of development and future development (Poehner, 2008). It is the measurement of both the size of the ZPD and the processes that lead to development that are the focus of DA (Poehner, 2008).

Although the ZPD is possibly the most well know concept of Vygotsky's work (Lidz & Gindis, 2003), it is also a concept that is not clear (Lidz & Gindis, 2003) or well understood (Kozulin et al., 2003). There have been disagreements over the precise definition and elements of the ZPD (Chaiklin, 2003; Poehner, 2008). For example, Chaiklin (2003) argues that many definitions of the ZPD indicate that the assistance provided must be competent assistance. Chaiklin (2003) believes that Vygotsky's focus was on the outcome of assistance rather than the content of the assistance. Changes in the text relating to the ZPD between different translations of Vygotsky's work (Glick, 2004) may be the cause of some of the disagreement. In addition to the changes in text, Vygotsky described and used the concept of the ZPD in three different contexts (Kozulin et al., 2003; Kozulin, 2011; Lidz & Gindis, 2003). The ZPD appears in discussion of the developmental context to explain how psychological functions emerge (Kozulin et al., 2003; Kozulin, 2011; Lidz & Gindis,

2003). It was also used in the context of applied psychology and education to explain the differences between aided and unaided performance in assessment and classroom learning (Kozulin, 2011; Lidz & Gindis, 2003). Finally, Vygotsky applied the ZPD to the interaction between academic and spontaneous concepts (Kozulin, 2011). Thus, differences in context and interpretation have contributed to disagreement and confusion over the definition and elements of the ZPD.

In spite of this confusion, the ZPD helps to conceptualise the differences in performance that occur in aided and unaided performance (Kozulin, 2003). This conceptualisation is important for dynamic assessment as it suggests that performance is not stable. The ability to benefit from assistance determines the size of the ZPD and it is the size of the ZPD that some forms of DA measure (Lidz & Gindis, 2003). In addition, the concept of the Zone of Proximal Development also suggests that the assisted performance is a legitimate focus of assessment (Kozulin, 2003; Lidz & Gindis, 2003). It links assessment, instruction and intervention (Lidz & Gindis, 2003). Interactive procedures that provide indicators for estimating the extent of what can be achieved with assistance should be the basis of assessment (Chaiklin, 2003), as it is thought that collaborative activities are a better predictor of ability to learn, cognitive functioning, and future performance than independent performance (Lidz & Gindis, 2003).

The sociocultural theory of learning and the ZPD are two concepts from the work of Vygotsky which are closely linked with DA. The sociocultural theory highlights the importance of social interaction in learning as learning occurs as a social process before it is internalised. It suggests that social and cultural input are the determinates of cognitive functioning thus suggesting cognitive functioning can be altered if the social and cultural input is altered. DA is related to the sociocultural theory of learning as it incorporates social interaction into the assessment process and is based on the premise that cognitive functioning is able to be changed. The concept of the ZPD differentiated between the ability learners show in aided versus unaided assessment. Thus the ZPD legitimised the inclusion of intervention within assessment. As a result of intervention being included in assessment; assessment, instruction and intervention become interlinked as they

are based on the same conceptualisation and explanation of development (Lidz & Gindis, 2003).

The work of Feuerstein.

R. Feuerstein is credited with being the most experienced proponent of DA (Cronbach, 1990). Although the theories developed by R. Feuerstein share some similarities to the work of Vygotsky, R. Feuerstein initially developed his theories independently from knowledge of Vygotsky's work (Burgess, 2000; R. S. Feuerstein, 2000). It is thought that Vygotsky sent correspondence to Piaget, under whom R. Feuerstein studied, and thus although Piaget was aware of Vygotsky's work, he did not share it with R. Feuerstein and his other students (Burgess, 2000). R. Feuerstein's (1979) work was the first to use the terminology Dynamic Assessment and discuss a DA procedure (Lidz, 2009). Many other forms of DA that have since been developed are based on the work of R. Feuerstein (Lidz & Elliott, 2000).

R. Feuerstein (1979, 1980) developed the theory of structural cognitive modifiability and the concept of mediated learning experiences, upon which his form of DA is based. He has also developed a DA measure, the Learning Propensity Assessment Device (LPAD) and the subsequent intervention programme, Instrumental Enrichment (R. Feuerstein, 1979, 1980). The focus of the following section is on R. Feuerstein's theories of learning and cognition that underpin many approaches to DA. Namely the theories of structural cognitive modifiability and mediated learning experiences.

The concept of structural cognitive modifiability suggests that an individual's level of cognitive functioning is able to be changed (R. Feuerstein, 1979, 1980). It is termed 'structural' as the course of cognitive development is altered by the changes made in cognitive functioning (R. Feuerstein, 1980). In other words substantive changes in the structures of thinking allow new learning and effect future cognitive development (R. Feuerstein et al., 2010). R. Feuerstein (1979) referred to an individual as "an open system that may undergo important modifications through exposure to external and/or internal stimuli," (p. 94). Thus the theory of structural cognitive modifiability suggests that cognitive functioning is modifiable (R. Feuerstein, 1979, 1980; Yeomans, 2008).

This concept, when first introduced, was in contrast to the prevailing approaches of psychoanalysis, behaviourism, and psychometrics prevalent in psychology and education at the time (R. Feuerstein, 1980). R. Feuerstein (1980) criticised these psychological and educational approaches for their relegation of cognitive processes to a secondary role, and for their focus on the end products of maladaptive behaviours or manifest level of performance. He argued that by sidelining the role of cognitive processes, the product of cognitive processes, intelligence, became a construct that was believed to be stable and was not able to be modified (R. Feuerstein, 1979, 1980). Thus, R. Feuerstein's theory was in opposition to the widely held belief that intelligence was genetically determined and a result of heredity (R. S. Feuerstein, 2000; Robinson-Zanartu & Aganza, 2000).

Instead R. Feuerstein proposed that deficient cognitive functioning was a result of a proximal factor (R. Feuerstein et al., 2010). The proximal factor of deficient cognitive functioning is a lack of, or inadequate, mediated learning experiences (R. Feuerstein et al., 2010; R. Feuerstein, 1979). Lack of mediated learning experiences can occur as a result of factors such as environmental, socioeconomic, organic, cultural and genetic factors (R. Feuerstein et al., 2010). Feuerstein termed these factors distal factors, as they effect cognitive development through their influence on the proximal factor of mediated learning experiences (R. Feuerstein et al., 2010; R. Feuerstein, 1979; Kozulin & Presseisen, 1995).

R. Feuerstein (1979) defined a mediated learning experience as,

> The interactional processes between the developing human organism and an experienced, intentioned adult who, by interposing himself between the child and external sources of stimulation "mediates" the world to the child by framing, selecting, focusing, and feeding back environmental experiences in such a way as to produce in him appropriate learning sets and habits (p.71).

There are a number of criteria to be met for an interaction to be considered a mediated learning experience (Kozulin & Presseisen, 1995). The three required criteria necessary for an interaction to be a mediated learning eperience are intentionality/reciprocity, transcendence, and meaning (R. S. Feuerstein, 2000;

Kozulin & Presseisen, 1995). Intentionality/reciprocity refers to the mediator gaining and maintaining the learners attention with the aim of developing self regulation of that attention (Lidz, 2002). Transcendence refers to helping the learner to make connections between past, present, and future experiences and events (Lidz, 2002). Meaning refers to explaining the reasoning for using the information contained within the mediation (R. S. Feuerstein, 2000). These criteria are what differentiates mediated learning experiences from direct learning and non mediated interactions (Kozulin & Presseisen, 1995). Other characteristics of a mediated learning experience can include sharing, challenge, feelings of competence, individuation, self regulation, and sense of belonging (Mentis, Dunn-Bernstein, & Mentis, 2008). These characteristics are in addition to, but not required for, an interaction to be considered a mediated learning experience (R. S. Feuerstein, 2000).

R. Feuerstein (1979) suggested that the amount a person's cognitive functioning is able to be modified is dependent upon the quality and quantity of the mediated learning experiences they encounter. This is because mediated learning experiences sensitise a person to characteristics of stimuli that enables integration of new experiences (R. Feuerstein, 1979). Integration of experiences can lead to changes in cognitive functioning. Support for the modification of cognitive functioning has come from brain imaging studies that show changes in the neural networks of the brain are able to take place (R. Feuerstein et al., 2010). R. Feuerstein et al., (2010) suggest that new experiences change existing neural structures and thus cognitive functioning also is changed. As support for neuroplasticity or changes in the neural networks grows, so too does support for structural cognitive modifiability (R. Feuerstein et al., 2010).

The theory of structural cognitive modifiability and mediated learning experiences form the basis of R. Feuerstein's approach to DA. The purpose of DA is to assess amount the of modification that is possible, under what conditions modification is possible, as well as the significance this modification may have on adaptation (R. Feuerstein et al., 2010). This is completed through the integration of mediated learning experiences into the assessment as the way to induce and observe modifiability (R. Feuerstein et al., 2010). It is through changes in cognitive

processes during the assessment that modifiability is assessed (R. S. Feuerstein, 2000). R. Feuerstein outlined several areas in which DA differs from traditional static based tests. These include the structure of the test, the testing situation and procedures, the interpretation of the results and the orientation of the test from product to processes (R. Feuerstein, 1979). It is through this type of assessment that appropriate interventions can be identified (R. Feuerstein, 1979).

The theories of Vygotsky and Feuerstein outlined above are similar in that they both focus on the importance of social interactions in their theories of learning and development. Vygotsky's sociocultural theory of learning and Feuerstein's conceptualisation of mediated learning experiences both highlight the role that others play in learning and development of cognitive functioning. In addition Feuerstein outlines how inadequate mediated learning experiences can lead to deficient cognitive functioning. Vygotsky's conceptualisation of the ZPD legitimises the use of instruction within an assessment situation. The work of both Vygotsky and Feuerstein is based on the premise that cognitive functioning, often measured as intelligence, is not a stable inherited, genetically determined trait, rather cognitive functioning is a result of social and cultural experiences. Feuerstein developed this premise into his theory of structural cognitive modifiability, which has since been supported by brain imaging studies showing the plasticity of neural networks.

Comparison with Traditional Static Assessments

The underlying premise of the work of Vygotsky and Feuerstein, that cognitive functioning is not an inherited and genetically determined trait, rather it is a result of the social processes and is able to be modified, is also the underlying premise of DA (R. Feuerstein, 1979; R. Feuerstein et al., 2010). This differs to the assumption of traditional static measures of intelligence. Traditional static measures of intelligence are based on the assumption that traits are stable (Sattler, 2008) and intelligence is genetically determined, inherited and immutable (R. S. Feuerstein, 2000; Gould, 1996; Robinson-Zanartu & Aganza, 2000). In addition to the premise upon which static and dynamic assessments differ, these forms of assessment also differ in methods within the assessment and result in different information being produced (Haywood & Lidz, 2007).

A key characteristic of DA is that interaction takes place between the assessor and the person being assessed (Lidz, 2002). This interaction is intended to produce changes in the performance of the person being assessed (Haywood & Tzuriel, 2002). In some forms of DA this means that during the assessment the assessor is creating a mediated learning experience (Lidz, 2002). As discussed previously, DA procedures differ in the amount that the interaction during assessment is individualised. Some (e.g. R. Feuerstein) believe that the interaction should be individualised for each person that is assessed whilst proponents of DA at the other end of the continuum of interaction consider standardised responses to be sufficient, such as the graduated prompts method of Budoff. During DA the assessor must make changes to determine how the individual being assessed responds to instruction in order to determine how the next steps and how the interaction should continue (Haywood & Lidz, 2007).

In contrast, traditional static intelligence tests are based on the tests being administered in the same way with a standardised procedure (Haywood & Tzuriel, 2002). During this form of assessment the assessor follows a predetermined script (Woodcock, Mather, & McGrew, 2001). No feedback is provided to the person being assessed. Information on any affective process that may have influenced the test are ascertained from the assessors observations of the person being assessed (Woodcock, Mather, & McGrew, 2001).

The information that is obtained as a result of the assessment also differs between traditional static assessments and DA. Traditional static intelligence tests result in a score of general intelligence or factors of intelligence depending on the test being utilised and the theory of intelligence upon which the test was developed (Merrell et al., 2012). These tests are standardised across a large number of people thus, alongside the individual's score, information on where the individual sits in comparison to others is also provided (Sattler, 2008).

In contrast, DA provides information as to the strengths and weaknesses of the individual, identifies the barriers to learning and indicates the type and amount of support needed to bring about changes (Elliott et al., 1996; Haywood & Lidz, 2007). This means that DA can provide information on how to help learning (Elliott, 2003). This is an important difference that was succinctly expressed by Haywood

(1993, as cited in Elliott, 2003), "There are many sources of such predictor information. What we need are instruments and approaches that can tell us *how to defeat those very predictions*!" (p.5-6). DA provides information as to how to overcome poor predictions thus the nature of the information provided by DA is prescriptive (Freeman & Miller, 2001). Prescriptive information has been identified as being useful and is often the type of information requested by teachers (Stringer, 2008).

This section has highlighted the differences between DA and standardised testing. It should, however, be noted that although DA and traditional static assessments are often compared (Lidz, 2002) many proponents of DA do not suggest DA as an alternative to traditional static assessment, rather it is suggested as an addition (Caffrey et al., 2008; Haywood & Lidz, 2005; Murphy & Maree, 1996; Stringer, Elliott, & Lauchlan, 1997). This is because traditional static assessment and DA provide different kinds of information that both have utility (Poehner, 2008).

Criticisms of Dynamic Assessment

The discussion of the differences between DA and traditional static assessments, highlighted the differences in the information obtained, procedures during the assessment and the underlying premise of these two types of assessment. Another difference between the two types of assessment is the amount of information that has been provided on the psychometric properties of validity and reliability, with static assessment having considerable reliability and validity information available and DA having less. Thus, the psychometric properties of reliability and validity is one area in which DA has sustained criticism (Grigorenko & Sternberg, 1998; Poehner, 2008). Other criticisms of DA have arisen due to the lack of uniformity and consensus regarding the terms and concepts of DA. These criticisms of DA are discussed below.

Reliability and validity.

Researchers often identify that the psychometric properties of DA is one area that needs to be addressed (Carlson & Wiedl, 2000; Elliott, 2000; Grigorenko & Sternberg, 1998; Haywood & Tzuriel, 2002; Lidz, 2009). This is because reliability and validity are often not reported (Caffrey et al., 2008) thus, there is a lack of published data on the validity and reliability of DA (Grigorenko & Sternberg, 1998).

This claim is rebuted by Lidz (2009) who comments that there is evidence of the reliability and validity of DA. Reliability refers to the consistency of the measure (Merrell et al., 2012; Sattler, 2008). Reliability can be measured in different forms relating to consistency across time, assessors, items within the measure and different forms of the measure (Merrell et al., 2012). A test is considered to be valid if it measures that which it was intended to measure (Merrell et al., 2012; Sattler, 2008). There are also various forms of, and ways to determine validity (Merrell et al., 2012). The lack of published information on the validity and reliability of DA is problematic as there is a reliance on empiricism in natural sciences which means that emphasis is placed on concepts such as reliability and validity (Stringer et al., 1997). The emphasis on psychometric properties has led to reliability and validity needing to be established in order for a test to be considered worthwhile (Merrell et al., 2012). Without reliability and validity tests are subject to criticisms. For example, Grigorenko and Sternberg (1998) argued that the changes seen during DA may be a result of practice effects rather than actual learning.

A number of researchers have attempted to establish the psychometric properties of DA. For example, Budoff and colleagues (1987, as cited in, Grigorenko & Sternberg, 1998) developed dynamic versions of a number of traditional static tests in which the interaction and intervention were also standardised. These measures achieved satisfactory reliability and construct validity (Grigorenko & Sternberg, 1998). In addition these measures were found to have greater predictive validity than IQ scores (Grigorenko & Sternberg, 1998). It should be noted, however, that the more standardised the DA the less clinical utility it is thought to have (Lidz, 1992b, as cited in, Elliott, 2000). Lidz (1991) described numerous studies which were conducted to determine the psychometric properties of the Learning Propensity Assessment Device developed by R. Feuerstein (1979). Lidz (1991) concluded that the LPAD had obtained adequate levels of validity and reliability. In a review of the research on the predictive validity of DA, Caffrey, Fuchs, and Fuchs (2008) found that the average correlation between DA and achievement scores was .49 whilst the average correlation between traditional static measures and achievement scores was .41. In addition, it was found that DA may predict achievement that is not measured in traditional static measures (Caffrey et al.,

2008). These examples show that some research has established the reliability and validity of some forms of DA.

An alternative view on the psychometric properties of DA, that has been argued by some DA advocates, is that due to the nature of DA, concepts, such as validity and reliability, should not be applied to DA (Caffrey et al., 2008; Poehner, 2008). This is because the theoretical assumptions upon which DA is based differ from the theoretical assumptions upon which psychometric assessment measures are based (Poehner, 2008). As DA is based upon the premise that cognitive abilities are modifiable, it is argued that the reliability or consistency is not applicable to DA as the purpose of DA is change (Poehner, 2008). This means that consistency is undesirable in DA (Poehner, 2008). In addition, measures of validity require that comparisons with other measures are made (Lidz, 1991; Poehner, 2008). It is important that the constructs being compared are equal (Lidz, 1991; Poehner, 2008). This means that if a measure is looking at the responsiveness of an individual the validity must be ascertained from a correlation with another measure of responsiveness (Lidz, 1991). These arguments highlight that, due to the underlying premise of DA and the differences in the constructs that are the focus of measurement, it is difficult, and may not be of value to establish the reliability and validity of DA with the same rigour as traditional static assessments.

Poehner (2008) suggested that new criteria for establishing and evaluating the effectiveness of DA measures could be developed. Suggested alternatives include careful test construction with better descriptions of the measures (Grigorenko & Sternberg, 1998), the use of mathematical models to control for issues such as practice effects (Grigorenko & Sternberg, 1998), and in depth, qualitative, case study analysis (Poehner, 2008). These alternative ways of establishing the utility of DA may represent a better option than modifying DA so that it conforms to evaluation using psychometric models.

Construct fuzziness.

The issue of DA being an unclear construct is also an often cited criticism of DA (e.g. Caffrey et al., 2008; Jitendra & Kameenui, 1993; Karpov & Tzuriel, 2009). The lack of clarity of the DA construct has been referred to as 'construct fuzziness' (Caffrey et al., 2008; Jitendra & Kameenui, 1993). Construct fuzziness occurs when

the features that make a concept unique, are indistinct or overlapping (Jitendra & Kameenui, 1993). In the case of DA there are differences and overlaps in definitions, theoretical bases, methods, models, perceived functions, goals, and procedures (Elliott, 2000; Jitendra & Kameenui, 1993; Karpov & Tzuriel, 2009). This results in a lack of clarity regarding the objectives and methods of DA (Karpov & Tzuriel, 2009; Kozulin, 2011).

The construct fuzziness of DA may, in part, be due to the lack of definition in terms of what DA is, as well as the goals of DA and the procedures used to meet these goals (Karpov & Tzuriel, 2009). The lack of definition has resulted in DA being interpreted very broadly with self evaluation used to determine if an assessment is dynamic in some cases (Lidz & Elliott, 2000). In addition, some terms within DA appear to overlap, be used interchangeably and differ for different researchers. For example, Kozulin (2011) discussed differences between learning potential assessment and DA. These terms have, however, been used interchangeably (Lidz, 1991) and the differences disregarded by researchers in the field (Kozulin, 2011). Lidz (2009) suggests " . . . all learning potential assessment is DA, whereas, not all DA is learning potential assessment" (p. 238). Similarly, Sternberg and Grigorenko (2002) differentiate between dynamic testing and dynamic assessment, suggesting dynamic testing is a narrower concept within dynamic assessment, whilst Poehner (2008) suggests that dynamic assessment and dynamic testing should not be thought of separately. Vague terminology within the theoretical bases of DA is also a hindrance (Grigorenko & Sternberg, 1998). The lack of clarity of terms and differentiation between terms can lead to confusion (Poehner, 2008).

There is also an abundance of terminology within DA. Terms such as interactionist and interventionist DA (Poehner, 2008), and research orientated and clinical orientated DA (Caffrey et al., 2008) have been applied and adds to the variety of terminology that may well overlap or refer to similar constructs. This overlapping, interchangeability and differences in terms used may represent the development and progress of DA. Currently, however, the concept fuzziness leads to confusion (Poehner, 2008) and variations in the interpretation of DA (Lidz, 1991). This makes DA, as a form of assessment, more difficult to evaluate (Jitendra & Kameenui, 1993). Some researchers have taken steps to clarify the terminology

used within DA. For example, Kozulin (2011) conducted research on learning potential and cognitive modifiability and found that learning potential and cognitive modifiability were distinct concepts. More research and clarification of concepts and terminology would reduce the construct fuzziness of DA.

Application of Dynamic Assessment

As has been discussed, the underlying premise of traditional static assessments and DA differ in that traditional static assessments view cognitive functioning or intelligence as stable and immutable whilst DA views cognitive functioning as open to change. One reason, therefore, for the development of DA was dissatisfaction with traditional static assessments of intelligence that held intelligence as immutable (Elliott, 2000; Lidz, 2002; Robinson-Zanartu & Aganza, 2000). Proponents of DA support the concept of assessment and instruction being interlinked (Lidz, 2002) with a view to understanding what individuals may be capable of rather than their current level of functioning (Grigorenko, 2008). With the focus on integrating assessment and instruction DA has most often been implemented with children who have learning and developmental disabilities (Poehner & Lantolf, 2010). DA research and practice has, however, also been utilised with a variety of other groups in numerous fields. These applications include the fields of neuropsychology, psychopathology, and with various groups within the broad field of education (Haywood & Tzuriel, 2002; Haywood & Wingenfeld, 1992). Some of the areas in which DA has been applied are discussed below.

Areas of application.

In the field of neuropsychology DA has been applied with patients who have had strokes, traumatic brain injuries and closed head injuries (Haywood & Tzuriel, 2002; Haywood & Wingenfeld, 1992). For example, Heinrich (1991, as cited in Haywood & Wingenfeld, 1992) found that DA showed that the potential for recovery was greater than previously estimated in patients with closed head injuries. On the basis of this Haywood and Wingenfeld (1992) suggested that DA could provide an estimate of the investment required for cognitive rehabilitation of patients with head injuries. Similarly, through the use of DA measures administered to a group of patients with traumatic brain injuries Haywood and Miller (2002, as

cited in Haywood & Tuzriel, 2002) found that participants made significant improvements on complex cognitive tasks, suggesting there is potential for cognitive rehabilitation for these patients. Further, subtle effects of cognitive treatment with stroke patients have been shown with DA when they were not shown by traditional assessment (Carr, 1985, as cited in Haywood & Wingenfeld 1992). These studies suggest that DA is useful in neuropsychological assessment, both to show the potential for cognitive rehabilitation, as well as the effects of treatments that, due to their subtly, may not be seen in traditional assessments.

DA has also been implemented in the field of psychopathology with patients who have schizophrenia (Haywood & Tzuriel 2002; Haywood and Wingenfeld, 1992). Research has found that DA has shown that there were processing differences between paranoid and non-paranoid schizophrenic patients that were not apparent prior to the application of DA (Scalan, Johnson & Haywood, 1992, as cited in Haywood & Wingenfeld, 2002). Further, paranoid patients derived greater benefit from cognitive intervention than non-paranoid patients (Scalan, 1986, as cited in Haywood & Tuzriel, 2002). Thus, DA has been successfully applied in the field of psychopathology.

DA has been implemented with multiple groups within the field of education. These groups include those from low socioeconomic backgrounds and culturally different groups (Tzuriel, 2001), second language learners (Poehner & Lantolf, 2010), students with speech and language difficulties (Pena & Gillam, 2000), and in the area of learning difficulties and developmental disabilities (Lidz, 1991; Tzuriel, 2001). Further, DA has been utilised as a cognitive programme evaluation tool (Lidz, 2002; Tzuriel, 2001) and curriculum based DA measures have also been developed for use with students (Lidz, 2002). This is not an exhaustive list and the extensiveness of this list with whom DA has been implemented suggests that DA is flexible and adaptable to many areas and situations (Elliott, 2000). The reasoning for the application of DA to a number of these areas and examples of these applications are described below.

An important group that has been the focus of research and implementation of DA are groups that are culturally different or socially disadvantaged. R. Feuerstein (1979, 1980) based his theories of structural cognitive modifiability and

mediated learning experiences and his work on DA on the observations that immigrants into Israel performed poorly on traditional static assessment (Burgess, 2000). Traditional static assessments often show differences in functioning between different cultural groups (Gould, 1996; Robinson-Zanartu & Aganza, 2000) with those of the non-dominant culture typically showing lower levels of performance (Gould, 1996; Tzuriel, 2001). These differences are thought to be due to cultural differences such as language and learning opportunities rather than differences in innate abilities (Gould, 1996; Tzuriel, 2001). DA has been implemented to provide information on how to best help individuals from culturally different groups with learning (Tzuriel, 2001). Research shows that DA predicts academic achievement more accurately that traditional static assessments amongst culturally different groups (R. Feuerstein, 1979; Lidz, 1991; Tzuriel, 2001). As a result a number of different DA measures have been developed to be applied specifically with culturally different groups. For example, Hessels and colleagues (as described in, Hessels, 2000) developed the Learning Potential Test of Ethnic Minorities.

Research has also shown that DA is able to provide better information on the cognitive capabilities of individuals with low socioeconomic backgrounds (Tzuriel, 2001). Often traditional static assessments underestimate the abilities of individuals with low socioeconomic backgrounds (Haywood & Tzuriel, 2002; Tzuriel, 2001). Numerous studies have documented the utility of various forms of DA with individuals coming from low socioeconomic backgrounds (e.g. Lidz, 1991; Tzuriel, 2001).

DA has influenced the area of language learning within the areas of speech and language deficits (Pena & Gillam, 2000) and second language development (Poehner & Lantolf, 2010). In second language development DA can help to interpret learners abilities and areas of need (Poehner & Lantolf, 2010). Poehner and Lantolf (2010) suggest that DA may be able to combine assessment and instruction so that second language abilities are maximally developed in students. Within the area of speech and language deficits, numerous DA measures have been developed (Pena & Gillam, 2000). These measures were described by Pena and Gillam (2000) to have a threefold advantage over static measures. Firstly, DA

measures help to determine if a language deficit is due to a language impairment or a language difference. Secondly, DA measures are able to create a more accurate description of language learning potential and. Finally, DA measures lead to better intervention planning due to the information that is provided on successful and unsuccessful learning (Pena & Gillam, 2000). This better intervention planning leads to more positive outcomes through the provision of services targeted to the correct areas for maximum learning (Pena & Gillam, 2000).

DA has also been used as a tool to evaluate cognitive education programmes (Haywood & Tzuriel, 2002; Haywood & Wingenfeld, 1992; Tzuriel, 2001). DA is seen as an essential measure in cognitive education programme evaluations as the main goal of cognitive education programmes is to teach the skills of how to learn (Haywood & Tzuriel, 2002; Tzuriel, 2001), thus the evaluative tool needs to be able to measure change (Tzuriel, 2001). Numerous cognitive education programmes have been evaluated with DA measures, including the Instrumental Enrichment programme, the Bright Start programme and the Cognitive Modifiability Battery (Tzuriel, 2001).

The area most often discussed in the literature on DA is the area of learning difficulties and developmental disabilities. Many researchers have reported on research and application of a variety of DA measures that have been developed for students with a variety of learning difficulties. For example, Lidz (1991) discusses numerous studies conducted with students who are learning disabled, deaf, or have learning difficulties using the Learning Propensity Assessment Device (R. Feuerstein, 1979) and Budoff's procedures (1987a, 1987b, as cited in, Lidz, 1991). Other DA measures that have been developed specifically for students with learning difficulties and disabilities include Dynomath (as described by, Gerber, 2000) and the Analogical Reasoning Learning Test (Schlatter & Buchel, 2000).

Many DA measures can be used with both learning disabled and non-learning disabled populations. Examples of these measures include the Application of Cognitive Functions Scale (Lidz, 2000, 2002), the Cognitive Modifiability Battery (Tzuriel, 2000), and the Learning Potential Assessment Instrument (Fernandez-Ballesteros & Callero, 2000). Curriculum based DA measures have also been developed and can be applied with students who experience difficulties in any area

of the curriculum (Lidz, 2002). These examples illustrate only a very limited number of the wide variety of measure, difficulties, and people with which DA has been applied in the area of learning difficulties.

The interest in DA within the area of learning difficulties is likely to be due to the link between assessment and instruction. Information as to the students responsiveness to intervention and the efficacy of an intervention is gathered in DA (Greenberg, 2000; Ryba, 1998). Thus, tailored interventions to suit the needs of the student are able to be developed (Elliott, 2003; Grigorenko, 2008; Karpov & Tzuriel, 2009; Yeomans, 2008). In addition, the adaptations that need to be made to improve the effectiveness of instruction can be ascertained from DA (Ryba, 1998).

The link between assessment and instruction is important as a progression from assessment to intervention is seen as ideal (Yeomans, 2008). In other words, the most effective assessment provides information that is directly applicable to next learning steps (Ryba, 1998). It is this type of information that is most useful to teachers (Grigorenko, 2008) and is often the type of information that teachers prefer as it enables the development of educational strategies (Freeman & Miller, 2001).

Other educators for whom this type of information is likely to be highly useful include Educational/School Psychologists and in the New Zealand context Resource Teachers of Learning and Behaviour (RTLB). These professionals often adopt a problem solving approach in their work assessing and providing intervention plans for students with difficulties (Merrell et al., 2012; Ryba, 1998).

Level of application.

In spite of the apparent utility of DA due to the link between assessment and intervention, a general positive attitude towards DA (Grigorenko, 2008), and the intuitive appeal of DA (Deutsch & Reynolds, 2000), advocates of DA have lamented that DA is not applied with more frequency (Karpov & Tzuriel, 2009). Studies that have investigated the use of different types of a assessment have shown that DA is implemented less frequently than other types of assessment. For example, Mccloskey and Athanasiou (2000) found that DA was used by 26% of School Psychologists in the USA whilst 79% used classroom observations and 53% used the Wechsler Intelligence Scale for Children. Woods and Farrell (2006) found that DA

was ranked 14th in commonly used procedures amongst Educational Psychologists in the UK whilst interviews with the student, school staff and parents were the three highest ranked methods. Traditional static tests were ranked 10th (partial test) and 11th (full test). In a study looking at the assessment practices in seven countries, LeBeer et al. (2012) found that less that 5% of Psychologists, medical and educational professionals used dynamically based assessments. Further, in a longitudinal analysis of assessment practices of Educational Psychologists in Scotland, Kennedy (2006) reported that DA use remained limited in spite of considerable professional development in this area.

In studies focused specifically on DA, application of DA has also been found to be limited. For example, Lidz (1992) found that 24% of school psychology trainers who were familiar with DA applied DA. Similarly, in a survey of Psychologists, Molano (2007) found that 26.6% of participants who were familiar with DA applied DA, whilst Haney and Evans (1999) found that 39% of School Psychologists who were familiar with DA applied DA. In a study that focused on Educational Psychologists who had training in DA, Deutsch and Reynolds (2000) found that 58% of participants applied DA. These studies highlight that DA has been applied with relative infrequency.

Suggested reasons for limited application.

Advocates of DA have suggested a number of reasons for the lack of implementation of DA (e.g. Lidz, 2009; Murphy & Maree, 2009; Stringer et al., 1997). These reasons include; variability within DA (Murphy & Maree, 2009), concerns over the psychometric properties of DA, the demands of the employment roles of those typically employing these types of assessments and, a lack of knowledge and training on DA (Lidz, 2009; Stringer et al., 1997). Two of these reasons, variability within DA and concerns over the psychometric properties of DA, are directly related to criticisms of DA discussed previously thus they will only be discussed briefly here. Other reasons such as demands of employment and lack of knowledge will be discussed in more detail.

One reason suggested for the lack of use of DA is the large variation within the construct of DA (Murphy & Maree, 2009). This is related to the idea of construct fuzziness, discussed previously. That is, due to the range of measures,

theoretical models, and terms that lack clarity, DA may be confusing to practitioners, which may be put practitioners off applying DA (Stringer et al., 1997). Elliott (1993, as cited in, Stringer et al., 1997) suggested that a lack of specific techniques associated with DA may in part explain the lack of usage of DA in the United Kingdom.

The other suggested reason for the limited application of DA, related to a previously discussed criticism of DA, is the lack of supporting evidence in relation to the psychometric properties of validity and reliability of DA (Lidz, 2009; Stringer et al., 1997). Although there is evidence for the reliability and validity of DA (Lidz, 1991, 2009) and it has also been argued that psychometric constructs do not apply to DA due to the desire for and measurement of change (R. Feuerstein, 1979), lack of information and evidence of validity and reliability may still be a barrier to the application of DA as those who regularly assess students with learning difficulties are familiar with these constructs (Sternberg & Grigorenko, 2002). That is, there is an emphasis on the empirical tradition and DA fits less comfortably into this mould than other forms of assessment (Stringer et al., 1997). Further, those who regularly assess students with learning difficulties tend to engage in legally defensible practices, which has led to a reliance on traditional static assessments (Lidz, 2009; Stringer et al., 1997).

This relates to another reason suggested for the limited application of DA, demands of employment roles upon those who conduct assessments (Lidz, 2009; Stringer et al., 1997). Traditionally the role of Educational Psychologists was to decide which students needed to be placed in special education and which did not dependent primarily upon the results of traditional static assessments (Stringer et al., 1997). These roles are changing however, and more emphasis is being placed on problem solving frameworks and providing intervention (Merrell et al., 2012).

An additional factor related to the employment role of the assessor that has been suggested to influence the use of DA are time pressures placed on those who assess in educational settings (Stringer et al., 1997). That is, DA is often reported and perceived to take longer to complete than other assessment measures (Lidz, 2009; Stringer et al., 1997). This means that for educators who have large caseloads and who are required to complete assessments as quickly as possible DA may not

present a practical option (Stringer et al., 1997). It should be noted, however, that some forms of DA have been developed take the same amount of time as psychometric tests (Lidz, 2009).

Amount of knowledge and as well as the training opportunities available in DA have also been suggested to influence the application of DA (Deutsch & Reynolds, 2000; Lidz, 2009; Stringer et al., 1997). Firstly, one must have knowledge of an assessment in order to be able to implement that assessment. In the case of non-standardised DA, one must have considerable knowledge and expertise (Grigorenko, 2008). This is because, in order to be able to individualise the interaction and alter the intervention as needed, as well as understand the theories and process of teaching and learning, considerable expertise is needed (Grigorenko, 2008).

The results of Haywood and Lidz (2005) supports this suggestion. In a survey of DA trainers the largest proportion of trainers identified that the minimum amount of time needed for training in DA was one week (35 to 40 hours), whilst most participants identified the optimal time for training to be 45 to 60 hours. In further support of this Deutsch and Reynolds (2000) found Educational Psychologists who had completed less than three days training in DA did not apply DA, whilst 15% of those who had completed three days training applied DA and 94.4% of those who had completed between five and fifteen days training applied DA. These results suggest that a high level of training is needed in order for DA to be applied as it appears that the application of DA is positively correlated with the amount of training on DA received.

The amount of knowledge and expertise educational professionals have of DA is directly related to the training opportunities that are available. Stringer et al. (1997) commented that this relationship is cyclical as prevailing practice reflects the training that is received in training programmes whilst training programmes reflect the current prevailing practices. Thus, if DA were taught to a greater extent in training programs it would more likely to be applied by practitioners. Equally if DA was applied more often by practitioners it is more likely that it would be taught in training programs. Further, Stringer et al. (1997) suggested that training

programme tutors may not be confident in their knowledge of DA and therefore may not include it in their courses.

Several studies investigating the amount of knowledge various practitioners have of DA (as well as the level of application) have been conducted. In the study by Lidz (1992) it was found that 80% of trainers of school psychology cognitive assessment courses were familiar with DA. Of those familiar with DA 68% incorporated it into their courses on cognitive assessment. Most trainers only discussed DA (55%) or assigned readings on DA (32%). Only 13% of trainers taught DA skills in their courses. Additionally, of the trainers who did not include DA in their courses, 38% did not include it due to their lack of knowledge on DA.

In a follow up to the study by Lidz (1992), Haney and Evans (1999) surveyed School Psychologists in the USA and found that the level of familiarity with DA was limited, with 56% of participants responding that they were not at all familiar with DA. Only 8% of participants responded that they were very familiar with DA. Molano (2007) also investigated the level of knowledge of DA. Her participant group consisted of Psychologists who were trained in cognitive ability testing and were likely to have contact with children and Latino populations. Molano (2007) found that knowledge of DA among this participant group was very limited with 77.5% of participants responding that they had no familiarity with DA.

These studies indicate that the level of knowledge of DA amongst a variety of practitioners is limited. This effects the application of DA as practitioners need a good knowledge and a good level of training in order to apply DA. Drawing from the research of Lidz (1992), Haney and Evans (1999), and Molano (2007), the current research focused on the level of knowledge and application of DA amongst educational professionals who regularly engage in assessment of students with learning or behaviour difficulties in New Zealand, Resource Teachers of Learning and Behaviour (RTLB). In addition to the level of knowledge and application of DA, the utility of DA was also investigated as it was considered that perceived utility may have a bearing on level of application. Thus the following research questions formed the basis of this research:

- What is the level of knowledge of Dynamic Assessment amongst RTLB?
- What is the level of application of Dynamic Assessment amongst RTLB?

- Do RTLB believe DA has utility?

- Are there differences in the levels of knowledge and application of Dynamic Assessment based on location off employment or highest qualification?

- Is there a need for training in DA in New Zealand?

Information pertaining to these research questions was gathered using the same methodological design, survey research, as the research by Lidz (1992), Haney and Evans (1999), and Molano (2007).

Summary

DA is a process orientated approach to assessment, which incorporates interaction and intervention into the assessment and results in information that can be used to inform intervention. There exists large variation in the terms, methods, models, procedures and theoretical bases of DA. Vygotsky and Feuerstein provided the theoretical foundations for DA. Vygotsky contributed the sociocultural theory of learning and the concept of the ZPD. Feuerstein contributed the theory of structural cognitive modifiability and the concept of mediated learning experiences. Criticisms of DA include the lack of information pertaining to the validity and reliability and the construct fuzziness within DA. There are multiple areas in which DA has been applied. Most commonly DA is applied in educational settings. Students with various learning and developmental difficulties are often the focus of research and the application of DA. In spite of the apparent utility of DA, due to its connection intervention, DA is not frequently applied by educational practitioners. Some of the suggested reasons for the underutilisation of DA include psychometric concerns, construct fuzziness, pressures of employment roles and the amount of knowledge and training that is available on DA. Prior research into knowledge of DA suggest that knowledge of DA is limited amongst practitioners in the USA and UK. The current research is designed to investigate the knowledge, application and utility of DA amongst Resource Teachers of Learning and Behaviour in New Zealand.

Chapter Three: Method

The current research was designed to gather information on the status of Dynamic Assessment (DA) amongst Resource Teachers of Learning and Behaviour (RTLB) in New Zealand. Previous research on knowledge and use of DA, for example, Lidz (1991), Haney and Evans (1999), and Molano (2007), were reviewed as examples of methodological approaches. The research design and instruments utilised in this research are presented in this chapter alongside an outline of participant information, ethical considerations, procedural steps and data analysis techniques.

Research Design

The research employed a descriptive, survey design. Descriptive research is intended to provide information on conditions and attitudes that currently exist (Ayiro, 2012; Check & Schutt, 2012; Cohen, Manion, & Morrison, 2007). It is commonly employed when the intent of the research is to describe and interpret the status of phenomena (Ayiro, 2012; Check & Schutt, 2012; Cohen et al., 2007). The intent of the current research was to provide information as to the current status of DA, amongst RTLB in New Zealand.

Data were gathered by employing a survey. Survey methodology allows information to be collected from participants through their response to questions (Check & Schutt, 2012; Stopher, 2012). It is one of the most commonly employed forms of data collection (Ayiro, 2012; Check & Schutt, 2012), as it is efficient, low cost, and versatile (Check & Schutt, 2012). Additionally, more than one variable is able to be the focus within a single survey (Check & Schutt, 2012). Participants are able to remain anonymous and the results can be generalised to the whole population, provided sampling criteria are met (Ayiro, 2012; Check & Schutt, 2012).

Instruments

The research utilised an online, self administrated form of survey distribution. In self administered surveys, participants receive and complete the survey without direct interaction with the survey supplier (Stopher, 2012). This is in contrast to interviewer administered surveys where an interviewer asks survey

questions and records the participants responses (Stopher, 2012). Self administered surveys present both advantages and disadvantages when compared interviewer administered surveys.   An advantage of self administered surveys is the ability for simultaneous participation of a large number of respondents, thus reducing the time required for data collection (Ayiro, 2012; Check & Schutt, 2012). Additionally participants remain anonymous (Fowler, 2009) and are able to work through the survey at their own pace and at a time which is convenient to them (Ayiro, 2012). Disadvantages of self administered surveys include; that the researcher is unable to control who is actually responding to the survey, and questions must be carefully designed (Fowler, 2009) so that there is no possibility for confusion, or misinterpretation as further explanation of questions is not possible (Stopher, 2012). The advantages and disadvantages of self administered surveys were considered in the conceptualisation of the current research. The utilisation of a self-administered survey was decided upon as it allowed for a large number of participants, from all areas of New Zealand to be included in the survey population.

Online survey tool.

The survey was presented through the online survey tool Survey Monkey. There are several advantages to using online surveys as opposed to other forms of self administered surveys, such as pencil and paper surveys (Fowler, 2009). Decreased time required for data collection due to the immediacy of electronic mail and low costs associated with data collection are amongst the advantages of online surveys (Ayiro, 2012; Fowler, 2009).   Further, in online surveys the complexity of the survey is able to be increased, for example, the questions that are asked can be based on the answers given to previous questions (Ayiro, 2012; Fowler, 2009). This can make to survey shorter, more interesting, and more attractive to the participants (Check & Schutt, 2012). Computerised design features, such as pull down boxes can be utilised and data entry errors are minimised (Check & Schutt, 2012).

The most commonly cited criticism of online surveys is that only those with access to a computer and the internet are able to respond (Dillman, 2000; Fowler, 2009). Although this criticism is valid for many pieces of research, it was not

applicable to the current research as all members of the participant group had access to computers and the internet as part of their employment. This is consistent with the observation made by Dillman, Smyth, and Christian (2009), that online surveys are a useful method when a specific population is targeted.

Survey Monkey was the online survey tool employed for data collection. This tool was chosen after investigation of multiple web based survey instruments. Investigation into web based survey tools was carried out by conducting an internet search using the search engine Google and the search terms "online surveys" and "online survey tools". Tools that appeared in the first five results of each search, eight tools in total, were investigated. Of these tools two, Survey Monkey and SogoSurveys appeared to be the most comprehensive and user friendly. As full access to Survey Monkey was available through the researcher's Graduate School Programme, it was chosen as the online survey tool for data collection.

Survey design.

The survey employed for data collection was developed for the purposes of this research. It was designed based upon the principles of the social exchange theory of survey response, described by Dillman et al., (2009). This theory suggests that participants are motivated to respond to a survey by the benefits they expect to receive from participation and simultaneously de-motivated to respond by the perceived costs of participation. Thus, the benefits must outweigh the costs of participation, as perceived by the participants, in order for the participants to have motivation to respond (Dillman et al., 2009). The survey was therefore developed with the intention of increasing perceived benefits and decreasing perceived costs to the participants with the goal of maximising the response rate to the survey.

Guided by the principles of social exchange theory as outlined by Dillman et al. (2009), multiple elements of the survey were carefully considered in the development of the survey. One of these elements was the type of questions included. Both open and closed question types were incorporated in the survey to take advantage of and limit the disadvantages associated with question types (Cohen et al., 2007). In addition, it was intended to take advantage of and limit the disadvantages of the types of data open and closed questions produce (Caruth, 2013). In open ended questions the participant provides a response in their own

words (Dillman et al., 2009). This type of question produces qualitative type data (Cohen et al., 2007), that can be coded and analysed to produce descriptive statistics for interpretation purposes (Dillman et al., 2009). Although more detailed information can be collected using open ended questions (Dillman et al., 2009), an assumption is made that all participants are able to articulate their response to an equal degree (Cohen et al., 2007). Open ended questions require more effort on the part of the participant, thus increasing the perceived costs to the participant (Dillman et al., 2009). To minimise these disadvantages whilst still obtaining the rich information that can be obtained from open ended questions the minority of questions were of an open ended format.

The majority of survey questions were closed questions. In closed questions the answers are provided and the participant must choose the answer of best fit for their situation or opinion (Dillman et al., 2009). Closed questions require less time to answer and less effort from the participant, however, the available responses can impact the way in which the question is interpreted and the answer the participant gives (Dillman et al., 2009). A combination of nominal and ordinal types of closed questions were included in the survey.

Question wording was also considered as it can play an important role in the success of a survey (Check & Schutt, 2012; Dillman et al., 2009; Stopher, 2012). Wording was clear, simple, in familiar language with as few words as possible making up each question, as suggested by Dillman et al., 2009, Fowler, 2009, and Stopher, 2012. Double barrelled questions and questions that contained double negatives were not included for the purposes of clarity and to avoid confusion (Dillman et al., 2009; Fowler, 2009). Response tasks were clearly specified and it was ensured all participants could answer each closed question with the answers provided (Dillman et al., 2009; Fowler, 2009; Stopher, 2012).

In addition to the survey questions developed for this research, a number of questions were adopted and adapted from previous research on DA. Specifically, questions from the research conducted by Lidz (1992) and Haney and Evans (1999) were included. Permission to use and adapt questions was requested and obtained from the relevant authors. These permissions can be seen in Appendix A. A list of questions that were adopted from prior research and their origins can be seen in

Appendix B. Adaptations to questions from prior research were made to ensure the questions suited the needs of the current research. As language and human reactions to survey elements change over time (Stopher, 2012), adaptations were made to ensure the questions were relevant to the context of the current research.

In addition to elements of individual questions, elements of the survey as a whole were taken into consideration. These elements included the structure, length, visual design, and layout. The order in which the questions are presented in a survey can affect the response rate (Brace, 2008). Thus, the questions were ordered in a logical manner with questions grouped according to content (Brace, 2008). Demographic questions were presented first, followed by questions relating to knowledge. Questions relating to application were placed next, then utility questions. As the survey was conducted online, online survey tool features were utilised. For example, when the participant indicated that they did not have any familiarity with DA they were not asked if they applied DA. Each participant was asked between nine and sixteen questions. The number of questions asked depended on their responses to previous questions. A survey completion indicator bar was placed on the bottom of each page and the survey kept as short as possible in order to decrease the perceived costs to the participants.

The visual design and layout was also considered as the appearance of the survey can affect response rates (Stopher, 2012). An open layout was used with plenty of clear space as suggested by Stopher (2012). Appropriate sized answer boxes were placed after the open ended questions (Dillman et al., 2009). Headings at the top of each page indicated the section the respondent was replying to and questions were numbered. A blue colour scheme was chosen after research into the psychological properties of colours indicated that blue is soothing and is associated with calm, concentration and clear thought (Wright, 2008). A printed version of the survey utilised in this research can be seen in Appendix B.

Participants

The participants were currently practising RTLB. RTLB are fully trained and registered teachers who undergo specialist training in learning and behaviour ("How to become an RTLB," n.d.). They provide support to schools, teachers and students, for students with learning and/or behaviour difficulties ("What RTLB do," n.d.).

RTLB are grouped into 40 clusters nationwide with each cluster led by a manager ("RTLB cluster allocations and regions," n.d.).

The participants were recruited through the RTLB Association, a voluntary organisation designed to support and advocate for RTLB ("NZRTLB Vision and Mission," n.d.). The survey and email introducing the survey were sent to the RTLB Association secretary who distributed it to RTLB association members through regional co-ordinators.

The introductory email was purposefully written as the initial contact is critical in survey research (Stopher, 2012) and can significantly influence the response rate (Dillman et al., 2009). Information as to the purposes of the survey, how the information was intended to be used as well as the benefits to the respondents and wider society were outlined to increase the motivation of participants to respond (Stopher, 2012). To allow potential participants to assess the perceived costs of participation an indication of the length of time required to complete the survey was provided, as was an assurance of confidentiality (Stopher, 2012). The introductory email also contained a link to the survey and participants were advised that by clicking on the link they were consenting to participate in the research. In addition, the Massey University Low Risk Ethical Notification was included in the introductory email. This introductory email can be seen in Appendix C.

Ethical Considerations

The study followed the Massey University guidelines for the ethical research with human participants. This process included review and discussion of the ethics screening questionnaire. As a result of this review and discussion it was decided that a low risk notification was needed to meet Massey University Human Ethics Committee standards. Consequently a low risk notification was sent to the Massey University Human Ethics Committee. This notification was received and recorded by the Massey University Human Ethics Committee on 19th April 2013. A copy of the letter acknowledging that the low risk notification had been received can been seen in Appendix D.

The introductory email contained the Massey University low risk notification statement. In addition, no identifying information was requested and data was

treated as strictly confidential. Contact information for the researcher was also provided inviting the participants to contact the researcher with any questions they had about the survey. One participant took advantage of this opportunity and was supplied with further information as to the reasons for the research.

In addition to the Massey University Human Ethics Committee standards it was also considered ethically sound practice to request permission to survey RTLB. Permission to survey RTLB was requested from the RTLB Association National Co-ordinator, Belinda Kusabs. This permission was granted and an offer to distribute the survey to RTLB via the RTLB Association was extended. A copy of the email granting permission for RTLB to be included as participants can be seen in Appendix E.

Procedure

Steps to comply with Massey University Human Ethics Committee standards were taken and the survey was developed. Permission to use questions from previous researchers was requested and granted. During survey development, a small scale, informal, dynamic pilot was conducted to test the survey before data collection began. Using this survey pilot method, as outlined in Brace (2008), the survey was presented to one participant then reviewed and rewritten. The rewritten questions were then presented to the next pilot participant. The participants for the pilot population were friends and colleagues of the researcher, thus making it an informal pilot (Brace, 2008).   The pilot survey was conducted a total of seven times with feedback and reworking occurring after administration.

Upon completion of the survey development, a list of questions was sent to the RTLB association with a request for permission to survey RTLB. Once this permission was received the introductory email and survey link were sent to the RTLB association who distributed the survey via the RTLB association regional co-ordinators. After one week a reminder email was sent to the RTLB association and this was again distributed via the regional co-ordinators. After an additional week, two weeks after the survey was originally distributed, the results were downloaded from the Survey Monkey website.

Data Analysis

Data was downloaded from the Survey monkey website and entered into IBM SPSS statistics software and Microsoft Excel software. Additionally, a full report of all responses was downloaded as a PDF file to allow for analysis of open ended questions. Open ended responses were coded into categories, and descriptive statistics were produced for each survey question.

Summary

A survey was developed specifically for the purposes of this research. It included questions adapted from previous research by Lidz (1991) and Haney and Evans (1999). The survey was developed with consideration of the many elements of good survey design, with the aim to be to increase response rate and by using the principals of social exchange theory to make the survey attractive to participants (Dillman et al., 2009). Data were collected through the online survey tool Survey Monkey. Participants were RTLB from throughout New Zealand who were recruited through the RTLB Association.   Permission to survey RTLB was sought from the RTLB association and granted. The research complied with the low risk ethical standards for research with human participants outlined by Massey University. Data were analysed using IBM SPSS and Microsoft Excel software.

Chapter Four: Results

Data obtained through the methodology described in the previous chapter are presented in the current chapter. These results pertain to the research questions regarding the level of knowledge, application, and utility of Dynamic Assessment (DA) amongst Resource Teachers of Learning and Behaviour (RTLB) in NZ, in addition to the differences in knowledge and application based on demographic variables and the need for training on DA in New Zealand. Raw data for each survey question can be seen in Appendix F.

There were a total of 195 responses to the survey. This represents 21.6% of the 904 RTLB employed in 2013 ("RTLB cluster allocations and regions," n.d.). Participants were recruited through the RTLB Association, which reports approximately 50% membership (Belinda Kusabs, personal communication, June 9, 2013). Thus approximately 41.5% of the RTLB Association members responded to the survey. Of these responses, nine were excluded from data analyses as participants did not reply to questions other than those pertaining to demographic information. Thus, the number of responses included in data analysis was 186.

Demographic Characteristics

Of the 186 participants responses included in data analysis, 177 participants (95.2%) were employed as RTLB whilst seven participants (3.8%) were employed as RTLB Managers and two participants (1.1%) were employed as RTLB in addition to another role (RTLB and Educational Psychologist; RTLB and High Learning Needs Teacher).

Participants were asked to indicate their location of employment from a choice of 14 regions in New Zealand. Region choices were based on the 16 districts as identified by the Ministry of Education ("Contact Special Education - Ministry of Education," n.d.), with some adaptations. The 14 regions were available as choices were collapsed into larger regional areas to allow for statistical analysis, given the small numbers of participants in some locations. These data are presented in Table 1.

Table 1

Participants Location of Employment

Location	n	%
Northland/ Auckland	52	28.0
Waikato/ Bay of Plenty	22	11.8
Hawkes Bay/ Gisbourne/ Central North Island/ Taranaki	38	20.4
Greater Wellington/ Wairarapa	31	16.7
Canterbury/ Nelson/ Malbrough/ West Coast	29	15.6
Otago/ Southland	14	7.5

Table 1 shows that participants from all areas of New Zealand responded to the survey. The largest numbers of participants were from the Auckland/Northland region (n=52, 28.0%). This was expected as this region contains the largest city in New Zealand.

Data regarding level of education was obtained from responses to the question *"What is the highest qualification that you currently hold."* Participants were asked to choose between six categories. Only university qualifications were included as a university qualification is required in order to obtain teacher registration in New Zealand. The six university qualification choices were collapsed to allow for statistical analysis, given the small number of responses to some qualification choices. These data are presented in Table 2.

Table 2

Participants Level of Education

Education Level	n	%
University Diploma	19	10.2
Bachelors Degree	38	20.4
Postgraduate Diploma	81	43.5
Masters Degree or Higher Qualification	48	25.8

As shown in Table 2, the highest number of participants had received a postgraduate diploma (n= 81, 43.5%). This is expected as RTLB training results in a postgraduate diploma being awarded. Within the Masters Degree or Higher

Qualification group, two participants had received doctorate degrees (1.31%), whilst eight (4.3%) had received a post-masters postgraduate diploma, indicative of educational psychology training in NZ, and 38 (20.4%) had received a Masters level degree.

Participants were asked to indicate the year in which they completed their training. Responses varied from "1977" to "currently in training" and "planning to train in the future." A summary of these results can be seen in Table 3.

Table 3

Year in Which Training was Completed

Year	n	%
Prior to 1998	3	1.5
1998 - 1999	7	3.8
2000	34	18.3
2001	24	12.9
2002	11	5.9
2003 - 2004	6	3.2
2005 - 2006	12	6.5
2007 -2008	13	7.0
2009 -2010	15	8.1
2011 - 2012	11	5.9
NA/Exempt	2	1.0
Currently in training	36	19.4
Planning to train in the future	12	6.5

As can be seen in Table 3, there are two years in which a large number of participants completed their training. A total of 34 participants (18.3%) completed training in 2000 and 24 participants (12.9%) completed training in 2001. This large number of participants completing training in 2000/2001 corresponds to shortly after the establishment of the RTLB service in 1998/1999 ("History of the RTLB service," n.d.), and thus is the probable reason for the large number of participants completing training during this time period. In addition, the participants who

indicated they were currently in training also represented a large group. A total of 36 participants (19.4%) indicated they were currently in training.

Knowledge of Dynamic Assessment

The first research question pertained to the level of knowledge of dynamic assessment. Participants were asked to report their level of familiarity with DA on a four point scale, with the response categories of *very familiar*, *somewhat familiar*, *barely familiar* and *not at all familiar.* The results to this question are presented in Table 4.

Table 4

Reported Level of Familiarity with DA.

Familiarity	n	%
Not at all	81	43.5
Barely	63	33.9
Somewhat	37	19.9
Very	5	2.7

Table 4 shows that 43.5% (n=81) of participants indicated they were not at all familiar with DA. A total of 105 participants (56.5%) indicated some level of familiarity with DA, although the majority of these participants (33.9%) indicated they were barely familiar with DA.

The participants who indicated that they had at least some familiarity with DA were asked to describe their understanding of DA in an open ended question. Responses were coded by awarding points to keywords and concepts pertaining to DA (listed in Box 1). In addition the similes, derivatives or explanations of these keywords or concepts were awarded points. The final determination of the number of points awarded was at the researcher's discretion.

Box 1

List of Dynamic Assessment Keywords and Concepts

• Feuerstein	• Vygotsky	• Learning potential
• Structural cognitive modifiability	• Zone of Proximal Development	• Embedded intervention
• Mediated Learning Experience	• Test-teach-retest	• Interactive

During the coding process it was noted that several responses, given by different participants, were identical. Further investigation revealed that these answers were taken directly from Wikipedia ("Dynamic assessment - Wikipedia," n.d.). These answers were placed in a separate category. Results of the coded responses are presented in Table 5.

Table 5

Coded Responses to "Please describe your understanding of Dynamic Assessment."

Familiarity	n	%
1 keyword or concept	29	27.6
2 keywords or concepts	16	15.2
3 keywords or concepts	6	5.7
4 keywords or concepts	3	2.9
0 keywords or concepts	18	17.1
Self identified little knowledge	11	10.5
Wikipedia	5	4.8
No Response	17	16.2

Of the 105 participants who were eligible to respond to this question, 11 (10.5 %) identified that their knowledge of DA was limited. Examples of these responses included "limited" and "very little". Combining this with the participants who obtained their description of DA directly from Wikipedia (n=5, 4.8%), and the participants who did not respond to this question (n=17, 16.2%), a total of 31.5% of the participants who were eligible to answer this question, through indicating that they had at least some familiarity with DA, were unable to, or did not articulate their understanding of DA in their own words.

A total of 72 (68.6%) provided a description of DA in their own words. However, 18 (17.1%) descriptions did not contain reference to any keywords or concepts outlined in Box 1. Interestingly, 12 participants (11.4%) described their understanding of DA as corresponding to collaborative and/or ecological assessment practices.

The number of participants who described their understanding of DA with reference to at least one key concept or theorist was 54. This represents 51% of the participants eligible to respond to this question and 27% of the total sample population. This is less than the 56.5% of the total sample population that identified that they were very, somewhat or barely familiar with DA.

Participants were also asked how they obtained their knowledge of DA. The majority of participants indicated that they obtained their knowledge of DA through reading (n = 52, 50.4%) or through a friend or colleague (n = 41, 39.8%). Coursework in the RTLB training programme was the third most common method to gain knowledge of DA (n = 29, 28.1%) with professional development workshops (n = 7, 6.7%) and dynamic assessment workshops (n = 4, 3.8%) representing the least common ways of gaining knowledge of DA.

Application of Dynamic Assessment

The second research question focused on the application of DA. Participants who indicated some familiarity with DA were asked to indicate the extent of application of DA in their practice. These results are presented in Table 6.

Table 6

Application of Dynamic Assessment

Application	n	%
At least one case every 3 months	14	16.5
At least one case every 6 months	9	10.6
At least one case per year	3	3.5
Less than one case per year	2	2.3
No	57	67.1

The majority of participants responded that they did not apply DA in their roles as RTLB (n=57, 67.1%). A total of 28 participants (32.9%) responded that they did apply DA with varying degrees of frequency. Of the total sample population 15.1% applied DA to some extent, on the assumption those participants who indicated they did not have familiarity with DA did not apply DA.

The participants who did apply DA were more likely to apply it frequently. This seen in Table 6, the largest number of participants who applied DA responded that they applied DA with at least one case every three months (n=14, 16.5%). The number of participants decreased as the frequency of application decreased with only two participants (2.3%) responding that they applied DA with less than one case per year.

A consideration in the results of the application of DA are the responses from participants who reported familiarity with DA but who did not describe their understanding of DA using keywords or concepts identified in Box 1. Response tracking revealed that of the 28 participants who reported using DA, eight participants (28.5% of those who applied DA) did not articulate an understanding of DA with reference to any of the keywords or concepts identified in Box 1. This includes five participants who described an alternative assessment paradigm such as collaborative or ecological assessment. This suggests that the number of RTLB who actually apply DA is lower than the number of RTLB who reported applying DA.

Participants who reported using DA (n=28) were asked to describe their DA procedures. A variety of descriptions of DA were provided ranging from identification of specific DA tools, for example "graduated prompts procedure" to general descriptions of DA, for example, "Test-teach-retest method. Prompting, cueing, mediating within a test situation and then evaluating the enhanced performance." A number of descriptions, however, described assessment methods that are more closely aligned with other assessment paradigms. Examples of these descriptions include, "narrative assessment tools" and "considering the environment, home and school." Of the descriptions of DA procedures 11 (39.3%) were aligned with DA whilst 17 (60.7%) were more closely aligned with other forms of assessment. This lends further support to the idea that actual application of DA is lower than reported application of DA.

Participants who indicated familiarity with DA were also asked what barriers there were to applying DA. These results are shown in Table 7.

Table 7

Barriers to the Application of Dynamic Assessment

Barriers to Application	n	%
I do not have enough training on how to conduct dynamic assessment	58	61.7
My use of dynamic assessment is not inhibited	9	9.6
I do not think dynamic assessment adds value	2	2.1
It does not fit with the demands of my position	5	5.3
It takes too long	1	1.1
I have concerns about the validity of dynamic assessment	1	1.1
Other	18	19.1

As can be seen in Table 7 , the majority of participants responded that a lack of training was a barrier to the application of DA.

Utility

The third research question sought information pertaining to the level of utility of DA. All participants were asked this question although it appeared in different forms to the participants depending upon their answers to previous questions. Participants who indicated that they both had familiarity with DA and applied DA were asked "How useful do you believe dynamic assessment is to your practice?" Participants who indicated that they had familiarity with DA but did not apply DA were asked "How useful do you think DA would be to your practice were you to implement it?" The participants that indicated that they had no familiarity with DA were provided a brief description of DA (adapted from, "Dynamic Assessment - Research Guides at Vanderbilt University," 2013) then asked "Given the limited information on DA provided above, how useful do you believe DA would be to your practice?" The responses to these questions are presented in Table 8.

Table 8

Utility of DA to RTLB Practice

Utility	Knowledge and application		Knowledge, no application		No knowledge		Total	
	n	%	n	%	n	%	n	%
Really not useful	1	4.0	4	7.0	1	1.3	6	3.75
Not useful	1	4.0	2	3.5	3	3.8	6	3.75
Useful	14	56.0	38	66.7	42	53.8	94	58.75
Very Useful	9	35.0	13	22.8	32	41.0	54	33.75

The results in Table 8 show that most RTLB believe that DA is or would be useful to their practice. Of the 160 participants who responded to this question, 33.75% (n=54) indicated that DA is or would be very useful, whilst 58.75% (n=94) indicated that DA is or would be useful. A total of 12 participants (7.5 %) did not think DA would be useful to their practice.

Differences Based on Demographic Variables

A chi square test of independence was performed to examine the relation between the level of familiarity with DA and location of employment. Location of employment areas were collapsed into larger regional groupings in order to meet expected cell count criteria for the chi square test of independence. Categories were also collapsed for level of familiarity. The relation between location of employment and familiarity with DA was not significant, X_2 (10, N=186) = 8.64, p = .567. Location of employment did not relate to the level of familiarity with DA.

In addition, a chi square test of independence was performed to examine the relation between highest qualification obtained and level of familiarity with DA. Both highest qualification and level of familiarity with DA were collapsed in order to meet expected cell count criteria for the chi square test of independence. The relation between highest qualification obtained and level of familiarity was not significant, X_2 (6, N=186) = 5.46, p = .486. Level of highest qualification did not relate to the level of familiarity with DA.

Chi squared tests of independence were not able to be performed to examine the relation between application and demographic variables as the

number of participants reporting application of DA was small. Thus, the data did not fit the expected cell count criteria, and could not be collapsed to fit expected cell count criteria required for the chi square test of independence.

Need for Dynamic Assessment Training

The results presented above indicate the level of knowledge, application, and utility of DA amongst RTLB participants. These results indicate that the majority of participants have no or very limited knowledge of DA and do not apply DA. In contrast the majority of participants believe that DA would be useful to their practice. These results can be taken to suggest there is a need for training in DA in New Zealand.

In addition to these results participants were also asked to indicate if they were content with their current levels of knowledge and application of DA. These results are presented in Table 9.

Table 9

Contentment with Knowledge and Application of DA*

| | Knowledge | | | | Application | | | | Total | |
| | No familiarity | | Some familiarity | | Does not apply | | Applies | | | |
Content	n	%	n	%	n	%	n	%	N	%
Yes	10	12.5	11	12.8	7	12.3	11	40.7	39	15.6
No	70	87.5	75	87.2	50	87.7	16	59.3	211	84.4

*Note total number of responses is greater than total number of participants (n=186) as some participants were asked this question in relation to both knowledge and application.

Table 9 shows that the majority of participants were not content with their level of knowledge or level of application of DA. The number of participants who indicated they were not content with their knowledge and application was even across groups (range = 87.2% - 87.7%), with the exception being for those participants who applied DA. Of these participants the percentage of participants who were not content with their application of DA was 59.3% (n=16). This was lower than the other groups and is likely a reflection that these participants apply

DA. Overall 84.4% (n=211) of responses indicated participants were not content with their current level of knowledge and application of DA.

Participants were given the opportunity to provide further explanation for their answers to questions relating to their contentment with their knowledge and application of DA.   In total 80 participants took this opportunity. Most comments (88.75%, n=71) were made by participants who indicated that they were not content with their level of knowledge or application of DA. The most common content of comments related to wanting to learn more about DA (38 comments, 47.5%). Examples of these comments included "Would like to learn more and how it can be incorporated into my practice" and "I was very impressed with the 'taster' we had during our training and would like to learn more about this form of assessment". A number of comments also related to not knowing what DA is (16 comments, 20.0%). Examples of these comments include "I don't know what it is" and "Haven't really go a clue about it." An additional 15 comments (18.75%) were categorised as other. For example, "I am currently in a relieving position and don't expect to be an RTLB in the future" and "I feel it is a great tool and one that should be used by RTLB far more often than current".

Of the participants who indicated that they were content with their level of knowledge of DA (n=6) only one participant indicated having familiarity with DA, whilst five participants indicated they did not have familiarity with DA. Most comments made by these participants pertained to not having knowledge of DA with one participant commenting "If it was important I would probably have heard about it by now." The comments from participants who indicated contentment with their application of DA (n=4) were varied and included comments related to time constraints and applicability of DA to the RTLB position.

The final question on the survey asked if participants would like to receive information on DA training that may be provided in their area. The majority of participants (n=137, 87.3%) responded that they would like to receive information regarding training on DA.

Summary

The results pertaining to demographic information presented in this chapter suggest that a broad spectrum of the RTLB population responded to the survey on

DA. Of the 186 survey responses included in data analysis, 43.5% of participants indicated they were not at all familiar with DA whilst 33.9% of participants indicated that they were barely familiar with DA. The level of articulated knowledge of DA was less than the reported level of familiarity with some participants not able to describe their understanding of DA with reference to any keywords or concepts of DA. Application of DA was also low with 15.1% of the population reporting applying DA in their practice and additional results suggesting the actual rate of application to be lower than the reported rate of application. The majority of RTLB, however, responded that DA is, or would be useful to their practice. No differences in familiarity were found as a function of location of employment or education level. These results, taken with responses on contentment with knowledge and application of DA, barriers to the application of DA, and if RTLB would like to receive more information on DA indicate that there is a need for training on DA in New Zealand. These results, their relationship to previous research and their implications are discussed below.

Chapter Five: Discussion

The purpose of this research was to gather information on the current status of Dynamic Assessment (DA) in New Zealand. Resource Teachers of Learning and Behaviour (RTLB) were surveyed to gather information on the following research questions:

- What is the level of knowledge of Dynamic Assessment amongst RTLB?
- What is the level of application of Dynamic Assessment amongst RTLB?
- Do RTLB believe DA has utility?
- Are there differences in the levels of knowledge and application of Dynamic Assessment based on location off employment or highest qualification?
- Is there a need for training in DA in New Zealand?

The results of the survey were presented in Chapter Four. The results pertaining to the research questions, their relationship to prior research and the implications of this research are discussed in this chapter. In addition, the limitations of the current research and areas for future research are also suggested. First, however, the demographic characteristics are discussed with comment on the degree to which the survey population is representative of the entire RTLB population in New Zealand.

Demographic Variables

A total of 195 RTLB participated in the survey. This represents 21.6% of RTLB employed in 2013 ("RTLB cluster allocations and regions," n.d.). Of the RTLB Association, through which participants were recruited, approximately 41.5% of members were represented, as the RTLB association reports approximately 50% membership (Belinda Kusabs, personal communication, June 9, 2013). This is an acceptable response rate as Manfreda, Bosnjak, Berzelak, Haas, & Vehovar (2008) found response rates to web based surveys to vary between 11% and 82%.

RTLB from all areas of New Zealand responded to the survey. The largest numbers of participants came from the Auckland region. This area was expected to have the largest response rate as it represents the region containing the largest city

in New Zealand. Thus, in regards to the participants location of employment, the survey responses were representative of RTLB from all areas of New Zealand.

The year in which training was completed was fairly stable between the establishment of the RTLB service and present. The number of participants completing training in 2000/2001 and currently in, or yet to begin, training were larger than the intervening years. The reasons for these larger numbers are not known, although could reflect larger training groups due to the establishment of the RTLB service (2000/2001) and RTLB restructuring (2012) which has lead to increased numbers of RTLB ("RTLB cluster allocations and regions," n.d.). As year of training completion was spread and the larger groupings can be accounted for, it is suggested that the year of training completion in the survey responses may be representative of the whole RTLB population.

In regards to the highest qualification participants had obtained, the largest number of participants (43.5%) had received a Postgraduate Diploma as their highest qualification. This is expected as this represents the qualification obtained from RTLB training. The second largest group had received Bachelor's Degrees (20.4%). This may be representative of the large number of participants who indicated they were still to complete their RTLB training. The same number of participants indicated they had Masters degrees (20.4%), whilst a smaller number of participants had received a Post-Masterate Post Graduate Diploma (4.3%, indicative of Educational Psychology training in New Zealand) or Doctorate Degree (1.1%). Similarly, a small number of participants indicated that they had received a University Diploma (10.2%), which was historically a teaching qualification in New Zealand. Due to the variation seen in the highest qualification received as well as the largest group of participant's highest qualification being representative of RTLB training, it is suggested that these results were representative of the whole RTLB population. Taken together, the survey responses to the demographic information questions suggest that the survey population may be representative of the whole RTLB population.

Level of Knowledge

Participants level of knowledge of DA was obtained from responses to two survey questions. In the first question participants were asked to rate their

familiarity with DA. This question was adapted from the previous research by Lidz (1992) and Haney and Evans (1999). Results showed that the majority of participants did not have a high level of familiarity with DA as 43.5% were not at all familiar and 33.9% were barely familiar with DA. Only 2.7% of participants were very familiar with DA whilst 19.9% were somewhat familiar with DA. These results are interesting when compared with the previous research from which this question was adapted. A comparison of the current research and the research of Lidz (1992), Haney and Evans (1999) and Molano (2007) can been seen in Table 10.

Table 10.

Familiarity with Dynamic Assessment Across Four Studies

	Current Research	Lidz (1992)	Haney & Evans (1999)	Molano (2007)
	n = 186	n = 120	n = 228	n = 80
Familiarity	*%*	*%*	*%*	*%*
Not at all	43.5	20	56	77.50*
Barely	33.9	17	15	13.75
Somewhat	19.9	37	19	5.00
Very	2.7	26	8	3.75

* This percentage was taken from 'no' responses to the question, *Are you familiar with DA?*

As can be seen in Table 10 the results across these studies vary. It should be noted that the participants in these studies were different. In the study by Lidz (1992) trainers teaching in School Psychology Graduate programs across the USA were surveyed. The participants in the study by Haney and Evans (1999) were practicing School Psychologists in the USA. In the research by Molano (2007) participants were practicing Psychologists in the USA with Psychologists who were trained in testing procedures, likely to have contact with children, and likely to have contact with Latino populations, being targeted. In the current research the participants were RTLB in New Zealand. The variations in the results may therefore be due to the differences between the participant groups of the studies. In spite of the differences in participant groups there are several interesting comparisons to make.

One comparison between the current research and prior research is in the percentage of participants who were not at all familiar with DA. In the current research there is a smaller percentage of participants who were not at all familiar with DA than in the in the research by Haney and Evans (1999) and Molano (2007). Consequently, there is a higher percentage of participants who have some knowledge of DA in the current research. One could infer from this that there may be a higher percentage of RTLB who have knowledge of DA than Psychologists in the USA. Another comparison between the current research and prior research is that there were less participants who were very familiar with DA than in all three prior studies. This suggests that although RTLB are more likely to have some familiarity with DA, the level of in-depth knowledge of DA is less in the current research than in the prior studies.

One possible reason for this can be extrapolated from the question asking RTLB how they obtained their knowledge of DA. In total, 28.1% of participants responded that they had obtained their information on DA from RTLB training. Although this percentage was lower than the percentage of RTLB who had obtained their knowledge from reading (50.4%) and a friend or colleague (39.8%), it indicates that at least some information on DA is provided in University programmes for RTLB. In addition, four participants commented that during their RTLB training they had received information on DA. This information was described as an "introduction" and "taster" by participants. This terminology suggests that information on DA is provided during RTLB training, although it may be limited in quantity. This training is likely to account for the higher percentage of participants being at least barely familiar with DA than in the research by Haney and Evans (1999) and Molano (2007). It also supports the comments of Lidz (2009) that in order for DA to become more widely known and applied it must first become familiar to, and taught by University staff.

The second question pertaining to knowledge of DA in the survey was an open ended question in which participants were asked to describe their understanding of DA. Participants descriptions of their understanding of DA revealed that the number of participants who were able to articulate their understanding of DA was lower than the number of participants who indicated that

they had at least some familiarity with DA. Only 51.4% of the participants who indicated that they had at least some familiarity with DA responded to this question with reference to one or more keywords or concepts related to DA, in their own words. This indicates that the level of in-depth knowledge of DA was not high amongst participants and further, may indicate that most RTLB knowledge of DA is limited. Assuming that those who indicated that they were not familiar with DA would not be able to respond to this question, only 28% of the entire survey population articulated their understanding of DA with reference to one or more keyword or concept of DA.

Of the 48.6% of participants eligible to answer this question but who did not answer with reference to at least one key word or concept relating to DA, in their own words, 16.2% did not attempt to answer this question. This may reflect that open ended questions are more difficult to respond to than closed questions (Dillman et al., 2009). It also may be an indication that it is more difficult to articulate knowledge of a concept than to rate ones knowledge of a concept. Interestingly 11.4% of participants who did respond to this question provided a description that was more closely aligned with another assessment paradigm. The descriptions of other forms of assessment that were provided included ecological and collaborative assessment practices. Thus, a number of participants who reported having familiarity with DA would seem to be misinformed as to the construct of DA.

In addition to descriptions of DA that were more closely aligned with other assessment paradigms, 4.8% of participant's descriptions of DA were found to been have taken directly from Wikipedia ("Dynamic assessment - Wikipedia," n.d.). This suggests that these participants knowledge of DA was limited and did not allow them to articulate their understanding of DA. Further, one could propose that due to the wide availability of easily accessible information on the internet, it is easy to obtain familiarity with a wide array of topics. The availability of information does not, however, necessarily lead to understanding. For understanding to be achieved, it appears that deeper involvement with the subject matter is needed.

Taken together, the results pertaining to knowledge suggest there is limited knowledge of DA amongst RTLB. A total of 43.5% of participants responded that

they were not at all familiar with DA, whilst 33.9% responded that they were barely familiar with DA. In addition, only 51.4% of participants who indicated they were familiar with DA articulated their understanding of DA with reference to one or more keywords or concepts related to DA. This shows that the level of in-depth knowledge of DA amongst RTLB was limited. This is in line with other research that has found limited knowledge of DA. Knowledge must be obtained before application is possible as without knowledge DA is not able to be applied. In the case of DA it has been found that a high level of training and knowledge is needed in order for DA to be applied (Deutsch & Reynolds, 2000; Haywood & Lidz, 2005).

Level of Application

The results, described above, show that level of in depth knowledge of DA was limited. Results of the survey questions pertaining to application showed that a total of 28 participants reported that they applied DA in their role as an RTLB. This represents 32.9% of those who indicated they had at least some familiarity with DA and 15.1% of all participants. The actual level of application may, however, be lower than 15.1% as response tracking revealed that eight of the participants who reported applying DA were unable to articulate an understanding of DA with reference to any keywords or concepts related to DA. Of these eight participants, five described an alternative form of assessment. This suggests that some participants who believed they were implementing DA had an inaccurate understanding of DA and consequently were implementing other forms of assessment. In addition, when participants were asked to describe the DA procedures that they implemented, eleven descriptions were more closely aligned with other assessment paradigms. This suggests that the actual level of application of DA is likely to be lower than the reported level of application of DA.

The level of application of DA has been researched in a number of studies throughout the world. For example, in the USA, Haney and Evans (1999) found that 39% of School Psychologists familiar with DA applied DA with varying frequency, whilst 26.7% of Psychologists familiar with DA applied DA in the research conducted by Molano (2007). Also in the USA, Lidz (1991) found that of the trainers in school psychology training programmes who reported being familiar with DA, 24% applied DA. In the United Kingdom Deutsch and Reynolds (2000) found that 53% of

Educational Psychologists who had participated in training on DA, applied DA. As these results suggest, there is variability in the level of application of DA. It should be noted that the higher proportion of participants applying DA in the study by Deutsch and Reynolds (2000) is likely due to the participants being trained in DA. The results of the current research, in which it was found that 32.9% of those with familiarity of DA report that they apply DA, is within the range of level of application found in previous research, as the research of Haney and Evans (1999) and Deutsch and Reynolds (2000) found higher percentages of participants applying DA whilst the research of Lidz (1991) and Molano (2007) found lower percentages of participants applying DA.

Other research that has been conducted on the level of application of DA is often designed to investigate the range of assessment practices used. For example, in investigating the assessment practices of School Psychologists with second language learners in the USA, McCloskey and Athanasiou (2000) found 26% of respondents used DA, compared to 57% using the Wechsler Intelligence Scale for Children and 79% using classroom observations. This percentage of application of DA is also in line with other research focusing solely on DA. Taken together the results of research on the application of DA suggest that DA is applied infrequently.

The current research also found an interesting trend in the application of DA. Of those participants who reported that they applied DA, it was more likely that DA was applied frequently. That is, of the participants who applied DA, 50% reported applying DA with at least one case every three months. The number of participants applying DA decreased as the frequency of application decreased. That is 32.1% of participants who applied DA applied it with at least one case every six months, 10.7% of participants that applied DA applied it with at least one case per year, and 7.1% of participants who applied DA applied it with less frequency than once per year. This trend, although less pronounced, was also seen in the research of Haney and Evans (1999). In their study Haney and Evans (1999) found that the 18% of participants applied DA once every three months, 11% once every six months and 10 % once per year. The trend found in the research by Haney and Evans (1999) and the current research suggests that those who apply DA are more

likely to apply it often. This trend in application could relate to the utility of DA. That is, those who apply DA find it useful and thus, apply it frequently.

Utility of Dynamic Assessment

Both the current research and the research by Haney and Evans (1999) found of the participants who applied DA participants were more likely to apply it frequently. This may suggest that those who applied DA find it useful. The current research specifically asked participants for their opinion of how useful they thought DA was, or would be, if they were to apply it. A large majority of participants indicated that they thought DA had, or would have utility, with 92.5% of participants responding that they thought DA would be useful or very useful to their practice as an RTLB.

This finding supports the research by Woods and Farrell (2006) who also found that DA was seen to have utility. In the study by Woods and Farrell (2006) DA was ranked 10th most useful assessment method by Educational Psychologists in the UK, which was higher than the actual usage ranking of 14th. In other research Freemen and Miller (2001) found that DA was viewed by Special Needs Co-ordinators to be useful for understanding and planning educational interventions. This finding of utility was found even though DA was unfamiliar to Special Needs Co-ordinators (Freeman & Miller, 2001). The linking of assessment to intervention is likely to explain why DA is seen as useful. Information as to the type, quantity and efficacy of intervention is able to be produced by DA (Elliott, 2003; Ryba, 1998). This type of information is seen as useful in planning educational strategies (Freeman & Miller, 2001).

Differences in Knowledge and Application Based on Demographic Variables

An additional finding of the current research was that the level of knowledge of DA did not vary according to location of employment or level of qualification. Differences in knowledge of DA based on demographic variables were investigated as it was thought that indentifying differences, if there were any, would allow for a deeper understanding of the status of DA in New Zealand. The chi square tests of association between the demographic variables and level of familiarity showed that there was no association between these variables. Thus, the level of qualification and location of employment did not associate with the level of familiarity with DA.

Need for Training

The results of this research have shown that the level of application of DA is limited and the level of in-depth knowledge of DA is also limited. RTLB, however, considered DA is or would be useful to their practice. These results suggest there is a need for training in DA, in New Zealand. In addition to the results on the level of knowledge, application and utility of DA, participants were asked to indicate if they were content with their current levels of knowledge and application of DA. Of the participants who did not apply DA, including participants who did and did not have familiarity with DA, 87% responded that they were not content with their levels of knowledge and application of DA. This rate was lower for those who did apply DA as 59% of participants who applied DA responded that they were not content with their levels of application. Further, 87.3% participants also responded that they would like to receive information in regards to training on DA. These results suggest that RTLB would like to know more about DA and apply DA with more frequency. Additionally it suggests that RTLB are open to training and learning more about DA.

Knowledge, application, and utility are interlinked and directly related to the training that is available. Training supplies the knowledge that is required in order for application of DA to occur. Further, utility is required for DA to be applied. Research has shown that a high level of training is required in order for DA to be implemented. For example, Deutsch and Reynolds (2000) found that the Educational Psychologists who had completed the most training in DA were more likely to apply DA. That is, 94.4% of Educational Psychologists who had completed five to fifteen days training implemented DA, whilst 15% of Educational Psychologists who had completed three days training applied DA and 0% of Educational Psychologists who had completed less than three days training implemented DA. In research with DA trainers, Haywood and Lidz (2005) found the highest proportion of DA trainers believed the minimum time required for training was 35 to 40 hours while the optimal time for training was 45 to 60 hours. These studies indicate that a high level of training is required in order for DA to be implemented.

The current research goes some way to support this finding. It appears from participant comments and the results to the question regarding how participants obtained their knowledge of DA that some information on DA is provided during RTLB training. This information, however, appears to be limited, as evidenced in most participants (61.7%) indicating that lack of knowledge was a barrier to the application of DA. Further, in participants comments language such as 'introduction' and 'taster' were used to describe the information on DA that had been received. Thus, the higher percentage of participants in the current research indicating at least some familiarity with DA when compared to Haney and Evans (1999) and Molano (2007), could be attributed to the fact that some information on DA is provided in RTLB training. The limited levels of DA application could be inferred to be a function of the lack of in-depth knowledge of DA, due to a lack of in-depth training.

Implications of the Current Research

The results of this research have implications for both the context of New Zealand and for research into DA. In the context of New Zealand, the results of this research suggest that DA is not applied frequently and this infrequency of application may be due to the limited knowledge on DA. There is, however, a perception that DA is, or would be of use to RTLB. This may be because RTLB are aware that multiple sources of assessment bring about a more accurate response or intervention (Ministry of Education, 2011). Likewise this perception of utility may be due to the links between assessment and instruction, which RTLB often make through their case work. These results combined with the levels of contentment with current levels of knowledge and application of DA, as well as an openness to learning about training opportunities, suggests that there is a need for information and training on DA to be provided to RTLB. Further, these results suggest that there is a desire for training on DA.

The provision of training on DA would broaden the repertoire of assessment practices that RTLB are able to engage in. Utilisation of a range of assessment practices contributes to effective evidence based practice (Merrell et al., 2012), an underlying principal that guides professional practices within education in New Zealand (Annan & Priestley, 2012). Further, knowledge and use of a broad range of

assessment practices is needed in order to effectively assess and provide intervention for the broad range of learning needs RTLB are presented with. DA could be applied as part of existing frameworks for practice, such as situational analysis (Annan, 2005), and add to these frameworks by providing direct evidence for potentially successful interventions prior to the implementation of the intervention programme (Elliott, 2003). For this to occur, information and training on DA first needs to be provided to those who engage in assessment and intervention with students.

In the context of international research on DA, the current research supports several prior conclusions. The first conclusion that the current research supports is that DA is applied with relative infrequency. The current research found that the level of application of DA was 32.9% of those who had familiarity with DA. This is in line with other research on DA (e.g. Haney & Evans, 1999; Lidz, 1992; Molano, 2007) that have concluded there is a low level of application of DA. Further analysis of the responses to the survey revealed that the actual level of application is likely to be lower than the reported level of application. This low level of application was not due to a low level of utility of DA as most participants believed DA was or had the potential to be useful to their practice as RTLB. It is likely that the low level of application of DA was due to the limited knowledge participants had of DA.

In addition, in regards to knowledge of DA, the current research supports the suggestions of Stringer et al. (1997) and Lidz (2009) that a lack of knowledge of DA contributes to a lack of application of DA. The current research found low levels of both knowledge and application of DA amongst RTLB. A total of 77.4% of participants in the current research were not at all or barely familiar with DA, suggesting there is limited knowledge of DA amongst this participant group. Additionally, a small percentage of participants (15.1%) reported that they applied DA and actual level of application is likely to be lower than reported level of application. It is likely that the limited knowledge of DA contributes to the limited application of DA as knowledge must be obtained before application is possible.

Lidz (2009) suggests one way to increase application and knowledge of DA is to ensure it is known about by University lecturers and taught in University training courses. There was evidence from the current research that DA is indeed

incorporated into RTLB training as evidenced in the number of RTLB who identified they obtained their knowledge of DA from RTLB training in addition to comments made by participants regarding information on DA being provided in RTLB training. It does appear however, that this training was limited in quantity as it was described as an 'introduction' and 'taster' by participants.

The fact that DA was incorporated into RTLB training highlights two interesting points. Firstly, as the percentage of participants who indicated that they had at least some familiarity with DA was higher than in the studies by Haney and Evans (1999) and Molano (2007), it suggests that teaching of DA in University training courses does increase the level of knowledge of DA. Secondly, because the amount of training provided in the RTLB training programme was limited and the application of DA was low, this suggests that training in DA needs to be comprehensive in order for it to be applied. This is congruent with the research of Deutsch and Reynolds (2000) and Haywood and Lidz (2005) who both found, in different ways, that training in DA needs to be comprehensive.

Research Limitations

One limitation of the current research is the self selection bias, or non-response error that is inherent in survey research (Dillman et al., 2009; Fowler, 2009). Self selection bias or non response error occurs in surveys when the individuals who do not respond to the survey differ from those who do respond to the survey (Fowler, 2009). These differences may be in attitudes, beliefs, characteristics, and behaviours (Dillman et al., 2009). In the current research the level of self selection bias or non response error is unknown. RTLB chose to respond to the survey. It is not known if, and to what extent, the participants who responded to the survey differed from those who chose not to respond to the survey.

The current research was also limited to one group of professionals who regularly assess students with learning difficulties, RTLB. This participant group differs from the participant groups that have been the focus of prior research on DA. For example, Haney and Evans (1999) included School Psychologists as participants and Molano (2007) included Psychologists as participants. Lidz also included Psychologists as participants although these participants were trainers in

psychology training programmes. In the current research the participant group consisted of RTLB. There are similarities between the roles of RTLB and Educational Psychologists in New Zealand, in terms of the work in which they engage in, however, there are also differences in terms of training and specific job roles. It would be interesting to conduct similar research with Educational Psychologists in New Zealand.

Future Research

As mentioned above, one interesting piece of future research would be to conduct a similar survey with Educational Psychologists in New Zealand. This research would be interesting as it would allow a comparison between these two groups of professionals working within a similar area. Investigation of the knowledge and application of DA with Educational Psychologists and other professionals within the field would lead to greater insight as to the status of DA in New Zealand. Further, it may help to understand the role that training or employment has in the implementation of different assessment practices.

It is hoped that this research may lead to more information and training on DA becoming available in New Zealand. If this were to occur research could be conducted to ascertain the levels of application and utility of DA once training had been completed. This could take a similar approach to the research by Deutsch and Reynolds (2000), in which the level of application of DA, and the supports that are needed to apply DA are the focus of the research. This could lead to research on the utility of DA from the viewpoint of a broader array of interested parties such as teachers, parents and support workers. Before this can occur knowledge of DA needs to increase to where practitioners can apply DA.

Summary

This chapter has discussed the results of the current research in relation to other research and the broader implications. Participants responses to demographic questions indicated that a wide variety of RTLB responded to the survey and thus the findings could be generalised to the whole RTLB population, although the extent of the self selection bias or nor response error is not known. The level of knowledge and application of DA was limited. This was congruent with previous research on DA. RTLB did, however, indicate that they thought DA was or

would be useful to their practice. These results combined with the low levels of contentment with current levels of knowledge and application suggest that there is a need for training in DA in New Zealand. Future research could investigate levels of knowledge and application of DA amongst other educational professionals as well as the perception of the utility of DA amongst other interested parties once DA had been implemented.

Final Summary

The focus of this research was Dynamic Assessment (DA). DA differs from traditional, static forms of assessment. The key characteristics of DA are interaction and intervention occurring between the assessor and the person being assessed during the assessment process. The resulting information is able to provide information on intervention characteristics. DA is based on the premise that cognitive functioning is open to modification. The work of Vygotsky and Feuerstein have provided the theoretical bases of DA. Although criticisms have been levelled at this form of assessment DA has been applied to multiple fields. These fields have included neuropsychology and psychopathology. The most common area in which DA has been applied is in an educational context. Within the field of Education, students with learning and developmental disabilities are often the focus of DA in terms of both research and application. This is likely to be due to the strong links between assessment and intervention.

Although DA links assessment and intervention research has shown that DA is applied less frequently than other forms of assessment. A number of reasons have been suggested for low levels of application of DA. One of these suggested reasons is the lack of knowledge and training available on DA. The current research was designed to investigate the level of knowledge, application and utility of DA amongst a group of education professionals who regularly engage in the assessment and intervention with students who experience learning difficulties, RTLB. In addition, differences in knowledge and application based on demographic variables were investigated to gain a deeper understanding of DA in the New Zealand context. These areas were the focused upon so that it could be ascertained if training on DA is needed.

A survey was developed for the purposes of this research. Some survey questions were adapted from prior research on DA by Lidz (1992) and Haney and Evans (1999). The survey was administered using the web based survey tool, Survey Monkey, and distributed through the RTLB association. A total of 195 RTLB responded to the survey although nine responses were not included in data analysis, due to these participants only responding to questions pertaining to demographic information.

The results of the survey showed that level of knowledge of DA amongst RTLB was limited as 43.5% of participants indicating that they were not at all familiar with DA and 33.9% of participants indicating that they were barely familiar with DA. In addition, the number of participants who were able to articulate their understanding of DA, with reference to keywords and concepts of DA, was lower than the number of participants who reported at least some familiarity with DA.

Application of DA was also limited with 32.9% of participants who were familiar with DA indicating that they applied DA. This corresponded to 15.1% of the whole survey population. The actual level of application of DA is likely to be lower than the reported level of application of DA as response tracking revealed that some participants who reported applying DA described an alternative assessment paradigm. Further, a number of participants described assessment tools that did not correspond to DA in their description of DA procedures. Thus, the actual level of application of DA amongst RTLB is likely to be lower than 32.9% of those who reported being familiar with DA.

In regards to the utility of DA it was found that RTLB thought DA had, or would have utility, were they to apply it. A total of 92.5% of participants indicated they thought DA was, or would be useful or very useful to their practice. No differences in knowledge and application of DA were found based on demographic variables. From these results and results on levels of contentment with current knowledge and application of DA it was extrapolated that there is a need for training on DA in New Zealand.

The results of the current research were congruent with prior research that has been conducted on DA. Prior research also found that participants had limited levels of knowledge and application of DA. Although some training in DA is included

in RTLB training programmes it appears that this training is limited in quantity. As research has shown, the level of training required for DA to be applied is considerable. Consequently there is currently not enough training on DA in New Zealand for it to be implemented frequently. It is hoped that in the future more information and training on DA will become accessible so that DA can become an important and regularly used form of assessment in New Zealand.

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Appendices

Appendix A

Permissions to Use and Adapt Questions from Previous Research

Permission from Dr Carol Lidz

helsw@hotmail.com

From:	"Carol Lidz" <zdilsc@aol.com>
Date:	Thursday, 23 May 2013 5:38 a.m.
To:	<helsw@hotmail.com>
Subject:	Re: Permission to use questions from your 1992 survey

Hello Helen,

I am pleased to give you permission to use as much of the survey as you wish or need, of course, as you state, giving appropriate citation. If you have a copy of the full article, I'm afraid that there is no more that I could provide. It was many years and many moves ago. However, if you only have an abstract and not the full article, I could send you a copy of that.
There was another, similar but independent, study a few years after mine. I don't recall the authors off hand, but it was published in the journal named Psychology in the Schools.

I would very much appreciate a copy of your completed study, and would be happy to add this to the reference list on the DA website now maintained at Peabody Library, Vanderbilt University. I will be giving a keynote address on DA at the upcoming IACEP conference in Leiden, THe Netherlands, and there will be a number of other presentations on DA. This is the main gathering of researchers and practitioners who are interested in this topic. I know you are far from there, but it would be wonderful if you could attend.
Good luck with your study,

Carol Lidz
zdilsc@aol.com

-----Original Message-----
From: Helen Hodges <helsw@hotmail.com>
To: zdilsc <zdilsc@aol.com>
Sent: Wed, May 22, 2013 1:40 am
Subject: Permission to use questions from your 1992 survey

Hello Dr Lidz,

My name is Helen Hodges. I am studying Educational Psychology (School Psychology) at Massey University in New Zealand. My chosen topic for my Master's thesis is the knowledge of dynamic assessment, its application and utility amongst professionals who work with students with learning and/or behavior difficulties.

I am collecting the information using a survey and would like permission to use some of the questions from your survey in the study titled 'The Extent of Incorporation of Dynamic Assessment into Cognitive Assessment Courses: A National Survey of School Psychology Trainers' (1992).
I will be incorporating the questions as stated and/or adapting them for my context. Any information that is obtained from your study will be appropriately referenced.

Further, would it be possible to obtain a copy of your original survey? At present I am limited to the questions as they are shown in the results section of your (1992) study and would like to obtain a more complete understanding of your survey.

I am happy to provide you further information and the outcomes of my study, should you wish.
I would really appreciate your help in this matter.

Thank you for your time and attention.
Kind regards,
Helen Hodges

Permission from Dr Michelle Haney

helsw@hotmail.com

From:	"Haney, Michelle" <mhaney@berry.edu>
Date:	Wednesday, 29 May 2013 11:32 a.m.
To:	"Helen Hodges" <helsw@hotmail.com>
Subject:	Re: Permission to use survey questions from your 1999 study

I think I can safely give you permission on behalf of Dr. Evans. He retired some years ago. Best of luck!

Sent from my iPhone

On May 28, 2013, at 7:15 PM, "Helen Hodges" <helsw@hotmail.com> wrote:

> Hello again Dr Haney,
> Thank you very much for your permission to use your survey questions. I have also contacted Dr Lidz to request permission from her.
> I am having trouble contacting Dr Evans. Do you by any chance happen to have Dr Evans updated email address?
> Thank you.
> Kind regards,
> Helen Hodges
>
> -----Original Message----- From: Haney, Michelle
> Sent: Friday, May 24, 2013 4:20 AM
> To: Helen Hodges
> Subject: RE: Permission to use survey questions from your 1999 study
>
> Hi Helen,
> You are welcome to include the survey questions from our paper. I believe many of those items were modified from a survey constructed by Carole Lidz (which is referenced in the paper).
> Best wishes,
> Michelle
>
> Michelle R. Haney, Ph.D.
> Associate Professor of Psychology
> Coordinator of Ralph George Scholar Lecture Series, George Scholars
> Program, and the Psychology Lab
> Charter School of Education and Human Science
> Berry College
> PO Box 495019
> Mount Berry, GA 30149-5019
> 706-238-7903 (phone)
> 706-368-6971 (fax)
> _____ñ_____

7/11/2013

Appendix B

Survey Questions Adopted from Prior Research

Survey Question from Current Research	Survey Question from Lidz (1991)	Survey Question from Haney & Evans (1999)
To what extent are you familiar with dynamic assessment?	Are you familiar with dynamic assessment as a assessment model?	To what extent are you familiar with dynamic assessment as an assessment model?
How did you obtain your knowledge of dynamic assessment?	How did you become aware of the model?	How did you become aware of the dynamic assessment model?
Do you conduct dynamic assessment yourself?	Do you conduct dynamic assessments yourself?	Do you conduct dynamic assessment yourself?
What if anything inhibits your use of dynamic assessment?		If you are familiar with the model, but do not use it at least every six months, is it because . . .

Appendix C

Printed Version of the Survey

Please note: Some questions appear twice in the printed version of this survey. This is due to the computer programming that allowed for only questions relevant to each participant to be presented, based on participants responses to previous questions. Questions were presented only once to each participant.

Dynamic Assessment

Introduction

Welcome to the survey on Dynamic Assessment.
This questionnaire will take 5-10 minutes to complete.

Thank you for your participation.

Demographic Information

*1. In what position are you currently employed?

( ) Resource Teacher of Learning and Behaviour (RTLB)

( ) Educational Psychologist

( ) Speech Language Therapist

( ) Management

( ) Other (please specify)

[   ]

Demographic Information

2. What management position do you currently hold?

( ) RTLB Manager

( ) Service Manager (Special Education)

( ) District Manager (Special Education)

( ) Regional Manager (Special Education)

Demographic Information

*3. In which geographic region do you work?

[   ]

Demographic Information

*4. In which year did you complete your training for your position?

[   ]

*5. Did you complete your training for your current position in New Zealand?

( ) Yes

( ) No (please specify the country in which you completed your training)

[   ]

Demographic Information

Dynamic Assessment

*6. What is the highest qualification that you currently hold?

○ University Diploma

○ Bachelors Degree

○ Postgraduate Diploma

○ Masters Degree

○ Post Masterate Postgraduate Diploma

○ Doctorate Degree

Knowledge

*7. To what extent are you familiar with dynamic assessment?

Not at all familiar	Barely familiar	Somewhat familiar	Very familiar
○	○	○	○

Knowledge

*8. How did you obtain your knowledge of dynamic assessment?
(please tick all that apply)

☐ Dynamic Assessment Workshop (post training)

☐ Professional development course (post training)

☐ Coursework in a training programme

☐ Reading

☐ Friend/colleague

☐ Other (please specify)

Knowledge

*9. Please briefly describe your current understanding of dynamic assessment.

Dynamic Assessment

Knowledge

*10. Are you content with your current level of knowledge of dynamic assessment?

○ Yes

○ No

Please explain (optional)

[text box]

Knowledge

*11. Are you content with your current level of knowledge of dynamic assessment?

○ Yes

○ No

Please explain (optional)

[text box]

Application

*12. Do you conduct dynamic assessment yourself?

○ Yes, at least one case every 3 months

○ Yes, at least one case every 6 months

○ Yes, at least one case per year

○ Yes, less than one case per year

○ No

Application

*13. What dynamic assessment procedures do you use?

[text box]

Application

Dynamic Assessment

*14. What (if anything) inhibits your use of dynamic assessment? (please tick all that apply)

- ☐ I do not have enough training on how to conduct dynamic assessment
- ☐ It takes too long
- ☐ It does not fit with the demands of my position
- ☐ I have concerns about the validity of dynamic assessment
- ☐ I do not think dynamic assessment adds value
- ☐ My use of dynamic assessment is not inhibited
- ☐ Other (please explain)

Application

*15. Are you satisfied with your current level of dynamic assessment use?

- ○ Yes
- ○ No

Please explain (optional)

Utility

*16. How useful do you consider dynamic assessment is to your practice?

Really not useful	Not useful	Useful	Very useful
○	○	○	○

Please explain (optional)

Application

Dynamic Assessment

*17. What (if anything) inhibits your use of dynamic assessment?

☐ I do not have enough training on how to conduct dynamic assessment procedures

☐ It takes too long

☐ It does not fit with the demands of my position

☐ I have concerns about the validity of dynamic assessment

☐ I do not think dynamic assessment adds value

☐ My use of dynamic assessment is not inhibited

☐ Other (please explain)

[   ]

Application

*18. Are you satisfied with your current level of dynamic assessment use?

○ Yes

○ No

Please explain (optional)

[   ]

*19. How useful do you think would be to your practice were you to implement it?

Really not useful	Not useful	Useful	Very useful
○	○	○	○

Please explain (optional)

[   ]

Utility

Dynamic Assessment

*20. Dynamic assessment is based on the theory that all people are capable to some degree of learning. It is an interactive approach to conducting assessments in that there is interaction between the assessor and the person being assessed. This interaction is designed to induce changes in the learners independent functioning so that processes that obstruct and promote successful learning can be determined. The assessment provides information on what interventions promote change in the learner (adapted from dynamicassessment.com).

Given the limited information on dynamic assessment provided above, how useful do you believe dynamic assessment would be to your practice?

Really not useful	Not useful	Useful	Very useful
○	○	○	○

Please explain (optional)

Final Questions

*21. Would you like to receive information on dynamic assessment training that may be provided in your area?

○ Yes

○ No

22. Do you have any additional comments?

Finish

Thank you very much for completing the questionnaire on dynamic assessment. Your participation is greatly appreciated!

Appendix D

Introductory Email for the Survey

Hello,

My name is Helen Hodges. I am studying Educational Psychology at Massey University. My chosen topic for my Master's thesis is the knowledge of dynamic assessment, its application and utility amongst professionals who assess and work with students with learning and/or behaviour difficulties.

The information will be collected via online questionnaire. It should take no more than 10 minutes to complete. I would like to invite you to participate in this study.
https://www.surveymonkey.com/s/DynamicAssessment

Your participation in the study is very much appreciated. It is hoped that the information that you provide will help to inform professional development opportunities and training, further enhancing the practices of inclusive education professionals and increasing positive outcomes for students that we serve. All responses (regardless of your familiarity with dynamic assessment) will be very valuable to this research.

All information that is gathered will be non identifying and kept strictly confidential. The questionnaire must be completed by 7th July 2013.

Please click on this link https://www.surveymonkey.com/s/DynamicAssessment to access the questionnaire.

This project has been evaluated by peer review and judged to be low risk. Consequently, it has not been reviewed by one of the University's Human Ethics Committees. The researcher(s) named above are responsible for the ethical conduct of this research. If you have any concerns about the conduct of this research that you wish to raise with someone other than the researcher(s), please contact Professor John O'Neill, Director, Research Ethics, telephone 06 350 5249, email:humanethics@massey.ac.

Thank you very much for your time.
Kind Regards,
Helen Hodges

Appendix E

Low Risk Notification Acknowledgement Letter

MASSEY UNIVERSITY
TE KUNENGA KI PŪREHUROA

22 April 2013

Helen L Hodges
16 Hood Crescent
Arrowtown 9302

Dear Helen

Re: Dynamic Assessment in New Zealand: Knowledge, Application and Perceived Utility Amongst Inclusive
        Education Professionals (Working Title)

Thank you for your Low Risk Notification which was received on 19 April 2013.

Your project has been recorded on the Low Risk Database which is reported in the Annual Report of the Massey
University Human Ethics Committees.

The low risk notification for this project is valid for a maximum of three years.

Please notify me if situations subsequently occur which cause you to reconsider your initial ethical analysis that it is
safe to proceed without approval by one of the University's Human Ethics Committees.

Please note that travel undertaken by students must be approved by the supervisor and the relevant Pro Vice-Chancellor
and be in accordance with the Policy and Procedures for Course-Related Student Travel Overseas. In addition, the
supervisor must advise the University's Insurance Officer.

A reminder to include the following statement on all public documents:

*"This project has been evaluated by peer review and judged to be low risk. Consequently, it has not
been reviewed by one of the University's Human Ethics Committees. The researcher(s) named above are
responsible for the ethical conduct of this research.*

*If you have any concerns about the conduct of this research that you wish to raise with someone other
than the researcher(s), please contact Professor John O'Neill, Director (Research Ethics), telephone 06
350 5249, e-mail humanethics@massey.ac.nz".*

Please note that if a sponsoring organisation, funding authority or a journal in which you wish to publish requires
evidence of committee approval (with an approval number), you will have to provide a full application to one of the
University's Human Ethics Committees. You should also note that such an approval can only be provided prior to the
commencement of the research.

Yours sincerely

J. O'Neill

John G O'Neill (Professor)
**Chair, Human Ethics Chairs' Committee and
Director (Research Ethics)**

cc   Terence Edwards   Dr Mandia Mentis
        School of Education   School of Education
        Albany   **Albany**

        A/Prof Helen Southwood, HoDS
        School of Education
        Albany

Appendix F

RTLB Permission Email

Please note: Some of this email content has been removed to maintain privacy.

helsw@hotmail.com

From:	"Belinda Kusabs" <belindak@rtlbcluster8.ac.nz>
Date:	Sunday, 9 June 2013 1:43 p.m.
To:	<helsw@hotmail.com>
Cc:	"Claire Murphy Sec" <nzrtlbsec@gmail.com>
Subject:	Survey

Kia ora Helen

Good to hear from you. Your survey sounds interesting.

I have sent your message on to the secretary with the suggestion that it could be sent out to RTLB via regional coordinators.

Please let me encourage you to attend our conference in Auckland held at Ellerslie Event Centre between 25th and 27th September. We would like as many educators as possible to attend and you may wish to encourage others completing study in special education to attend also.

Feel free to contact me directly any time.

You may indeed want to join the NZRTLBA as an associate member.

Ng mihi nui

Belinda

Belinda Kusabs
National Coordinator
NZRTLB Association
Email: belindak@rtlbcluster8.ac.nz
Mobile: 021 733 865

Appendix G

Raw Data for Each Survey Question

Q1. In what position are you currently employed?

	Frequency	Percent
Other (please specify)	2	1.1
Resource Teacher of Learning and Behaviour (RTLB)	177	95.2
Management	7	3.8
Total	186	100.0

Notes: Other = 1 RTLB & Ed Psyc, 1 RTLB /High Learning Needs Teacher

Q2. What management position do you hold?

	Frequency	Percent
RTLB	6	100

Notes: This question has become irrelevant as only RTLB surveyed

Q3. In which geographic region do you work?

	Frequency	Percent
Northland	15	8.1
Auckland	37	19.9
Waikato	22	11.8
Bay of Plenty	0	0.0
Central North Island	9	4.8
Hawkes Bay/ Gisborne	19	10.2
Taranaki	10	5.4
Wairarapa	4	2.2
Greater Wellington	27	14.5
Marlborough/Nelson	1	.5
West Coast	2	1.1
Canterbury	26	14.0
Otago	10	5.4
Southland	4	2.2
Total	186	100.0

Q4. In which year did you complete your training for your position?

	Frequency	Percent
1977	1	.5
1982	1	.5
1988	1	.5
1998	3	1.6
1999	4	2.2
2000	34	18.3
2001	24	12.9
2002	11	5.9
2003	4	2.2
2004	2	1.1
2005	7	3.8
2006	5	2.7
2007	8	4.3
2008	5	2.7
2009	9	4.8
2010	6	3.2
2011	1	.5
2012	10	5.4
NA	1	.5
Exempt	1	.5
Pre-training	12	6.5
In-training	36	19.4
Total	186	100.0

Q5. Did you complete your training in NZ?

	Frequency	Percent
Yes, in training or pre-training	184	98.9
UK	1	0.5
(currently in RTLB training in NZ)		
Mongolia	1	0.5
Notes: This question has become irrelevant as RTLB is a NZ concept		

Q6. What is the highest qualification that you currently hold?

	Frequency	Percent
University Diploma	19	10.2
Bachelors Degree	38	20.4
Postgraduate Diploma	81	43.5
Masters Degree	38	20.4
Post Masterate Postgraduate Diploma	8	4.3
Doctorate Degree	2	1.1
Total	186	100.0

Q7. To what extent are you familiar with dynamic assessment?

	Frequency	Percent
Not at all familiar	81	43.5
Barely familiar	63	33.9
Somewhat familiar	37	19.9
Very familiar	5	2.7
Total	186	100.0

Q8. How did you obtain your knowledge of DA?

	Frequency	% Of answers
DA workshop (post training)	4	3.8
Professional Development	7	6.7
Coursework in training program	29	28.1
Reading	52	50.4
Friend / Colleague	41	39.8
Other	3	2.9
Did not answer	2	
legitimate skip (no knowledge)	81	
Notes: Tick all that apply		

Q9. Please briefly describe your current understanding of dynamic assessment (Open ended question)

	Frequency	% Total	% Of answers
Self identified little knowledge	11	5.9	12.5
Directly from Wikipedia	5	2.7	5.7
1 keyword/concept	29	15.6	33
2 keywords/concepts	16	8.6	18.2
3 keywords/concepts	6	3.2	6.8
4 keywords/concepts	3	1.6	3.4
answer did not contain key words	6	3.2	6.8
DA equated ecological or collaborative assessment	12	6.5	13.6
No answer	17	9.1	
legitimate skip	81	43.5	
Total	186	99.9	100

Q10. Are you content with your current level of knowledge of dynamic assessment? (has *some* knowledge)

	Frequency	% Total	% Of answers
Yes	11	5.9	12.8
No	75	40.3	87.2
no answer	19	10.2	
legitimate skip	81	43.5	
Total	186	100.0	100

Q11. Are you content with your current level of knowledge of dynamic assessment? (has *no* knowledge)

	Frequency	% Total	% Of answers
Yes	10	5.4	12.5
No	70	37.6	87.5
no answer	1	.5	
legimate skip	105	56.5	
Total	186	100.0	100

Q12. Do you conduct dynamic assessment yourself?

	Frequency	% Total	% Of answers
Yes, at least one case every 3 months	14	7.5	16.5
Yes, at least one case every 6 months	9	4.8	10.6
Yes, at least one case per year	3	1.6	3.5
Yes, less than one case per year	2	1.1	2.3
No	57	30.6	67.1
no answer	20	10.8	
legitimate skip	81	43.5	
Total	186	100.0	100

Notes: the total number of people who implement DA is n=28 or 15%

Q13. What Dynamic assessment procedures do you use?

Open ended question

Q14. What (if anything) inhibits your use of dynamic assessment? (*for respondents who apply DA*)

	Frequency	Percent
I do not have enough training on how to conduct dynamic assessment	12	42.8
It takes too long	1	3.6
It does not fit with the demands of my position	2	7.1
I have concerns about the validity of dynamic assessment	1	3.6
I do not think dynamic assessment adds value	1	3.6
My use of DA is not inhibited	9	32.1
Other	6	21.4

Notes: Tick all that apply

Q15. Are you satisfied with your current level of dynamic assessment use? (those who apply)

	Frequency	% Total	% Of answers
Yes	11	5.9	40.7
No	16	8.6	59.3
no answer	1	.5	
legitimate skip	158	84.9	
Total	186.0	100.0	100

Notes: Of the people who apply DA 59.3% are not satisfied with their current level of use (40.7% are)

Q16. How useful do you consider dynamic assessment is to your practice? (*for those who apply DA*)

	Frequency	% Total	% Of answers
Really not useful	1	.5	4
Not useful	1	.5	4
Useful	14	7.5	56
Very useful	9	4.8	36
no answer	3	1.6	
legitimate skip	158	84.9	
Total	186	100.0	100

Q17. What if anything inhibits your use of dynamic assessment? (*for who have knowledge but do not apply DA*)

	Frequency	Percent
I do not have enough training on how to conduct dynamic assessment	46	80.7
It takes too long	0	0
It does not fit with the demands of my position	3	5.2
I have concerns about the validity of dynamic assessment	0	0
I do not think dynamic assessment adds value	1	1.7
My use of DA is not inhibited	0	0
Other	12	21

no answer	20

Notes: tick all that apply question

Q.18 Are you satisfied with your current level of dynamic assessment use? *(have knowledge but do not apply DA)*

	Frequency	% Total	% Of answers
Yes	7	3.7	12.3
No	50	26.9	87.7
no answer	20	10.8	
legitimate skip	109	58.6	
Total	186	100.0	100

Q19. How useful do you think would be to your practice were you to implement it? (*have knowledge do not apply***)**

	Frequency	% Total	% Of answers
Really not useful	4	2.2	7
Not useful	2	1.1	3.5
Useful	38	20.4	66.7
Very useful	13	7.0	22.8
no answer	20	10.8	
legitimate skip	109	58.6	
Total	186	100.0	100

Q20. Given the limited information on dynamic assessment provided above, how useful do you believe dynamic assessment would be to your practice? (*no knowledge***)**

	Frequency	% Total	% Of answers
Really not useful	1	.5	1.3
Not useful	3	1.6	3.8
Useful	42	22.6	53.8
Very useful	32	17.2	41
no answer	3	1.6	
legitimate skip	105	56.5	
Total	186	100.0	99.9

Q21. Would you like to receive information on dynamic assessment training that may be provided in your area?

	Frequency	% Total	% Of answers
Yes	137	73.7	87.3
No	20	10.8	12.7
no answer	29	15.6	
Total	186	100.0	100

Q22. Do you have any additional comments?

Open ended question