
When Tests ‘Frame’ Children: The Challenges of Providing Appropriate Education for Children With Special Needs

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Decision-making regarding intensive instructional support for children with special needs should build from children’s instructional needs, and not from diagnostic labelling and criteria for funding eligibility. Cognitive referencing, the use of results on intelligence and language quotients to decide children’s academic options and funding eligibility, is established as inappropriate practice yet continues to be used by many education systems. This paper discusses systemic practices in Australia, the United Kingdom and the United States, and then details four cases of children ‘framed’ by their tests, that is, experiencing unwarranted disadvantage due to how they were positioned by their tests and diagnoses. The final section makes recommendations for considerations needed in the improving of Australian education of children with special needs.

Keywords: assessment, cognitive referencing, instruction

Virtually every Australian with a disability encounters human rights violations at some point in their lives and very many experience it every day of their lives. (National People with Disabilities and Carer Council (NPDC), 2009, p. 3)

A useful analogy for assessing and monitoring educational progress of students with special needs is that of light shining through different facets of a prism. The separate views through the individual facets are the potential sources of data that can be gathered in building an understanding of children’s strengths, weaknesses and needs. Many school-aged children with special needs are assessed for the purpose of deciding the extent and types of educational resources that will be allocated to supporting their needs in current and future years, and the effectiveness of the education they are receiving. For these children, the different views from different facets are likely to include:

1. the child and family’s perspectives, experiences, hopes, expectations, and preferences
2. the child’s educational needs and history, including responsiveness to different types and aspects of instruction, and results on informal, formal and dynamic assessments conducted by the child’s teachers

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3. those teachers' experiences in working with the child, and their judgments about the child's educational and social-emotional state, functioning, strengths, and weaknesses
4. assessment by visiting specialists, including school psychologists and speech pathologists, using observation and standardised tests.

As an increasing number of relevant views are integrated, the picture of the child's achievement and needs matches more closely to the child. While the child (the prism) remains unchanged, at times the views obtained may differ markedly. In seeking clarification of these differences, modified views and deeper understanding of the child are developed. The challenge of effective assessment and instruction is to draw together these different sources of data as efficiently as possible.

Categories of special needs impacting school students and their teachers include physical, learning, intellectual, attention, communication, autistic, social-emotional and behaviour disorders (American Psychiatric Association, 1994). Many of these children are identified for Special Education: education using formal individual education plans provided on the basis that these students need education services additional to usual classroom resources. Special Education services usually include reduced adult-child ratios for part or all of the school day, and provision of specialist services (Giangreco & Broer, 2005; Suter & Giangreco, 2009). The numbers of students with formally identified special needs is large and rising (Fuchs, Mock, Morgan, & Young, 2003). The number of students formally identified with Learning Disability (LD), a significant discrepancy between ability in reading and writing and cognitive ability, rose massively in the United States in the 1980s and 1990s (Fuchs et al., 2003), a situation likely to be seen in Australia should LD be accepted as a funded Special Education category (Australian Government, 2004; Senate Employment, Workplace Relations and Education References Committee (SEWRERC, 2002); for example, there are indicators that reading accuracy difficulties are present in significant numbers of children in middle school, in addition to children in early years (Galletly, Knight, Dekkers, & Galletly, in press); Australian ADHD numbers are rising, increasing twofold for girls, and tenfold for boys in the period from 1988 to 1998 (Graham, 2007); and Australian numbers for children with language impairment seem likely to greatly exceed those formally identified at present (Jessup, Ward, Cahill, & Keating, 2008a, 2008b; SPA, 2006b). It is also common for children with special needs to not have their needs officially identified; these children are commonly considered as slow learners, with many having serious behaviour difficulties (Achielles, McLaughlin, & Croninger, 2007; Benazzi, Horner, & Good, 2006; Caldarella, Young, Richardson, Young, Young, et al., 2008; Jessup et al., 2008a, 2008b; NPDCC, 2009; SEWRERC, 2002).

The appropriate education of children with special needs creates multiple challenges for education systems, with regard to appropriate financing, placement, and provision of supports (Australian Government, 2004, 2008; Angus, Olney, & Ainley, 2007; DfES UK National Statistics (DfES), 2008; SEWRERC, 2002; Suter & Giangreco, 2009). Children with special needs almost inevitably require more expensive education than their non-disabled peers (Graham, 2007; Fuchs et al., 2003). With mandated requirements for governments of western nations to provide every child with an appropriate education, the increasing numbers of identified children thus places financial pressure on government education bodies. With most children educated in mainstream settings, this additional expense is largely incurred through the increased staffing required to provide small-group, individualised, and specialist programming

(Boe, 2006; Denton, Vaughn, & Fletcher, 2003; Fuchs et al., 2003). Inclusion creates high needs for instructional supports if all students are to make optimal progress (Angus et al., 2007; Australian Primary Principals Association (APPA), 2008; SEWRERC, 2002). In part this is because, in addition to their learning needs, children with special needs frequently have attention and emotional–behavioural difficulties — for example, disproportionately higher numbers facing disciplinary action and exclusion (Achielles et al., 2007; Benazzi et al., 2006).

This article explores the challenges of effective identification and education for Australian children with special needs, through considering systemic policies and their impacts in Australian contexts. It has four sections. The first two sections discuss international and Australian approaches to Special Education and the criteria used to determine eligibility for funded Special Education. The article then explores four case studies of Australian children ‘framed by their tests,’ that is, experiencing unwarranted disadvantage from use of their test scores. The final section discusses the limitations of current identification and education of children with special needs, and makes recommendations for future Australian practice.

Wide Diversity Within International Approaches to Special Education

Nations differ considerably in their processes for identifying and educating students with special needs. Australian children with special needs experience orthographic disadvantage largely specific to Anglophone nations, i.e. reading accuracy and spelling difficulties, and the secondary impacts of these difficulties (Aro, 2004; Cossu, 1999; Galletly & Knight, 2004; Seymour, Aro, & Erskine, 2003). For this reason, in considering the international context in this paper, other Anglophone nations (the United Kingdom and the United States) will be considered. Australia, the United Kingdom and the United States all provide support services to children with special needs at two levels: within-school Learning Support services for children experiencing learning difficulties, and additionally-funded Special Education services for children with severe difficulties and disabilities (DfES, 2008; Dyson & Gallannaugh, 2008; Giangreco & Broer, 2005; SEWRERC, 2002; Suter & Giangreco, 2009).

The UK Context

In the United Kingdom, levels of service for children with special needs are provided on the basis of students’ individual special needs, both social–emotional and academic, identified by their teachers, with no use of diagnostic labelling or categories (DfES, 2008; Dyson & Gallannaugh, 2008). Levels of service include Special Needs with Statement (formal documents detailing the students’ needs and educational arrangements); and Special Needs without Statement, whereby students receive either School Action (using school resources), or School Action Plus, using school resources supplemented by outside specialist services. In 2008, the proportions of the school population receiving special needs services were 17.2% without statements, and 2.8% with statements. In addition to classroom teachers and teacher aides, large numbers of additional teachers and teacher aides are employed for working with children with special needs. The United Kingdom maintains an impressive level of transparency about prevalence and services; for example, England publishes an annual Special Education Needs in England report that details the prevalence of needs, and services provided. Approximately 60% of identified children are in mainstream classes, almost 40% attend special classes or schools, and about 3% attend independent schools (DfES, 2008).

The US Context

In the United States, in addition to mandated specialist school services such as Learning Support, speech pathology, and behaviour management; schools receive funding on the basis of children being diagnosed with disabilities, including intellectual disability, learning disability, language impairment, ADHD, and emotional-behavioural disorders. Mandated requirements that all children receive an appropriate education from educational specialists places pressure on schools and systems to provide appropriate specialist support. This has resulted in long-standing shortages of Special Education teachers, speech language pathologists, and behaviour management specialists (Edgar & Rosa-Lugo, 2007); specialist caseloads considered as excessively high (Dowden, Alarcon, Vollan, Cumley, et al., 2006); and concern over excessive use of teacher aides, or 'paraprofessionals' (Giangreco & Broer, 2005; Suter & Giangreco, 2009).

The Australian Context

It is currently a crux time in Australia regarding the education of students with special needs, with potential to resolve the prevailing mismatch between what could be, and is, provided for children with special needs (Australian Government, 2004, 2005, 2008, 2009; Graham, 2007; National People with Disabilities and Carer Council (NPDCC), 2009; SEWRERC, 2002; van Kraayenoord, Elkins, Palmer, & Rickards, 2001; van Kraayenoord, 2006). Ongoing debates between federal and state governments have been largely terminated through federal mandating of Disability Standards for Education 2005 (Australian Government, 2005), following multiple expensive unsuccessful attempts at reaching consensus (Allen Consulting Group, 2003; Australian Government, 2004; SEWRERC, 2002); and the federal government is currently actively developing the National Disability Strategy (Australian Government, 2008).

The *Disabilities Disability Discrimination Act 1992*, which Australia enacted in 1992, uses a broad definition of disability, in keeping with the United Nations (1990) Convention on the Rights of the Child, recently ratified by Australia (Australian Government, 2004, 2009). The Act's definition does not restrict disability to identification by education system processes, and includes learning, attention, and social-emotional and behaviour difficulties that are not currently funded for Special Education in Australia (Australian Government, 2004). Section 4 of the Act states disability as including '(a) total or partial loss of the person's bodily or mental functions; or ... (f) a disorder or malfunction that results in the person learning differently from a person without the disorder or malfunction; or (g) a disorder, illness or disease that affects a person's thought processes, perception of reality, emotions or judgment or that results in disturbed behaviour'.

The Federal Government considers that education of Australian students with special needs has been unsatisfactory in major ways. The multiple reports paving the way for the Disabilities Standards (Allen Consulting Group, 2003; Australian Government, 2004; SEWRERC, 2002) discuss the federal government providing insufficient financial support to states for special needs education; the rights of students with special needs not being addressed; the need for funding status to be applied to disabilities which currently are not funded, including learning and attention disabilities; the lack of Special Education training of Special Education teachers and aides; the lack of equity between states due to different services and eligibility criteria; lack of effective national data on disability frequency and services; and multiple states resisting moves towards the Disability Standards on the basis that special needs numbers might rise as high as 18% of the school population.

While the above might suggest the federal and state governments are taking benevolent rather than malevolent roles regarding children with disabilities, the states' reluctance doubtless stems from concerns about their capacity to fund services. There are clear needs at the current time to review the required funds for Australian education of all students, including students with and without disabilities; and resourcing for education within classroom teaching, Learning Support, and Special Education (Angus et al., 2007; APPA, 2008; Australian Government, 2004, 2008, 2009; SEWRERC, 2002; SPA, 2006a, 2006b). This need is exemplified in Angus et al.'s (2007) study of 160 primary schools across Australia, which found schools considered 21.7% of children (approximately five per class) to have special needs requiring intensive support or intervention, while less than one quarter of these children were receiving funded intervention. The need is further evidenced in appeals from professional bodies for improved services (APPA, 2008; SPA, 2006a, 2006b), e.g., the APPA's (2008) appeal to the federal government to address resource issues for education of all children, related to inclusive education practices for children with special needs. Items discussed in APPA's submission included insufficiency of resources for children with special needs given large numbers of children not receiving funded support; insufficiency of resources for other children in inclusive classrooms where general school resources and teacher time must be used in supporting nonidentified children with special needs; inappropriately restrictive eligibility criteria built from economic rather than educational considerations; and excessive time taken in assessing and decision-making prior to funding being available (Angus et al., 2007; APPA, 2008).

Contention Regarding Methods of Identifying Children With Special Needs

When funding is directly linked to children's official labelling as having an eligible disability, the processes used in deciding whether or not a disability is present take on heightened importance. There is currently considerable disagreement internationally about what is best practice for identification of children with special needs (Denton et al., 2003; Fletcher, Francis, Morris, & Lyon, 2005; Francis et al., 2005; Fuchs et al., 2003; Johnson, Mellard, & Byrd, 2003). There is also disagreement on whether diagnostic labelling is useful or needed, with many voices raised about labels inappropriately constructing students' identity and options (Duchan, 2003; Graham, 2007; NPDCC, 2009; SEWRERC, 2002; Washington, 2007). The three methods of identification most widely considered by Anglophone nations at the present time are the low-achievement, response-to-intervention (RTI), and cognitive referencing models.

The low achievement model operates independently of diagnostic labelling issues, and allocates services according to the extent of children's needs, existing despite appropriate instruction (Fletcher et al., 2005; Johnson et al., 2003). UK practice seems aligned to this model (DfES, 2008; Dyson & Gallannaugh, 2008), as does the World Health Organization's (WHO, 2007) International Classification of Functioning, Disability and Health framework (ICF). The ICF integrates medical, educational and social frames; and emphasises consideration of strengths, weaknesses, preferences and opportunities in multiple contexts; the child's current functional achievement levels, and the resources and restructuring needed so that the child can make optimal progress in academic and social functioning (Ma, Threats, & Worrall, 2008; Threats & Worrall, 2004; Washington, 2007; WHO, 2007).

RTI is a formalisation of 'appropriate' instruction, using tiers of successively more intensive instruction (Fletcher et al., 2005; Francis et al., 2005; Fuchs et al., 2003;

Johnson et al., 2003). Students who do not make satisfactory progress with classroom instruction are provided with additional Learning Support, and then those who do not progress satisfactorily receive further more-intensive intervention often with specialist involvement. In working successively from classroom instruction to specialist instruction, RTI bridges classroom instruction, Learning Support and Special Education. The United States is currently actively investigating RTI within its search for optimal models of identifying children with special needs (Denton et al., 2003; Johnson et al., 2003; Fletcher et al., 2005; Francis et al., 2005; Fuchs et al., 2003). Opinions vary as to RTI's role in identifying children — for example, whether RTI and low-achievement are sufficient criteria for Special Education eligibility, and whether RTI's role should be pre-referral, that is, preliminary to students' being considered for diagnosis with a disability. Positive features of RTI include its strong emphasis on effective instruction and intervention, and the extent of resources being allocated directly to the student's point of need. RTI works to eliminate 'instructional disability', that is, low achievement due to inappropriate (often insufficient) instruction (Denton et al., 2003; Fuchs et al., 2003). Concern is also expressed that the United States might rush to use RTI when at present there is little rigorous evidence of its fidelity of implementation (Fletcher et al., 2005; Francis et al., 2005; Fuchs et al., 2003; Johnson et al., 2003).

Cognitive Referencing as Inappropriate Practice

Interest in low-achievement and RTI models has waxed as reliance on cognitive referencing has waned. Cognitive referencing is the use of intelligence and language scores as cut-off criteria defining disabilities, including learning disability, intellectual disability, and language impairment (Aaron, 1997; Catts, Adlof, & Ellis Weismer, 2006; Catts, Fey, Tomblin, & Zhang, 2002; Fletcher et al., 2005; Francis et al., 2005; Fuchs et al., 2003; Siegel, 2003; Warner, Dede, Garvan, & Conway, 2002; Washington, 2007). In contrast with low-achievement and RTI models of education, which build from education model frames, cognitive referencing belongs to medical model frames. Using cognitive referencing, instructional resources are allocated not according to extent of functional disability (i.e., the child's needs), but instead on the basis of the child meeting cognitively referenced criteria for allocation to particular diagnostic categories (Aaron, 1997; Catts et al., 2006; Catts et al., 2002; Siegel, 2003). Psychometric tests are useful as contributors to multiple lens views of assessment; however, their use as a prioritised single-view data form is established as being highly inappropriate (Aaron, 1997; Catts et al., 2006; Catts et al., 2002; Fletcher et al., 2005; Francis et al., 2005; Fuchs et al., 2003; Siegel, 2003; Warner et al., 2002; Washington, 2007). Cognitive referencing is usually accompanied by use of specified diagnostic categories, which use cognitively referenced criteria. If children with severe difficulties have profiles that fit the specifications, their school receives additional funding to support their education. If the profiles do not fit, no funding is provided. Sometimes this additionally funded educational support can be planned flexibly, but often it must be used on dictated remedial paths; for example, life skills rather than academic skills for children assessed as having intellectual disability. In cognitive referencing models, children whose scores do not suffice for allocation to a category are found ineligible for these additional support services, and their instructional needs are expected to be met from usual school resources (Angus et al., 2007; APPA, 2008).

Unfortunately, education systems in Australia and the USA are still using language quotients, intelligence quotients (IQ) to mediate children's access to intervention services (Catts et al., 2006; Catts et al., 2002; EAP Verification Team, 2007; NPDCC.

2009; SEWRERC, 2002; Washington, 2007). In addition, most Australian states are not offering funding for many disabilities, accepted under the *Disabilities Disability Discrimination Act 1992*, including attention, learning, social-emotional and behaviour disabilities (Australian Government, 2004; SEWRERC, 2002). In addition to not meeting the rights of children with special needs, this situation reflects a clash between educational and medical frames (Duchan, 2003; Ma et al., 2008; Threats & Worrall, 2004; Washington, 2007). It is ironic that all the children are referred for assessment on the basis of extent-of-need for additional instructional supports (educational frames), yet specific extent-of-disability criteria (medical frames) are then used to decide whether or not services are allocated to meet those instructional needs.

Considerable research has focused on building knowledge showing the inappropriateness of basing educational decision-making on cognitive referencing (Aaron, 1997; Catts et al., 2006; Catts et al., 2002; Siegel, 2003). Key assumptions underlying cognitive referencing that are now established as flawed include the following. First, that children's IQ levels more effectively suggest children's responsiveness to intervention and optimal educational options than does information provided by schools and teachers on the children's responsiveness to different forms of instruction and intervention (Aaron, 1997; Catts et al., 2006; Catts et al., 2002; Siegel, 2003; Spaulding, Plante, & Farinella, 2006); second, that language and literacy weaknesses have different aetiologies in children with average vs. low IQ scores, and that these groups of children require different kinds of remedial treatment (Catts et al., 2002; Fletcher et al., 2005; Francis et al., 2005; Siegel, 2003; Spaulding et al., 2006); third, that children with severe functional difficulties will routinely perform at lowest levels ($> 2SD$) on standardised tests for their area of disability (Washington, 2007); fourth, that children with overlapping disorders are not as suited to or needy of funded educational intervention as children with clearly identifiable single disorders (Catts et al., 2006; Catts, Adlof, Hogan, & Ellis Weismer, 2005; Catts et al., 2002; Stanovich, 1999); and finally, that cut-off points for low intelligence scores have been arbitrarily founded and lack agreement. (Fletcher et al., 2005; Francis et al., 2005; Siegel, 2003).

Other criticisms include that that professionals working closely with children usually do not need an intelligence test to know that a child does not have an intellectual disability (Siegel, 2003; Stanovich, 1999; Fletcher et al., 2005; Francis et al., 2005), and that IQ results are not strong predictors of literacy and language weakness in average-intelligence children, nor useful in differentiating the instructional needs and instruction for children with severe literacy, language and learning difficulties (Aaron, 1997; Siegel, 2003). Further, many children with high needs are not receiving appropriate intervention because of lower intelligence scores, despite evidence that such children have high needs for intervention and make effective progress from intervention (Catts et al., 2006; Catts et al., 2002; Stanovich, 1999). Inappropriate circular reasoning seems present: IQ scores dictate allocated diagnoses (specific language impairment vs. nonspecific language impairment; learning disability vs. intellectual impairment) yet many children in the discrepancy groups are differentiated more by their IQ-discrepancy than by their functional literacy and language levels, instructional needs, and response to intervention. Researchers cognisant of the area inevitably conclude that discrepancy-defined and nondiscrepancy-defined groups of poor achievers are more alike than different (Aaron, 1997; Catts et al., 2006; Catts et al., 2002; Fletcher et al., 2005; Francis et al., 2005; Siegel, 2003; Swanson, Hoskyn, & Lee, 1999).

In the United States, the lengthy battle against cognitive referencing is now largely over with regard to learning disability (LD), with strong consensus that practices using

cognitive referencing to identify LD are invalid (Fletcher et al., 2005; Francis et al., 2005; Fuchs et al., 2003). Australia has avoided the LD debate by not providing disability funding for LD, on the basis that within-school Learning Support resources are sufficient to meet the needs of students with LD; although there is growing recognition that these supports are insufficient (APPA, 2008; Australian Government, 2004; SEWRERC, 2002; SPA, 2006a, 2006b). Cognitive referencing is still used with regard to language disability in both Australia and the United States, despite its inappropriateness being well established, (Aaron, 1997; Catts et al., 2002; Cole & Notari, 1992; Krassowski & Plante 1997; Siegel, 2003; Washington, 2007). Because of this, it is increasingly common for researchers and practitioners to delineate two profiles of language impairment equally in need for intensive instructional support (Catts et al., 2002; Fey et al., 2004; Rice, Tomblin, Hoffman, Richman, & Marquis, 2004): specific language impairment (the profile recognised for funding eligibility) refers to children with language impairment whose WISC scores show a significant gap between low verbal-subtest scores and average-range performance-subtest scores; while nonspecific language impairment (the profile showing similar need for funding eligibility, but often deemed ineligible) refers to children with language impairment who show no functional indicators of intellectual disability, but have WISC scores with no appreciable gap between verbal- and performance-subtest scores. Stanovich (1999, p. 353) exposes the erroneous hidden message of systemic decision-making using IQ to separate funded haves from the have-nots: 'It is rare for the advocates of discrepancy-based definitions to articulate the theory of social justice that dictates that society has a special obligation to bring up the achievement of individuals whose achievements fall short of their IQs, rather than simply to bring up the skills of those with low skills, period'.

When Eligibility Criteria Demand a Primary Disability

With spiralling numbers of identified children placing pressure on limited education funds, governments act in diverse ways to control their expenditure (Denton et al., 2003; Fletcher et al., 2005; Francis et al., 2003; Fuchs et al., 2003). Use of assessment practices likely to establish children as ineligible for special-needs funding and educational support seems particularly inappropriate practice (Denton et al., 2003; Fletcher et al., 2005; Francis et al., 2003; Fuchs et al., 2003). In some locations, systemic ill-use of cognitive referencing and diagnostic labelling is further compounded by requirements that the child's disability must be 'primary': to receive funding, the child's characteristics must neatly fit a single diagnostic category with no overlapping of categories (SPA 2006a, 2006b). This practice is clearly inappropriate given the high needs of children with characteristics of multiple disorders (Achielles et al., 2007; Caldarella et al., 2008; Fletcher et al., 2005; Francis et al., 2005; Fuchs et al., 2003; Stanovich, 1999) and the frequency with which disabilities co-occur. This is seen in the literature showing children with LD having overlapping difficulties with language skills (Catts, Adlof, Hogan, & Ellis Weismer, 2005; Catts et al., 2002; Fey, Catts, Proctor-Williams, Tomblin, & Zhang, 2004; Nippold & Schwarz, 2002; Roth, Speece, & Cooper, 2002; Snowling & Hulme, 2006), cognitive processing (Leonard, Ellis Weismer, Miller, Francis, et al., 2007; Mainela-Arnold & Evans, 2005; Marton & Schwartz, 2003; Ellis Weismer, Plante, Jones, & Tomblin, 2005), social understanding and interaction skills (Brinton, Spackman, Fujiki, & Ricks, 2007; Conti-Ramsden & Durkin, 2008), concentration and attention (Bauermeister, ShROUT, Ramírez, Bravo, Alegria, Martínez-Taboas, et al., 2006; Bonafina, Newcorn, McKay, Koda, & Halperin, 2000; McGrath, Hutaff-Lee, Scott, Boada, Shriberg,

& Pennington, 2008; Musiek, 2000), and behaviour (Rescorla, Ross, & McClure, 2007; Tomblin, Zhang, Buckwalter, & Catts, 2000).

Inappropriate Australian Practice Regarding Language Impairment

At the current time, some Australian states use cognitive referencing to access disability funding for children with language impairment (severe weakness with language comprehension and expression); for example, Queensland does not fund children with nonspecific language impairment (EAP Verification Team, 2007), and Victoria has used tightening of eligibility criteria to reduce numbers of funded children, with scores on language tests now needing to be 3, rather than 2, standard deviations (SDs) below the mean, and children now needing to also show a severe behavioural, safety or health problem (SPA, 2006a, 2006b). This change meant that only 208 Victorian children with language impairment were eligible for funded support in 2006, and that 6,552 children previously on funded support now needed to be supported by general school funding. In addition, the tests states use as eligibility criteria are tests of language fundamentals, and not of sophisticated integrated language skills used in everyday school tasks (SPA, 2006a, 2006b; Washington, 2007). This means children with moderate weakness on language fundamentals but severe weakness in the sophisticated integrated language skills needed for coping with year-level literacy progress, are not eligible for funded support.

Language skills are vital precursors to all educational achievement (Catts et al., 2006; Catts et al., 2006; Catts et al., 2002; Catts et al., 2005; Fey et al., 2004; Nippold & Schwarz, 2002; Roth et al., 2002; Snowling & Hulme, 2006; Washington, 2007), and there are indicators that language impairment is much more widespread and under-identified in Australia than previously thought (Jessup et al., 2008a, 2008b). There is currently a marked lack of equity between states in the education of Australian children with language weakness (SPA, 2006b), seen in Western Australia and South Australia providing Special Education funding to much higher proportions of the school population than eastern states (EAP Verification Team, 2007). Speech pathology national bodies in Australia and the United States recommend a criterion of 1.5 SD below the mean on language test batteries for identifying school children in need of intensive support, which comprises 4.4% of the population (SPA, 2006a, 2006b). Available data shows only two states achieving close to these levels, and great variability in the proportion of students funded in different states (EAP Verification Team, 2007; SPA, 2006b). Western Australia (5%) funds a proportion of students more generous than the 1.5 SD cut-off of 4.4% of children, with South Australia (4%) approaching this level, while the eastern states fund less than 0.5% (EAP Verification Team, 2007).

Children with language impairment almost invariably have severe literacy weakness (Catts et al., 2005; Catts et al., 2002; Fey et al., 2004; Nippold & Schwarz, 2002; Roth et al., 2002; Snowling & Hulme, 2006), such that if Australia funded LD at a disability level, many children with language impairment would receive funded educational support. Given that Australia does not fund LD at disability level (Australian Government, 2004; Loudon, Chan, Elkins, Greaves, House, Milton, et al., 2000; van Kraayenoord et al., 2001), it seems likely this non-equivalence of support levels in different states will translate to distinct levels of educational advantage and disadvantage for Australian students with language impairment and their classmates. With pressure to build Australian educational outcomes (SEWRERC, 2002), there are clear needs for Australia to resolve current unsatisfactory educational practices for children with language weakness.

Child Factors Impacting Test Results

With education systems in Australia prioritising results on standardised tests of intelligence and language as primary criteria establishing eligibility for funding and intervention (SPA, 2006a, 2006b), specialist assessments of Australian children take on heightened importance. Specialist assessment of a child is a single view, a snapshot often taken on a single day, away from usual school circumstances, by educational psychologists and speech language pathologists, who, compared to the child's family and teachers, have only superficial knowledge of the child's idiosyncrasies. When funding decisions are made on the basis of prioritised single views rather than balanced multiple views, the many peripheral factors that limit children's results on standardised tests also take on heightened power. These factors include a student's general and academic self-concepts; locus of control orientation; current literacy level; current general academic levels; history of experience, success, enjoyment of literacy acts and psychometric tests; and attitude and motivation for literacy acts and psychometric tests (Knight, Bellert, & Graham, 2008). These peripheral factors may strongly impact students' attitude and motivation for undertaking an assessment task. Factors such as confidence in working with and revealing areas of weakness to unfamiliar adults, and on-the-day factors such as hunger, tiredness, health, and impact of previous activities on the day may also impact students' performance.

In addition, factors such as resilience, self-image, mood, anxiety and emotions may strongly impact task performance because of their effect on working memory efficiency (Hayiou-Thomas, Bishop, & Plunkett, 2004; Lowe, Lee, Witteborg, Prichard, Luhr, Cullinan et al., 2008; Watts & Weems, 2006). For example, researchers exploring student anxiety in test situations report that high anxiety temporarily reduced available working memory capacity, resulting in slower processing, increased errors, and accuracy often sacrificed in order to complete the task (Ashcraft & Kirk, 2001; Hyun Lee, 1999). Further, a language-impairment pattern of performance can be induced in non-impaired children simply by increasing cognitive processing demands (Hayiou-Thomas et al., 2004). It is likely similar effects occur in anxious children completing cognitive, literacy and language assessments.

Case Studies: Children Framed By Their Tests

The following case studies are of four children, each of whom worked with a private educational consultant, and who were found to have been 'framed' by earlier tests — that is, inappropriately disadvantaged by the use of the test results. All four children were attending public schools in a single state, Queensland, however the elements of their cases are relevant across states and nations. The cases are used to exemplify the disadvantages children may experience due to inappropriate use of the results of psychometric tests.

Case 1: Kyle

Kyle, aged 10 years, was seen by the first author for intervention to improve his literacy skills. He had suffered cerebral injury from severe seizures when aged 3 years. He tired easily, making learning a challenge for him. Ascertained as intellectually impaired, he had attended a Special School for 5 years, but made only very limited academic gains. Kyle's parents were now trying a home-schooling component in his education, supporting his needs for rest while using intense learning before he tired. The parents sought additional information on his difficulties and instructional needs to guide their

home schooling. A review of previous assessments of Kyle showed low IQ scores, and an annual speech pathology assessment, comprising the CELF-3 (Semel, Wiig, & Secord, 1994) battery, on which each year Kyle had scored at the 1st percentile in all areas. Kyle was able to read seven words during testing, in keeping with his mother's estimate of 10 words.

Kyle's family were particularly keen to build his literacy skills so the programming provided by the private consultant focused on reading accuracy and story writing skills, at all times keeping an eye on Kyle's confidence, involvement, and working memory. The high-density, word-reading practice provided by the private consultant focused initially on decontextualised, single words and homemade books with controlled vocabulary. As well, tasks were carefully scaffolded to avoid cognitive overload and ensure high levels of success.

Ten weeks after this individualised instruction had commenced, Kyle could read almost 100 words (41 always correct, 34 usually correct, 24 sometimes correct). Within a few months he was reading a range of reading books and texts, and writing science fiction tales with readable invented spellings.

Why had Kyle made such progress? Could it be keen family support, carefully scaffolded instruction and rest breaks when Kyle needed them? Could it be a new scene, a new start and new teachers? One factor could be the cognitive referencing used in his previous experiences: the tests used, the results obtained, the educational emphases decided as a result of the tests. Defined by his diagnostic label and test scores as intellectually deficient with language skills at a similarly low level, his low literacy progress was perhaps viewed as acceptable, and in keeping with his diagnostic label of intellectual disability (Denton et al., 2003). His chronic tiredness and possible learned helplessness might have further reinforced this view. WYSIWIE (*What you see is what you expect*) and a tendency not to question such expectations is common practice in life and in education. When the child's performance fits with expectations stated in diagnostic labels, it can be hard for educators to pursue educational emphases that seem contra-indicated. His curriculum, until the current year, had perhaps focused largely on life skills and little on academic development. For children with special needs, curriculum requirements are often highly flexible, perhaps creating risks that children may be insufficiently extended in their learning.

Kyle had the funded support but the education provided did not meet his needs (Denton et al., 2003), as evidenced in the progress he made in different circumstances, when viewed through different lenses. It seems likely Kyle would have benefited from rigorous RTI exploring different forms of instruction and intensity thereof, in his previous years at school (Fletcher et al., 2005; Francis et al., 2005; Fuchs et al., 2003). Unfortunately this was not provided. From Speech Language Pathologist (SLP) perspectives, a further likely factor would be the time allocated to testing, which was then not available for treatment. Time spent testing is time not spent teaching. Queensland schools each have SLP time allocation, with many schools receiving only a few hours per week. It is a lengthy process to administer the CELF-3 battery (Semel et al., 1994), to process test results then write reports on those results and recommendations. This would greatly reduce SLP time available to explore Kyle's potential through trialling different interventions and monitoring his response to those interventions. There are needs to weigh the value of time being allocated to psychometric testing instead of to intervention. Kyle, and his extent of education emphases while at school, seems to have been framed by his diagnostic label, his test results and specialist time prioritised for psychometric testing.

Case 2: Leo

Ten-year-old Leo, diagnosed with autism spectrum disorder (ASD), was seen by the first author for assessment of his learning skills and potential. He had been severely depressed, resulting in inpatient assessment at a regional hospital. Psychology and speech pathology assessments, including the WISC, CELF-3 (Semel et al., 1994) and Test of Problem Solving (1994) concluded that Leo had low intellectual ability with some 'savant' skills. Concerned that Leo might be directed to a Special Education unit, his parents stated that his usual performance levels were much higher than the formal results indicated, despite his having performed very consistently on all tests and in all test sessions. It was suggested to the parents that they may need to rethink their expectations and the pressures they had perhaps inadvertently placed on Leo. The parents were confused. They had accepted ASD as part of Leo's life, but had always assumed that Leo had normal ability, and now didn't know what to think about his educational needs and his prospects for the future. Had their expectations been causal in Leo's depression — should they move him to a facility for children with intellectual disability, rather than continuing his mainstream education? A further issue, not raised by the family, was the family having previously lived in countries beyond Australia, and likely to do so again: this new label might impact Leo's educational opportunities in the future.

With anxiety a common feature of both ASD and reduced working memory capacity in test conditions (Ashcraft & Kirk, 2001; Hyun Lee, 1999; Williams, Goldstein, & Minshew, 2006), it is possible that Leo's distress in hospital may have caused exaggeratedly low test scores. To reduce anxiety, the consultant tested Leo in his home environment, with small sweets dispensed liberally to reinforce ongoing work. Far from completely relaxed, Leo nonetheless worked reasonably well. The Neale Analysis of Reading Ability (Neale, 1999) and the Test of Problem Solving (Linguistics, 1994) were completed before he tired after 45 minutes, evidenced in performance dropping markedly, and testing ceased. Leo's reading accuracy was well above 12 years 6 months, the top level of the test, and comprehension was at a 12 year 0 month level, levels compatible with his parents' experience of Leo as a voracious reader with reasonable comprehension. On the Test of Problem Solving, his scores were at age level and above on most subtests, showing a pattern of moderate logical reasoning difficulties in specific areas. Leo's results on this occasion matched his parents' perspective of his learning skills, not that of his cognitive test results. His parents continued Leo's education in regular primary and high school classes.

Leo's case highlights the difficulties of drawing rigorous conclusions from results of psychometric tests of cognitive and/or language skills conducted at a single test-point. It also highlights key factors integral to maximising the rigor of conclusions drawn from such testing. Test results from a single test-point need to be treated with caution. Children's IQ scores often differ significantly from one test-point to another (Francis et al., 2005). When factors such as learned helplessness, depression, disengagement, and anxiety are present, obtained results may be much lower than the child's levels of potential and functioning in more positive situations. When psychometric test results conflict with the perceptions of those working closely with the child in usual life situations, conflicting perspectives can be resolved by gathering further information to explore those conflicts, e.g., in Leo's case, school report cards, interviews with teachers and parents.

Leo would seem to have been framed by inappropriate assumptions about the results of his psychometric tests being more valid than other sources of data.

Case 3: Louise

Sixteen-year-old Louise lives on a remote Queensland pastoral property, and anticipated attending the boarding school her siblings attended. The first author had worked with Louise in preschool years to remediate severe speech and language weakness, then in early school years to support literacy development. Louise had severe phonological and learning weakness in addition to language weakness. She managed verbal communication in conversation reasonably well, but experienced limited literacy development and academic success. Unfortunately, the boarding school staff had viewed Louise's school reports, including an IQ assessment placing her as 'intellectually deficient' (Verbal IQ 72, Performance IQ 54, Full scale IQ 60). They were concerned they might not be able to adequately support Louise and therefore might not accept her enrolment. The family sought further clarification of Louise's abilities from the consultant.

Louise worked conscientiously on all tasks. Her conversation was appropriate, as was her functional comprehension, with occasional requests for clarification of instructions. Louise was assessed using the CELF-3 (Semel et al., 1994). Despite the competent expression and comprehension she showed in conversation, her scores were no higher than the second percentile on any subtest, and at the first percentile for receptive, expressive and full-scale index scores. It is not unusual, from the researchers' experience, for children with healthy functional ability and severe language weakness to obtain very low scores on standardised tests, including IQ and language tests. Seeking further evidence of Louise's capability, discussions were held with Louise's mother about her strengths. The list of skills was extensive, indicating the narrowness of the views provided from standardised testing. They included Louise being a competent horsewoman, representing Queensland in this sport; and also a reliable worker on the property, drafting over 200 weaners on her own, driving 4-wheel drive vehicles all over the property checking stock and water levels, feeding 15–20 horses in the stables by herself, monitoring mares ready to foal, and managing stock in drought conditions. In addition, they showed Louise to be a competent household manager, able to run the household and family meals when her mother was away; and a skilled problem solver, taking on responsibility in diverse areas as needed, and persisting far longer than others in finding practical solutions to seemingly intractable problems. Louise's case suggests the importance of including 'My child's interests' and 'My child's strengths' on case history assessment forms. This data was prioritised above Louise's low IQ and language scores, and Louise went off to boarding school.

Louise has language impairment. She is not intellectually disabled but 'failed' her IQ tests, a not uncommon phenomenon, given recommendations that results from IQ tests be considered against functional levels of intelligence (Fuchs et al., 2003). Why did Louise's assessors decide she was intellectually disabled, rather than having language impairment? Is it possible that this was the most expedient option at the time, given the school's pragmatic aims of achieving funding to enable intensive instructional support which Louise needed, given that the same amount of funding would be received for intellectual disability as for SLI, and the school would have discretion over the type of intervention provided using this funding? In addition, testing by a school speech language pathologist would be needed to establish whether Louise had significant language weakness, although such professionals are not readily available in rural settings. Further, there would have been a risk that Louise might achieve relatively healthy language test results that would jeopardise the funding available on the basis of a diagnosis of intellectual disability. In Queensland, funding is provided only for

diagnoses of specific language impairment, but not for diagnoses of nonspecific language impairment (EAP Verification Team, 2007). Louise's WISC profile meant that only the latter diagnosis would be possible, such that support funding would then not be made available.

Louise had no personal need for any diagnostic label; she simply needed an appropriate education directed at her area of need. It is notable that had adequate school or disability funding been available for learning disability; her educational needs would have been met without recourse to inappropriate diagnoses of intellectual disability. The label of intellectual disability was perhaps 'necessary' to achieve the funding needed for an adequate education. The label was useful in the short term, but in the long term it framed Louise inappropriately in serious and potentially life-changing ways.

Case 4: Jennifer

Jennifer, aged 10 years, had received intensive remediation of severe literacy and language difficulties from the first author for nine months, and had made healthy gains. An 18-month rise in reading-accuracy scores, to an 8 years 0 month level, showed her ability to respond to carefully differentiated intensive intervention with high levels of one:one support. Jennifer was making gains in all focused language and literacy areas, but needed ongoing intensive language support and intervention for this progress to continue.

At school, Jennifer had been assessed for funding towards additional support, but deemed ineligible because her profile did not fit the criteria of available funding categories. Jennifer's language scores showed her to have language levels more than 2 standard deviations below the mean, thus commensurate with allocation to a language impairment category. Unfortunately, her psychological assessment showed her to have cognitive scores at a similarly low level. This precluded funding on the basis of language weakness, as nonspecific language impairment is not a recognised funding category in Jennifer's locality.

Her WISC results suggested possible eligibility for funding on the basis of intellectual disability; however, Jennifer does not show functional indicators of significant intellectual impairment, and results on the Vineland Adaptive Behaviour Scales (Sparrow, Balla, & Cicchetti, 2005) did not support the intellectual disability label suggested by her WISC results. In consequence, Jennifer's school, whose resources for Learning Support are in keeping with the insufficiencies found by Angus et al. (2007), and discussed by the Australian Primary Principals Association (2008), received no additional funding to meet her high needs for literacy, language and Learning Support.

Social justice issues seem present in Jennifer's WISC scores being deemed inappropriate towards a diagnosis of intellectual disability, thus preventing access to funded support for intellectual disability, but appropriate towards preventing eligibility for funded support for language weakness (Stanovich, 1999). In real terms, Jennifer had no need for diagnostic labelling or funding eligibility, simply needs for an appropriate education. The rapid progress made with private intervention suggests inadequacies in the education her schools had been able to provide. Jennifer would benefit by the funding and increased opportunity for an appropriate education that rigorous RTI methods would ensure.

Like Louise, Jennifer has nonspecific language impairment. Louise was allocated an unfortunate label of intellectual disability, but through this label did receive funded support. Jennifer, who has been correctly established as having nonspecific language

impairment, received no funding as she did not fit the categories (diagnostic labels) for which funding was provided. Despite having the language support needs of many others receiving funded support, she was not considered by the system as having difficulties warranting funded support. Jennifer, too, has been 'framed' by her tests.

Seeking Best Practice in the Education of Children With Special Needs

These four children have all been disadvantaged by the way their test results have positioned them. Kyle and Leo seem framed by staff perceptions built from test results, that the performance shown in the test results represents their potential in all situations. Louise and Jennifer seemed framed by systemic use of test results to avoid resourcing the intensive instruction they needed to receive an appropriate education. All four cases show that psychometric test results may not appropriately depict the 'real' child and that, in many instances, can be harmful for the child. Both Kyle, who was receiving funded Special Education, and Jennifer, who was not, shows indicators of not having been provided with an appropriate education meeting their literacy development needs.

How frequently are other Australian children, similar to the above cases, inappropriately framed? How often are their rights denied? Consideration of these four cases in the light of current practice in Australia and other Anglophone nations, Australian federal emphasis on improving the lot of Australians with disabilities, and research knowledge on assessment, suggests the following recommendations.

Identification of Children With Special Needs

The cases exemplify the need to move educational assessment practices from medical to educational frames. Traditionally, work in Special Education for children with language weakness has been conducted from medical frames, focusing on differential diagnoses, causes, symptoms, and associated treatments (Duchan, 2003; Threats & Worrall, 2004; Washington, 2007). Questioning whether assessment is for categorisation, remediation or a balance of both is likely to result in better choices of assessments. Useful points for reflection regarding assessment of children with special needs include the following: How best can the child, family, teachers, and other professionals contribute as equal partners? In what ways do different frames (educational, social, and medical frames, or ICF framework) offer different lenses to view the child? What are the most appropriate 'lenses' for the child's current needs? Do assessment results and reports match with the child's authentic functioning at school and at home? Are the most appropriate assessments being used? Is cognitive referencing being used inappropriately for this child? What sources of corroborative data have been used? In what ways do the child's achievement gaps reflect instruction gaps? Are the assessments strategically guiding intervention?

The cases exemplify the limitations, discussed earlier in this article, of diagnostic labelling, prioritised single assessments, cognitive referencing used for restricting funding eligibility, and specified remedial paths. There needs to be reconsideration of the extent of power given to cognitive tests and tests of fundamental language skills, and to increase flexibility with regard to the types of assessment information which are valued (Duchan, 2003; van Kraayenoord, 2006; Threats & Worrall, 2004; Washington, 2007). Multiple assessment views are needed, including teacher reports, work-sample evidence, dynamic assessments (Jeltova, Birney, Fredine, Jarvin, Sternberg, & Grigorenko, 2007), and response-to-intervention trials (Compton, Fuchs, Fuchs, & Bryant, 2006; Coyne & Harn, 2006; Fletcher et al., 2005; Francis et al., 2005; Fuchs et al.,

2003; Justice, 2006). Diagnostic labels accepted for administrative simplicity are usually not in the child's best interests, and policy-makers need to question whether it is appropriate for funding to be linked to diagnostic labelling, rather than to the extent of each child's instructional needs.

Australian education systems need to reassess the roles and value of diagnostic labelling, and the eligibility criteria used for the educational supports many children need to receive an appropriate education. Do we need diagnostic labelling, and eligibility criteria linked to specific disabilities? The United Kingdom does not use this system, so precedents for Special Education free of labelling are available for scrutiny. Given the extent of research establishing its inappropriateness, we do not need diagnostic categories with eligibility built from cognitive referencing prioritising the results of intelligence and language quotients. We need to be aware that RTI and dynamic assessment of a child's performance over time, with practice and scaffolding, may yield more valid results than psychometric tests of skills not integrally related to everyday functioning. Children may achieve low scores on standardised tests less from their ability levels than from weakness with new tasks, low self-expectations, and anxiety in the test situation, and single assessment views must not be given too much power, as peripheral factors such as test anxiety may be the crucial factors on which decisions are inadvertently based (Ashcraft & Kirk, 2001; Hayiou-Thomas et al., 2004; Hyun Lee, 1999; Lowe et al., 2008; Watts & Weems, 2006). With regard to language skills, integrated language skills — for example, written expression, and social skills — should be deemed equally important as isolated fundamental language skills (Duchan, 2003; Threats & Worrall, 2004; Washington, 2007).

Rights to an Appropriate Education

There is a need to look at the adequacy of the education provided to all Australian children: children with disabilities, children with learning difficulties, and classmates with healthy progress. In restricting categories of disability, and using exclusive eligibility criteria for funded categories, is unnecessary hardship being placed on teachers, schools and Australian children? Can an appropriate education be provided for all children with current funding levels and practices?

For Australian children to receive an appropriate education, do we need systems of Special Education and Learning Support resources separate to classroom resourcing? Could we achieve a seamless system of education support, free of diagnostic labels, focussed primarily on classroom teaching and learning, and providing additional learning, behaviour and social supports, in inclusive or withdrawal settings, as needed for all children with special needs? The practical parameters of an 'appropriate' Australian education, free of diagnostic labelling and meeting children's rights, need to be established. There seems value in Australia scrutinising US requirements of appropriate education, as the services mandated in the United States, as part of appropriate education, seem to far exceed those Australian children currently receive (Achielles et al., 2007; Benazzi et al., 2006; Boe, 2006; Caldarella et al., 2008; Denton et al., 2003; Edgar & Rosa-Lugo, 2007; Fletcher et al., 2003; Giangreco & Broer, 2005; Suter & Giangreco, 2009). Three examples of these services include funding of LD, the provision of speech language pathologists, and behaviour specialists.

Funding of LD might seem purely a Special Education concept, but when a proportion of children receive additional intensive education, this expands the resources provided to all teachers and members of the inclusive classrooms of those children. An Australian instance of such support is seen in South Australia and Western Australia

funding 4.4 to 5% of the school population on the basis of their having significant language weakness. When one in twenty children in the classroom is receiving appropriate high levels of support, with teacher time made freer for instruction of other students, all children benefit.

Provision of effective speech language pathologist services in schools is important for effective Australian education, given the pivotal role of language skills in literacy development, and the strong co-occurrence of language impairment and literacy learning disability in Anglophone children (Catts et al., 2005; Nippold & Schwarz, 2002). Needs for increased services are further suggested by findings of much higher incidence of language weakness in school children than previously considered, and of teachers having significant difficulty identifying children with language weakness (Jessup et al., 2008a, 2008b). This is particularly the case, given current pressure to improve Australian literacy and academic outcomes (PISA, 2007, 2008). In the United States, the nationally recommended maximum caseload for school speech language pathologists is 40 students, with fewer students where cases include individuals with severe communication impairments (Dowden et al., 2006). The school resourcing received, should this level of school SLP services be provided for Australian students, would positively impact the outcomes of all teachers and students.

State, National and International Issues

As suggested by the examples detailed above, Australia needs to scrutinise international practice for principles for improving Australian practice. Current practice is unsatisfactory in many ways, but change is also unsatisfactory unless the new practices are reputable and rigorous. In addition to scrutinising practice in other Anglophone nations, there needs to be scrutiny of the practice in nations with orthographic advantage (Galletly & Knight, 2004; Seymour et al., 2003). It is notable that all four of the children discussed in this article had significant reading difficulties. The impact of English orthographic complexity falls hardest on low-progress learners, in reading and spelling difficulties (Aro, 2004; Galletly & Knight, 2004; Seymour et al., 2003), and education to remediate reading and writing difficulties uses very large amounts of education funding and resources (Australian Government, 2004; Loudon et al., 2000; van Kraayenoord et al., 2001). In the triennial Program for International Student Assessment (PISA) tests of 15-year-olds, world leaders such as Finland, Korea, and Japan use simple orthographies such that reading and spelling are acquired easily; and nations such as Estonia and Slovenia, with small economies but transparent orthographies, are passing the Anglophone nations with relatively little effort (PISA, 2007, 2008): Not having reading difficulties may be a critical factor in optimising education for all students, including children with special needs. The practices of transparent-orthography nations where reading and writing are not difficult for all children, including most children with disabilities, need to be appraised, as it is possible children with Special Needs in Anglophone nations may need higher levels of support than their peers in transparent orthography nations.

The disparities between states in educating children with special needs also raise questions about levels of systemic education. With international comparisons of education now ongoing, schools are working to produce outcomes at state, national and international levels. Consideration needs to be given as to whether the needs of Australian children with special needs will be served best under state education (with differences between states), or under federal, Australia-wide parameters (SEWRERC, 2002).

Conclusion

This article has considered the need for Australian education systems to reflect on issues which impact decision-making about educational funding, eligibility criteria and the education of children with special needs. At the current time, reform of Australian practices in supporting the education of children with special needs is needed. Practices used in different states lack equity, and some inappropriately use outmoded cognitive referencing practices. There are needs for increasing supports for children with special needs. When legislation, curriculum and support resources are appropriate and meet the instructional needs of children with special needs, capacity building occurs which meets the needs of all students (Curry, 2007).

Our goal is to create educational contexts that enhance the learning of all students. For those students with special needs, we must ensure that the most effective means are used to achieve this goal. (van Kraayenoord, 2006, p. 15).

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