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Examining teacher responses to a professional learning program addressing learning disabilities¹

Kay Munyard, Lyndall Sullivan, Jason Skues and Everarda Cunningham

Introduction

Under the ‘blueprint for government schools’, Victorian state educational policy requires schools to identify and provide effectively for the wide array of individual needs and abilities of all students (Department of Education and Training, 2003). Despite this policy commitment, the needs and educational potential of many students are frequently overlooked or inadequately met. Students with learning disabilities, which have an estimated population prevalence rate of approximately 10%, are a particularly neglected group (Prior, 1996).

Teachers regularly encounter students who experience difficulties in learning and school engagement. Leaving aside issues of school educational provision and environment, the reasons for this are often readily apparent. A student may have a lower general cognitive ability, an identified or diagnosed disability, or major social and emotional stressors. However, teachers also frequently encounter students of at least average apparent ability whose learning performance is unexpectedly low or at best markedly uneven. It is likely that many of these students have learning disabilities. These students may also show avoidance, discouragement or reduced engagement in at least some areas of learning.

While teachers have expertise in supporting students over a range of ability levels, they often lack adequate knowledge about learning disabilities and their implications for classroom practice. The underlying problems of

¹This study was supported by an ARC Linkage Grant No. LP0560472

students with learning disabilities can be hard to identify, and so responses are frequently delayed and/or ineffective. Unless they have knowledge and understanding of the challenges faced by students with learning disabilities, teachers will continue to lack the necessary expertise to accommodate their individual learning needs. Addressing the needs of students with learning disabilities is further intensified by issues of definition and knowledge dissemination. This commonly occurring situation reflects a lack of systematic education about learning disabilities both during pre-service teacher training and in on-going professional learning.

Definition and Terminology

The definition of learning disabilities has been a source of controversy and considerable debate among researchers and professionals since the term 'learning disabilities' was first introduced in the United States by Samuel Kirk in 1962 (Hammill, 1990; Kavale & Forness, 2000). The debate ranges from what diagnostic criteria should be employed to identify students with learning disabilities (Scruggs & Mastropieri, 2002) to whether or not learning disabilities even exist (Ysseldyke, Algozzine, & Epps, 1983; Ysseldyke, Algozzine, Shinn, & McGue, 1982).

Despite more than 30 years of debate over its validity, there has been a reluctance to alter the conceptual definition of learning disabilities. While there have been some minor changes, the most widely cited definition of learning disabilities is the United States Office of Education (USOE) 1977 definition, which remains the definition used by the United States federal government. The USOE defined 'specific learning disability' as:

... a disorder in one or more of the psychological processes involved in understanding or in using language, spoken or written, which may manifest itself in an imperfect ability to listen, speak, read, write, spell, or to do mathematical calculations. The term includes such conditions as perceptual handicaps, brain injury, minimal brain dysfunction, dyslexia and developmental aphasia. The term does not include children who have learning disabilities which are primarily the result of visual, hearing or motor handicaps, or mental retardation, or emotional disturbance, or of environmental, cultural, or economic disadvantage (USOE, 1977, p. 65083).

Hammill (1990) asserts that the USOE definition was developed for the limited purpose of determining eligibility for special education funds and was not intended to be a comprehensive conceptual definition of learning disabilities. As such, Hammill argues that the definition developed by the National Joint Committee on Learning Disabilities (NJCLD) best describes the nature of learning disabilities. The NJCLD defined learning disabilities as:

... a general term that refers to a heterogeneous group of disorders manifested by significant difficulties in the acquisition of and use of listening, speaking, reading, writing, reasoning, or mathematical abilities. These disorders are intrinsic to the individual, presumed to be due to central nervous system dysfunction, and may occur across the life span. Problems in self-regulatory behaviours, social perception, and social interaction may exist with learning disabilities but do not by themselves constitute a learning disability. Although learning disabilities may occur concomitantly with other handicapping conditions (for example, sensory impairment, mental retardation, serious emotional disturbance) or with extrinsic influences (such as cultural differences, insufficient or inappropriate instruction), they are not the result of those conditions or influences (NJCLD, 1988, p. 1).

Taken together, both the 1977 USOE and the 1988 NJCLD definitions affirm the notion that learning disabilities describe underachievement in one or more academic areas which are the consequence of some intrinsic neurological problem and not the result of other physical conditions or environmental influences (Kavale & Forness, 2000).

Adding to the confusion surrounding the use of terminology is the frequent use of the terms 'learning disability' and 'dyslexia' interchangeably. While learning disabilities is predominantly used in the United States, dyslexia is the more commonly used term in the United Kingdom (Cook, 2004). Dyslexia is the most common type of learning disability and refers to specific deficits in reading, writing and spelling. More specifically, the International Dyslexia Association (2002, p. 1) has proposed the following definition of dyslexia:

... a specific learning disability that is neurobiological in origin. It is characterised by difficulties with accurate and/or fluent word recognition and by poor spelling and decoding abilities. These difficulties typically result from a deficit in the phonological component of language that is often unexpected in relation to other cognitive abilities and the provision of effective classroom instruction. Secondary consequences may include problems in reading comprehension and reduced reading experience that can impede growth of vocabulary and background knowledge.

In Australia, definitional issues are further compounded by a tendency to use the term 'learning difficulties' instead of 'learning disabilities'. While these two terms are sometimes used interchangeably to refer to the same group of individuals, they have also been applied to different groups of individuals (Chan & Dally, 2000). This situation creates further confusion about which group of individuals is under consideration. Chan and Dally suggest that this misunderstanding can be attributed both to a lack of consensus about the meaning of learning disabilities and to the multiple explanations of the causes of the learning problems.

The inconsistencies in terminology have implications for attempts to integrate the research as well as for determining the prevalence of learning disabilities in particular areas or schools. In 1990, a statement on learning difficulties in children and adolescents produced by the Australian National Health and Medical Research Council (NHMRC) differentiated learning difficulties from learning disabilities. 'Learning difficulties' was described as a generic term referring to children and adolescents with developmental and academic problems that are the result of one or more factors including intellectual disability, physical and sensory impairments, emotional disturbance, inadequate environmental experiences and a lack of appropriate educational opportunities. In contrast, the term 'learning disabilities' was reserved to describe children and adolescents who exhibit developmental and academic problems which are significantly below expectation for their age and general abilities. As such, learning disabilities are suggested to be intrinsic in nature and are not the secondary result of intellectual disability, physical and sensory impairment, or emotional disturbance (NHMRC, 1990).

For the purpose of the current paper, learning disabilities are defined as unexpected underachievement in one or more areas of academic achievement such as reading, spelling, writing or mathematics which is assumed to be associated with specific cognitive impairments such as poor phonological processing, working memory problems, or visual processing problems (Prior, 1996). Furthermore, learning disabilities are distinguished from learning difficulties in that underachievement is attributed to some intrinsic characteristic that is neurological in origin and not the result of below average cognitive ability, sensory deficits, cultural and environmental influences, or inappropriate teaching.

Risk and Protective Factors

When learning disabilities are not recognised or effectively addressed during school years, individuals can face significant and usually lifelong disadvantages including unemployment, juvenile delinquency, criminal conviction and mental health problems (Goldberg, Higgins, Raskind, & Herman, 2003; Raskind, Golberg, Higgins, & Herman, 1999; Smart, Prior, Sanson, & Oberklaid, 2001; Wong & Donahue, 2002). This disadvantage occurs despite the fact that many people with learning disabilities possess areas of high-level ability. Although certain individuals with learning disabilities achieve well and may overcome their disadvantages, the majority endure frustration and underachievement, often leading to diminished life quality and unexpressed potential. For example, a longitudinal study in the USA of individuals with learning disabilities found that 41% were unemployed at the time of the 20-year follow-up study (Raskind et al., 1999). This study also reported an extremely high incidence of problems at school experienced by this group.

The effects of the life-long nature and resistance to intervention of learning disabilities are less well recognised in Australia than other countries such as the USA, where the phenomenon is acknowledged in law. In the USA many students who have learning disabilities successfully complete high school and pursue higher education (Cook, 2004; Reiff, Ginsberg, & Gerber, 1995). In Australia, however, while specific learning disabilities are generally not assessed nor well understood, it is well known that early school leavers frequently have low literacy and numeracy achievement and become disconnected from the school environment (DEET, 2000; Mc-

Millan & Marks, 2003). Prior (1996) suggested that many of these early school leavers are also likely to have a learning disability.

In contrast to the risks faced by many people with learning disabilities, key protective factors that have been identified in the literature as critical for academic success for all students, and particularly for students with learning disabilities, are school connection and sense of control (Raskind & Golberg, 2002; Skinner & Wellborn, 1997). Teaching practices that increase these success attributes may positively change retention rates for students who have learning disabilities. For many such students, school connection and sense of control are the very characteristics for which they are currently at risk (Prior, 1996; Wong & Donahue, 2002). Where learning disabilities are unrecognised and unaddressed it is difficult for students to acquire the self-awareness to take control of their circumstances. Furthermore, a longitudinal study of successful adults who have learning disabilities (Raskind et al., 1999) concluded that personal characteristics including self-awareness, proactivity, perseverance, emotional stability and the use of effective support systems could lead to successful outcomes. Goldberg et al. (2003) suggest that another important element of success was the ability of a person with learning disabilities to compartmentalise the disability as only one facet of their life, rather than seeing it as an all-pervasive aspect of their identity.

The Current Study

Given the significant incidence of learning disabilities, it is likely that most teachers regularly encounter one or more students with learning disabilities in their classes. An important opportunity thus exists for schools and teachers to identify and build strengths in students with learning disabilities as a counter to the substantial risks they may otherwise face. In order to fully engage and assist students with learning disabilities, all schools and teachers need to acquire the skills and knowledge to understand and identify learning disabilities, utilise research-informed teaching strategies, and participate in, and contribute to, a culture of on-going professional learning.

The aim of this paper is to examine the interim responses of teachers to a professional learning program developed by the authors to strengthen the skills and knowledge needed to more effectively support students with learning disabilities in mainstream classrooms. We propose that the pro-

gram, 'Engaging and Empowering Students with Learning Disabilities/Dyslexia' (Cunningham, Firth, Skues, Munyard, & Sullivan, 2006), addresses a gap in the existing capacity of many schools to fully provide for students with learning disabilities as part of their professional obligation towards all students.

Participants

Two outer urban state education school clusters² in Melbourne, Victoria, participated in the study. One cluster was selected for the study because the research team was approached by that cluster's educator/convener, who perceived the need for building the capacity of the cluster's teachers to address the needs of students with learning disabilities in that particular group of schools. The other cluster was identified by its supervising region because it was likely to benefit from the program and because very few students from the schools in this cluster came from non-English-speaking backgrounds. Both clusters were in low socio-economic areas, one in an older suburb, the other in a new suburban growth area. Because some of the schools had already finalised their professional learning programs for 2006, the schools in each of the clusters were divided into two groups as agreed to by school principals. Hence, one group from each cluster completed the professional learning program in 2006 and the remaining two groups in 2007.

Each school was invited to send a team of three to six staff to participate in the professional learning program at the agreed times. Whilst the program was targeted primarily at classroom teachers of Years 5–9, participants also included school leadership and specialist staff such as principals, psychologists and special education teachers. This reflected our intention to support a coordinated whole school approach rather than a selective or specialist approach to assisting students with learning disabilities. The majority of attendees were classroom teachers. Members of leadership and specialist teams attended where possible within their obligations.

A total of 93 school-based personnel were involved in the professional development program, which consisted of four sequential sessions over

² The term 'cluster' is used by the Victorian Department of Education and Early Childhood Development to describe a geographical grouping of one or two secondary schools and four or five primary schools in the government system.

a period of two weeks. Twelve of the participants (e.g. school principals, student teachers) attended irregularly and did not complete evaluation forms. A small number of school-based personnel also missed single sessions (e.g. due to illness) and did not complete evaluation forms on some days³. Of the remaining 81 participants that took part in the majority of sessions, the number of evaluation forms completed following any one of the four professional learning sessions in both clusters ranged from a low of 47 to a high of 75. From an overall maximum of 324 possible evaluation forms (from 81 participants across four sessions), 244 were completed and returned (75%). This included 65 that also provided structured feedback at the end of the final session. Given that numbers attending specific sessions did vary slightly, this percentage (i.e. 75%) will likely be an underestimation of the true response rate.

Materials

The professional learning program was a revised and refined version of a previous program (see Firth & Cunningham, 2004, for a description of the original program). The program, comprising six modules, was intended to increase the capacity of mainstream teachers to better meet the needs of students with learning disabilities. Table 1 provides details of the content of each module together with a brief rationale for its inclusion. Modules were designed to use a variety of teaching and learning approaches including direct teaching, collaborative learning, video presentations, role plays, interactive discussions, sharing of expertise, and demonstrations of inclusive technologies. A feature of the professional learning program was that presenters of the program modelled effective classroom teaching practices for students with learning disabilities throughout the delivery of the program modules. The program also provided opportunities for discussion and review of participants' in-school application of program learning and resources.

Procedure

We delivered the professional development program, which consisted of four sessions over a six-week period, to the four different groups at different times during 2006 and 2007. The timing of delivery of the program

³ No record of specific absences was taken.

was determined by school principals and was dependent on the schools' other professional learning commitments. Two of the presenters have over 20 years of teaching experience in English or Mathematics across primary and secondary schools. The other two presenters, one of whom is a clinical psychologist, had a background in psychology studies. At any given session, the number of presenters ranged from two to four and always comprised a mixture of those with primarily an educational and a psychological background.

Participants attended four sessions for a total of 15 hours. The initial full day of six hours covered the first three modules of the program (see Table 1). Three half-day sessions, each of approximately three hours duration, followed the initial day and sequentially covered the remaining three modules listed in Table 1. Numbers attending each session ranged from 15 to 25. Following the initial day, the half-day sessions were spaced at approximately fortnightly intervals. It was expected that teachers would trial newly-acquired strategies from the program between each of the sessions so that these skills would be gradually incorporated into classroom teaching practice. Each new session began with participants sharing what they had trialed and how it had worked. The fortnightly scheduling also provided opportunities for mutual consultation and sharing of perspectives and expertise between participants and presenters. In this way, on-going partnerships between the researchers and the participants of the research might be established.

Structured feedback was obtained through evaluation sheets distributed at the end of the first and last sessions. Using a five-point rating scale, participants were asked to rate four specific dimensions of program performance, namely (1) program content; (2) presentation style; (3) presentation pace; and (4) quality of activities. They were also asked to evaluate that day's session overall. The ordinal rating scale was as follows: (1) = very poor; (2) = poor; (3) = average; (4) = good; and (5) = excellent. In the final session, participants were asked to evaluate the entire six-week program on each of the four dimensions and at an overall level.

Participants were also invited to write comments on each of the dimensions and on the overall program for that day in terms of what worked well and desired changes or suggested improvements. For sessions two and three, participants were only invited to provide comments on aspects of the program that

worked well and areas that could be improved. This meant that structured feedback was not obtained for these sessions. On every occasion, participants were given the opportunity to provide this feedback anonymously. Obtaining anecdotal feedback through discussion and interaction with the participants was also a planned component of data collection. (A copy of the structured evaluation sheet is included in an appendix.)

Table 1. Overview of modules: engaging and empowering students with learning disabilities

Module	Rationale
<p>1: <i>Definition of learning disabilities (LD)</i> Definition of LD: permanent, neurologically based, varied individual manifestations</p>	<p>Teacher knowledge is currently limited; potential for adverse consequences for students with learning disabilities</p>
<p>2: <i>Identification and assessment</i> Informal and formal classroom screening and assessment tools can be used</p>	<p>Needs of all students need to be known in order to be met within mainstream classroom practice LD not always immediately obvious – students often use their strengths to disguise disability Identification has implications for student engagement</p>
<p>3: <i>The experience of having learning disabilities</i> Video and personal presentations by people identified as having LD Characteristics of successful adults with LD</p>	<p>Builds direct empathic understanding of LD Role models for students in meeting the challenges of LD and achieving their potential</p>

Module	Rationale
<p>4: <i>Building a sense of belonging and a sense of control</i></p> <p>Importance of inclusive classrooms and relationship building</p> <p>Student empowerment – LD is only one aspect of them as a person</p>	<p>Optimum learning occurs when there is a strong relationship between teacher and student and when there are positive teacher beliefs</p> <p>Schools’ obligation to value diversity, and foster student capacity for independent engagement in learning</p>
<p>5: <i>Instructional strategies and curriculum differentiation</i></p> <p>Effective teaching styles, incorporating appropriate accommodations into classroom</p> <p>Teacher practice in adjusting classroom tasks to include those with LD</p>	<p>Demonstrates how accommodations can be routinely incorporated to benefit all students, rather than being a separate task for teachers</p> <p>Builds knowledge and skills about LD for teachers</p>
<p>6: <i>Technology and creating change</i></p> <p>Demonstration of inclusive technologies</p> <p>Creation of individual school Action Plans</p>	<p>Empowers student capacity to work independently and broaden options</p> <p>Minimises previous obstacles to effective learning</p> <p>Operationalisation at school level of knowledge gained through the program</p>

Results

The total number of evaluations received across the four sessions was 244. The quantitative results reported here are based only on the structured evaluation forms completed at the end of the professional learning program and hence relate to overall evaluations of the 15-hour program. When reporting on the qualitative results, all participant evaluations were included.

The number of participants completing evaluations at the end of the final sessions was 65, which represents a response rate of 80%. The results for the evaluations of each of the four program dimensions at the conclusion of the program are displayed in Table 2.

Table 2. Percentages of ratings for program dimensions (n = 65)

Program Dimension	Very poor	Poor	Average	Good	Excellent
	%	%	%	%	%
Content	0	0	6	32	62
Style	0	0	9	34	57
Pace	0	2	11	34	54
Activities	0	2	15	32	51

For the first dimension, namely *Program content*, 94% of participants rated the content as either good or excellent, with the remaining 6% rating it as average. Some comments about the content were:

This has made me think about my teaching style and evaluate whether I am catering for possible learning disabled students in my grade.

All useful to my own teaching and to how I am going to create change at my school.

Improved as it went along – making sense of previous theoretical background.

The second and third dimensions, namely *Presentation style* and *Presentation pace*, were rated similarly by the participants. Presentation style was rated as either good or excellent by 91% of participants while a further 9% rated this dimensions as average. Presentation pace was rated as either good or excellent by 88% and as average by 11%. Only 2% reported that the presentation style and pace were poor.

While the majority of participants expressed satisfaction with the presentation style and pace of the program, some indicated a desire for more interaction and discussion. Example comments included:

Very presenter focused.

Discussion/sharing really helped.

Typical positive comments for *Presentation pace* were:

Easy to follow and listen to.

Fast paced but necessary.

These were countered by remarks such as:

Bit slow.

Hard to get so much information into such a short space of time.

The last dimension, namely *Program activities*, attracted the most criticism. Despite 83% of participants rating the activities as either good or excellent, 15% rated the activities as average and a further 2% rated this dimension as poor. Several participants suggested improvements including:

Weren't many (activities). Some more sharing of ideas from others and ideas from presenters would be good. Ones we had were good though.

A little mundane in terms of most activities were reading tasks. Videos weren't too bad. One was hard to hear.

More commonly, comments were positive, for example:

Great demonstration on reading and writing program online.

Participants were overwhelmingly positive in their rating responses for the program overall. Ninety-two percent of respondents rated the overall program good or excellent and a further 8% rated the overall program as average. Not a single respondent rated the program as poor or very poor. Selected overall feedback comments include:

Very practical ideas ... inspiring for the future. I have seen many kids in middle/senior school just lost and disengaged.

Helped me to understand why some students appear to have grasped concepts but do not perform well when tested formally. Understanding the frustration and sense of hopelessness that these students experience.

More practical stuff that could be used in the classroom.

Practical ideas for informal assessments are most welcomed. At last I feel as though there is something I can do to identify those students with learning disabilities.

Enlightening – providing a very different way of looking at children in my grade.

Just more practical would have been perfect.

I'm a student teacher about to start. This session proved invaluable.

Good to reflect on how students with learning disabilities may feel.

I have already changed my teaching to accommodate some of the strategies you have informed me about.

While written comments were provided by participants in response to each of the four dimensions and the overall rating there was overlap in many of the themes discussed under these headings. Hence, we explored recurring patterns for common themes. Overwhelmingly the themes analysis identified aspects of the program that were perceived to be particularly positive. One recurring theme was that the information provided was relevant because it offered new knowledge about learning disabilities that directly informed teaching practice (that is, it was practical). As one participant described, 'practical ideas for informal assessments are most welcomed. At last I feel as though there is something I can do to identify LD students'. In addition, the program manual was seen to be a resource that could be taken back to the classroom and consulted in future.

Another recurring theme suggested that the variety of presentation styles and formats was a positive characteristic of the program. In particular, participants described positive responses to the range of different presenters (including a guest speaker with LD) and the variety of teaching modes, including power-point presentations, videos, group discussions and activities. As one participant observed: 'it was great to have different presenters and modes of presentation', whilst another commented that 'I enjoyed the variety that was presented; power-point discussion, group work and guest speaker'. The interactive nature of these activities was also seen to be particularly positive in that 'we could frequently ask questions and presenters would come back to them'. Taken together, these characteristics appeared to provide participants with greater insight into the nature of LD as suggested by 'the guest speaker as well as the other afternoon activities gave an idea of how it feels to be a person with LD'

and a sense of empowerment to assist students with learning disabilities, 'at last I feel as though there is something I can do'.

However, not all themes indicated positive characteristics, and some recurring comments suggested areas for potential improvement. In particular, some participants suggested that the sessions progressed too fast, whilst others stated that there was too much information to process properly. These themes potentially suggest areas for improvement in the current program and for future professional development programs.

In addition to the structured evaluation responses, the interactive nature of the program generated intensive discussion and professional sharing about the issue of learning disabilities. During initial sessions, participants confirmed that the area of learning disabilities was generally not well understood in their schools and that professional training and resources were largely lacking. In particular, participants frequently commented on how an understanding of the permanent nature of the neurological processing problems of students with learning disabilities changed their perceptions and their approaches in working with students in their classrooms. They expressed great interest in the information and materials provided and most participants were strongly engaged in the program's activities and opportunities for collegiate discussion and sharing. As the sessions progressed, participants frequently reported that they now had the skills to identify students experiencing learning disabilities and also reported changes to their teaching practice.

Discussion

Ongoing professional development is an important factor for facilitating the implementation of evidence-based teaching practices in schools (Klinger, 2004). The purpose of this study was to determine the extent to which schools and teachers would actively engage in a professional learning program designed to support the needs of students with learning disabilities. Based on the largely positive evaluation responses across the four dimensions of program content, activities, presentation style and presentation pace, as well as responses to ratings of the overall program, the results of the study confirm that the program was very well received by teachers and other school-based personnel across both the primary and secondary sectors.

Participants also provided qualitative comments about these same dimensions, which were examined for recurring patterns. These patterns included themes integral to notions of professional learning, namely gaining new knowledge and associated practical skills, as well as reflection on one's own teaching practice. This is consistent with previous research that has found that teachers are interested in professional development programs and associated learning experiences that are directly applicable to their own teaching practices (Hardy, 2004). Similarly, Englert and Tarrant (1995) emphasised the importance of teachers making connections between abstract theoretical concepts and practical applications. It could be that the current program managed to achieve close to an optimal balance between theory, practice and reflection. The fortnightly timing of the sessions may have further supported time for reflection and time for the adoption of gradual changes in classroom practice.

The qualitative analysis also indicated that group discussions and interactions with the presenters were seen as particularly valuable aspects of the program. One reason why these characteristics might be particularly important is that they provide the opportunities to share information, which can lead to teachers adjusting their teaching practice. For instance, Scott and Spencer (2006) suggest that teachers who believe that students may not benefit from adapting the curriculum may gain insight from the presentation of research findings and the opportunity to discuss this issue with their colleagues. Similarly, providing opportunities for reflection and sharing ideas with colleagues about how to meet the needs of students may result in improved teaching practice (Weiner, 2003).

A related explanation of participant engagement throughout the program was that the program addressed students whom participants readily identified but around whom little, if any, clarity existed. Once they became aware of the permanent nature of the neurological processing problems associated with learning disabilities, participants readily acknowledged that ignorance, confusion, and lack of appropriate provision had generally prevailed, adversely affecting their sense of empowerment to assist students with learning disabilities. In fact it seems that this new knowledge gave rise to teacher need, or even 'hunger', for information and strategies to identify and assist students with learning disabilities. In other words, the knowledge acquired in the initial stage of the program seemed to pre-

pare participants to engage in acquiring the necessary skills and expertise that formed much of the content of the remainder of the program. Once definitional clarity around learning disabilities was established, participants seemed eager to trial the suggested screening tools for learning disabilities and make accommodations and changes to their classroom practice.

While the results of this study provide preliminary support for the need for professional learning relating to learning disabilities, the study had a number of limitations. The fact that the authors of the program were also evaluating the participant responses creates the potential for bias. Given that school teams were invited to participate on the understanding that these teams would then deliver the program in their own schools, future examinations of participant evaluations conducted independently of the authors are warranted. A related problem is that the results reported here were based on author-generated feedback sheets, rather than a previously known and validated questionnaire. In addition, given that sample selection at the cluster level was not random and that selection of participants was left to individual schools, the extent to which the sample is representative of teachers is unknown. Hence the findings reported here require cautious interpretation.

The major limitation of the study was that the findings reported in this study relied entirely on comments and observations made during the sessions or on participants completing feedback sheets immediately at the end of a session. Program evaluations are frequently positive post program, yet do not provide any empirical evidence that the professional learning gained during such sessions actually translates into meaningful and sustained changes in the classroom. While some evidence of changed practices was apparent, based on shared feedback at the beginning of each of the sessions, the extent to which teaching practice may have been influenced and sustained in the longer term was not determined. Longitudinal studies, including a control group and using a variety of teacher and student data collection methods, are needed. Such studies could monitor specific changes in classroom practice whilst simultaneously monitoring changes in outcomes for students who may have learning disabilities. Furthermore, unlike the current study which was unable to make group comparisons because of participant anonymity coupled with the limited nature of the feedback sheets, future studies might compare differences in

the effectiveness of the program across different subgroups (e.g. school sectors, gender).

The professional learning program reported here required schools to release participants for 15 hours on four regular school days. As such, involvement in the program meant a significant commitment of resources for the participating schools and also had the potential for disrupting the day-to-day learning of students due to frequent absences of their mainstream classroom teachers. Many schools simply do not have sufficient resources for such a program. One alternative would be to ensure professional learning programs focusing on students with learning disabilities were mandatory in teacher training courses. In the interim, however, future research needs to determine which program elements are essential for all educators, and how that knowledge is best acquired. For example, it is possible that clarity of definition of learning disabilities was the critical turning point for participants in the current study. Hence an equally efficacious program might consist of the primary content areas relating specifically to learning disabilities, namely definitional clarity, screening tools and matching accommodations and technologies. Using the newly-acquired knowledge, teachers could develop their own approaches based on their knowledge of student needs and utilising principles underlying effective teaching. In addition, if these content areas required approximately six hours of participant involvement, then the optimal timing for such learning (e.g. a single day or three two-hour sessions at fortnightly intervals) should also be explored.

Despite the limitations of this study, the study does have implications for educational systems. While Victorian government policies such as the 'blueprint for government schools' call for high levels of teacher knowledge and professional capacity to support all students' engagement and success in learning (DE&T, 2003), the educational experience of many students with learning disabilities has remained far less than optimal. Under this Victorian state education policy, schools also have a proactive obligation to identify and provide effectively for the diverse needs and abilities of all students. The professional learning program outlined in this study is one example of how policy aims can be directly translated into practice for a group of students with unmet or inadequately met needs. Teacher responses to the professional learning program outlined in this

study confirm that the program potentially addresses an important gap in the existing capacity of many schools to provide effectively for students with learning disabilities.

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Appendix

Program evaluation (used at the end of each session)

Date.....

Name: (optional).....

Please circle your response on the scale: **1 to 5** (1 = *very poor*; 5 = *excellent*)

(a) Program content

1 2 3 4 5

Comment:.....

(b) Presentation style

1 2 3 4 5

Comment:.....

(c) Presentation pace

1 2 3 4 5

Comment:.....

(d) Activities

1 2 3 4 5

Comment:.....

1. What worked well for you in the program?

2. What changes would you like to see made to the program?

Overall rating

1 2 3 4 5

Comments:.....