Effective Writing Instruction Practices for Students with Learning Disabilities

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Abstract

Learning Disabilities (LD) is the most prevalent disability among children in Canada (Learning Disabilities Association of Canada, 2007). However, many students with LD are struggling to meet the increasing academic standards and expectations as they advance in school years—one of the reasons is the challenge they have with writing. Writing is part of almost every subject in schools, but could be particularly frustrating for students who have LD; therefore, it is vital for teachers to provide effective writing instruction and support in order to facilitate their writing. This qualitative research study, based on in-depth interviews with two experienced teachers practicing in the Greater Toronto Area (GTA), investigates the following: writing difficulties faced by students with LD; approaches to teaching writing, such as the process writing approach and explicit/direct instruction, that are responsive to students’ writing difficulties; and, accommodations and support, including technology tools, that aid the writing and writing development of students with LD. The analysis of the data collected coupled with the relevant review of literature reveals the kinds of evidence-based strategies and support teachers implement in their writing instruction for students with LD, as well as challenges involved with the practice.

Keywords: writing, writing instruction, learning disabilities, dysgraphia, teaching strategies, assistive technology
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Introduction to the Research Study

Learning disability (LD) is the most prevalent disability among children in Canada (Learning Disabilities Association of Canada, 2007). According to Statistics Canada (2009) report on the 2006 Participation and Activity Limitation Survey (PALS), in 2006, 3.2% of children (ages 5-14) were reported as having a learning limitation—a learning difficulty from a condition such as dyslexia, attention, and hyperactivity—94.5% of whom were enrolled in school. Also, 90% of children who were in a special education had a learning disability. This situation is not that different for Ontario. Ministry of Education (EDU) statistics reported that in the 2009-2010 academic year, of those students identified as “exceptional” by the Placement and Review Committee (IPRC) in Ontario schools, 43.7% had a learning disability (Learning Disabilities Association of Ontario [LDAO], 2011a).

With such a high percentage of students with learning disabilities in classrooms, it is important for teachers to be aware of the difficulties faced by these “exceptional” students in the academic discipline. The National Longitudinal Survey of Children and Youth (NLSCY) conducted a survey of Canadian children from birth to 11 years (from 1994 to 2001) every two years about their academic achievement. In Ontario, 24.5% of the parents of children with LDs said their child was doing well at school, which is a fairly low percentage compared to 76.1% for parents of children without disabilities (LDAO, 2011a). On top of academic challenges, there are social and emotional problems as well. Of the parents of children with LDs, 14.7% reported their child’s diagnosis of emotional, psychological or nervous difficulties during that period whereas only 1% of
those with children without disabilities did (LDAO, 2011a). The difficulties faced by students with LD do not cease at the grade school level, but rather persist in high school and adulthood, as a significant number of youths and adults with LDs are quitting schools. As learning disabilities are life-long, it is likely that students with LD will face difficulties in universities, colleges as well as at work places (National Joint Committee on Learning Disabilities, 2008). According to Learning Disabilities Association of Ontario (2011a), more than a quarter of Canadians aged 22-29 with LD reported that they do not have a high school certificate.

Learning disabilities “refers to a variety of disorders that affect the acquisition, retention, understanding, organisation or use of verbal and/or non-verbal information” with deficits in one or more of the psychological processes related to learning, such as memory and attention, executive functions, processing speed, visual-spatial processing, phonological processing, and language (LDAO, 2011b). Learning disability is distinct from intellectual disability and, consequently, students with LD commonly show “a significant discrepancy between academic achievement and assessed intellectual ability” (Vieira, 2013, p. 2). One of the greatest challenges for students with LD is language—expressive language through writing being a part of this challenge. Although there has been a fair amount of research on reading and math for students with LD, research on their writing is lacking (Graham & Perin, 2007; Harris, Graham, Brindle, & Sandmel, 2009; Mason & Graham, 2008). For some students with LD, writing is a challenge and this can negatively impact their performance across all subject areas, widening gaps in literacy skills between students with and without LD (National Joint Committee on Learning Disabilities, 2008).
Writing is necessary for successful performance in school and is a method of communicating that is an essential life skill. If students do not develop competence in writing in schools, they will face difficulties later on in the higher educational and employment settings and their careers where they would be required to communicate ideas in writing (National Joint Committee on Learning Disabilities, 2008). Writing is a higher-order cognitive skill, for it requires a complex development of language and cognition. Its process is also complex as it requires a whole array of skills that lead to the best quality written products when automatized: monitoring the composing process, considering the purpose and audience, and paying attention to organization, mechanics, and cohesion (Graham, Harris, & McKeown, 2013). Thus, writing is a challenging skill but particularly frustrating for students who have LD.

When it comes to writing, students with LD tend to struggle all the way throughout the writing process, such as planning, organizing ideas, elaborating, and revising, as well as the physical act of handwriting (Graham, Harris, & McKeown, 2013). With such deficit of basic skills, clearly they require instructional support for writing. As writing practices are not done extensively during school hours and students mostly communicate verbally, students, especially those with LD, can easily experience a slow development of writing skills. Also, students with LD face a lot of difficulty in today’s schools, as the demands of the curriculum as well as the expectations for the students to learn independently have been increasing; the challenge is that much greater for those who have not received proper educational support earlier on (National Joint Committee on Learning Disabilities, 2008). Such difficulties and challenges can lead to negative emotional impact and discourage students with LD (Maag & Reid, 2006).
While education in Ontario fosters integration of students with LDs as well as other disabilities into regular mainstream classrooms, regular teaching methods may not result in successful written performance of LD students as they lag behind in many writing skills and strategies. Regular, as well as special education, teachers need other instructional methods for them. There is a need for evidence-based successful strategies for teaching writing as well as strategies teachers can easily incorporate into the classroom and use with the rest of the students. Furthermore, programs that can foster self-confidence and independence in students with LD should also be implemented to support their emotional well-being and self-regulation. External support involving the use of special instructional equipment such as computer software programs can also be helpful.

Most research on writing have been done on early-age children, and not much has been explored with older students, but this study will attempt to focus on the older, intermediate grade-level students with LD. Although research on writing instruction and intervention focuses a lot on children, adolescents with LD also have trouble integrating skills and expressing knowledge through writing without direct intervention; many older students with LD have trouble meeting academic standards and expectations for writing. I would argue that students with LD will need the same kind of support in later years as well.

**Purpose of the Study**

The purpose of this exploratory study is to discover teachers’ instructional strategies for writing in practice and support provided for intermediate (grade 6-8) students with learning disabilities in writing in Toronto-area schools. The effectiveness of those practices, including the support from technology, will be examined and the
challenges faced by teachers in implementing those practices and support will also be brought to light. The focus of this study will be on teachers’ responses to and beliefs about teaching writing to students who have a learning disability pertaining to writing: dysgraphia and/or dyslexia.

This study will help the educational community discover more about the problems facing students with LD in writing within mainstream classrooms. It will also help discover more about the teaching strategies teachers use to support students’ writing both inside and outside of classrooms. The study will also inform teachers about the effectiveness of particular strategies for teaching writing to students with LD as well as effective and supportive accommodation practices.

**Research Questions**

The goal of this study is to discover and to help inform practicing teachers and practitioners of the practical ways to effectively teach writing to students with LD. The following research questions will guide the exploration of the topic of teaching writing to students with LD. The overarching question guiding the study is “What do middle school teachers perceive to be the types of difficulties faced by students with LD in writing, and what strategies and support do they find helpful in improving the writing skills and academic achievement of those students?”

**Background of the Researcher**

I would have to say that learning disability stood out for me when I was taking an undergraduate course on child language disorders. I became aware that learning disability is very much prevalent in today’s world and that it is generally a life-long disorder that often interferes with academic work as well as other activities, depending on the degree and type of the learning disability. Although I had learned about the topic and the theories
and processes behind the disorder, I never got to actually see what it meant for students in schools.

Therefore, I was surprised when I found that many of the students had learning disabilities related to writing during my practice teaching in a grade 8 class. Out of the 35 students in the class, about 1/5 had an identified learning disability in their IEP. I was surprised that many of those students were fluent in speaking but had trouble with putting and organizing their ideas onto paper. I even noticed that some of them struggled with the speed of printing out the words during note-taking sessions and tests. Some students were using their own laptops to type notes and assignments because they had trouble with handwriting. I saw how frustrating it could be for those students to be very knowledgeable about a topic but have difficulty with putting the knowledge and insights down onto paper.

Thus, I became motivated to discover more about the learning disabilities that have to do with writing and the teaching strategies to help the students (e.g., holding writing workshops, teaching prewriting strategies, introducing graphic organizers, training the students in assistive technology such as voice-writing software, keyboard programs). I became intrigued to find out what teachers are actually doing in their classrooms to help students improve their writing and also provide support so that they can achieve success. I also wanted to look into different types of accommodations, such as giving extra time on tests and letting students use laptops/computers for typing notes and assignments.

Definitions

- For purposes of this paper, the term “learning disability”—as defined by Learning Disability Association of Ontario (2011b) will refer to the following:
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“a variety of disorders that affect the acquisition, retention, understanding, organization or use of verbal and/or non-verbal information. These disorders result from impairments in one or more psychological processes related to learning (a), in combination with otherwise average abilities essential for thinking and reasoning. Learning disabilities are specific not global impairments and as such are distinct from intellectual disabilities. Learning disabilities range in severity and invariably interfere with the acquisition and use of one or more of the following important skills:

- oral language (e.g., listening, speaking, understanding)
- reading (e.g., decoding, comprehension)
- written language (e.g., spelling, written expression)
- mathematics (e.g., computation, problem solving)

Learning disabilities are due to genetic, other congenital and/or acquired neurobiological factors. They are not caused by factors such as cultural or language differences, inadequate or inappropriate instruction, socio-economic status or lack of motivation, although any one of these and other factors may compound the impact of learning disabilities. Frequently learning disabilities co-exist with other conditions, including attentional, behavioural and emotional disorders, sensory impairments or other medical conditions.

(a) The term “psychological processes” describes an evolving list of cognitive functions. To date, research has focused on functions such as:

- phonological processing;
- memory and attention;
- processing speed;
- language processing;
• perceptual-motor processing;
• visual-spatial processing;
• executive functions; (e.g., planning, monitoring and metacognitive abilities).”

As defined by the National Centre for Learning Disabilities (2014b):

❖ *Dyslexia* is “a language-based processing disorder [that] can hinder reading, writing, spelling and sometimes even speaking. Dyslexia is not a sign of poor intelligence or laziness or the result of impaired hearing or vision. Children and adults with dyslexia have a neurological disorder that causes their brains to process and interpret information differently.”

❖ *Dysgraphia* is “a learning disability that affects writing, which requires a complex set of motor and information processing skills. It can lead to problems with spelling, poor handwriting and putting thoughts on paper. People with dysgraphia might have trouble organizing letters, numbers and words on a line or page.”

❖ *Executive Functioning* is “a set of mental processes that helps connect past experience with present action.” Many people with LD struggle with executive function, which can make activities like planning, organizing, strategizing, remembering details and managing time and space difficult.”

**Overview**

Chapter 1 includes the introduction and purpose of the study, the research questions, as well as how I came to be involved in the topic of writing instruction for students with LD and study of the teaching strategies as well as additional accommodation and support. Chapter 2 contains a review and discussion of the literature findings on the topic of writing deficits of students with LD and teaching writing to students with LD. Chapter 3 provides the methodology and procedure used in this study.
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including information about the sample participants, setting, and data collection instruments. Chapter 4 discusses the findings from the open-ended interview questions with two participants. Chapter 5 will revisit some of the literature as it relates to the findings of the participants, and outline implications, recommendations and areas for further study. Following the above five chapters are a list of references, a letter of consent for the participants and the interview questions.
Chapter 2: LITERATURE REVIEW

This section provides a comprehensive, yet not exhaustive, review of literature on the writing performance of students with Learning Disabilities (LD) and the use of different writing instructional approaches, teaching strategies, and accommodations to improve writing.

The Plight of Students with LD

The fact is that figures for learning disabilities among Canadians are growing. According to Statistics Canada (2009) report on the 2006 Participation and Activity Limitation Survey (PALS), more than half (59.8%) of the children who have a disability have a learning disability. LD among those aged 15 and over also grew by almost 40% between 2001 and 2006 to 631,000 (Statistics Canada, 2009). However, because of their deficits in language, executive functioning (e.g., planning, problem solving, logical reasoning), and/or motor skills, they have a great disadvantage in academic success (Vieira, 2013). Students with LD have difficulty “learning at the typical rate of peers in their age group”, and they usually have either low academic achievement or can only meet success with high levels of effort and support (Vieira, 2013, p. 3).

Academic writing is one of the greatest struggles for students with LD as they often do not have the skills needed to support higher level of academic demand. The plight is that as they age, there are higher academic expectations for students and the achievement gap between LD performance and that of their typically-developing peers widen. For instance, in the middle years, students are expected to do more printing or writing, and to deal with more informational content and domain-specific vocabulary (National Joint Committee on Learning Disabilities, 2008). They are also expected to produce longer written products at a faster speed which “require[s] rapid and accurate
retrieval of information and consolidation of learning into long-term memory” with which students with LD experience difficulty (National Joint Committee on Learning Disabilities, 2008). Narrowing the gap between students with and without LD by providing support for the former is, for sure, a challenge for teachers.

**Deficits in writing students with LD typically face.**

Writing is a complex process that requires a level of language and cognitive development, as it involves an array of different processes and strategies, including “automatic letter formation and/or keyboarding, accurate and fluent spelling, sentence construction, and the ability to compose a variety of different text structures with coherence and cohesion” (National Joint Committee on Learning Disabilities, 2008). Students with LD experience significant deficits in writing when compared to their peers with typical development. According to Graham, Harris, and McKeown (2013), there are four factors of typical writing development: strategies, skills, knowledge, and motivation; students with LD face challenges in all of these areas.

It has been established throughout that writing involves three stages: planning, composing, and revising (Baker, Gersten, & Graham, 2003). Writing is a self-regulated, problem-solving process that involves using knowledge, cognitive processes, and strategies recursively across planning, text production and revision (Harris & Graham, 2009). However, students with LD approach writing as one process of generating content, not making use of the planning or the revising stages (Scardamalia & Bereiter, 1986). They tend to use previous sentences to come up with the next idea and do not evaluate ideas, take into account the audience or purpose of writing; consequently, their writing lacks coherence and logical organization of the subject matter, and is rather a jumble of ideas about the topic (Graham, Harris, & McKeown, 2013). Such writing approach is not
effective for academic writing tasks in schools like essay and stories. Students with LD generally write with no or little prior planning (Graham, Harris, & McKeown, 2013). For instance, when told to plan for writing, fifth and sixth graders with LD spent less than a minute or so planning on average and it did not matter whether they were writing by hand, typing on a word processor, or dictating it (MacArthur & Graham, 1987). Another process in which students with LD have difficulties is the revision, as they lack self-regulation strategies (Graham, Harris, & McKeown, 2013). When told to revise their work, they tend to focus mostly on correcting grammar and spelling, making the print neater, and substituting words (MacArthur, Graham, & Schwartz, 1991). The “majority of their revisions involve minor changes to the surface level features of the text” such as mechanical errors (Graham, Harris, & McKeown, 2013, p. 407). A possible reason behind such difficulty has been suggested to be that students with LD have difficulty carrying out processes underlying planning and revising (Graham & Harris, 2000).

Students with LD also experience problems with the composing process. They have difficulty with generating ideas, as their written products are often short, containing little detail or explanations (Graham & Harris, 2003). Such “meager output” phenomenon could be explained by the fact that children struggle with writing due to them having a hard time sustaining the writing effort (Graham & Harris, 2003). In a study conducted by Graham (1990), fourth and sixth grade students only spent an average of 6 minutes writing an opinion essay in writing time, stating a position followed by a short explanation of one or two reasons, and ending without a resolution or conclusion. First of all, it could be that they have had limited knowledge about the writing topic, but the bigger problem is that they have difficulty accessing knowledge they already possess when writing (Graham, Harris, & McKeown, 2013). Their struggle with the writing
mechanics also could interfere with their thinking in the composing process (Graham, 1990; Graham & Harris, 2003). Some students also showed difficulty sustaining their thinking about their topic and coming up with a variety of statements for even a familiar topic (Thomas, Englert, & Gregg, 1987).

Another difficulty that leads to an impoverished writing performance of students with LD comes from them having limited knowledge about writing, such as genres, devices, and conventions, as well as the basic components within a genre (Saddler & Graham, 2007). For instance, their stories often lacked necessary parts such as a problem or ending (Sawyer, Graham, & Harris, 1992). Graham and Harris (2003) also emphasize the importance of the knowledge of how to write. Students with LD who have difficulties in writing typically show a lack of knowledge of processes underlying organizing writing ideas as well as evaluating and revising writing (Englert, Raphael, Anderson, Gregg, & Anthony, 1989).

On top of strategies of and knowledge about writing, students with LD often have a lack of skills to manage the processes of planning, revising and self-regulation. For instance, revising and evaluating writing requires skills. Students with LD often do not constructively evaluate their writing and some do not have the skills to adequately evaluate a written piece of work (Graham, Harris, & McKeown, 2013). Even if the students have evaluated adequately and noticed room for improvement, such as their writing lacking content and in need of additional information, they might have trouble making the actual changes, as students with LD often lack those skills, such as thinking of what type of information to add (Graham, Harris, & McKeown, 2013).

Another hindrance to writing for students with LD is the problems they have with the mechanics of writing, such as their lack of basic text transcription skills.
Transcription is the “process of transforming the words writers want to say into written symbols” (Baker, Gersten, & Graham, 2003). Students with dysgraphia have difficult time with spelling and handwriting and/or keyboarding skills (Baker, Gersten, & Graham, 2003). Such lack of skills for the physical writing contributes to the generally slow rate of writing (half of peers), the frequent misspelling of words, and illegibility (Baker, Gersten, & Graham, 2003; MacArthur & Graham, 1987; Weintraub & Graham, 1998). They also tend to have trouble with capitalization and punctuation (Weintraub & Graham, 1998) and with sentence construction (Saddler & Graham, 2005). Apart from the problem of illegibility and surface mechanical errors, the lack of transcription skills might not seem like a large issue; however, it impacts the whole process of the student’s writing and diminishes the quality of the writing on a larger scale. According to Graham (1990), these problems can hinder the writing process in the following three ways: 1) ideas and plans in working memory may get lost while writing due to paying too much attention to mechanical matters; 2) due to the slow speed of writing or typing, thoughts may be lost before they are put down on paper; 3) focusing on mechanical concerns makes it hard to think and reflect on ideas as well as the purpose and intention of writing. Thus, given the impact of various writing difficulties on the quality of written products for students with LD, it is important to determine writing instructions that effectively address the content (high-level) as well as the surface mechanical (low-level) skills.

**Writing Instruction Frameworks**

**Process writing approach.**

The process approach serves as the guiding structural framework for writing instruction programs and strategies in many schools (Cutler & Graham, 2008; Sandmel & Graham, 2011). This approach sees writing as a process and emphasizes the cognitive
and metacognitive processes involved in writing and the connection between thinking, writing, and learning processes (Harris & Graham, 2009). Instruction based on this approach focuses on the thinking and actions of the writer at each stage during writing process and allots time for learners to practice writing skills, such as planning, drafting, evaluating and revising (Harris, Graham, & Mason, 2003; Sandmel & Graham, 2011). By immersing students in the process of writing using modeling, sharing, and classroom dialogue, the approach is expected to help students naturally develop writing skills and abilities through the authentic learning experience (Harris & Graham, 2009). This approach has a number of potential benefits, as it allows students to self-reflect, evaluate, take ownership of their writing, and collaborate the teacher and peers. The individualized instruction students get from teachers who implement a variety of teaching tools such as choice, mini-lessons and writing conferences, could increase students’ motivation as well as the quality of their writing (Sandmel & Graham, 2011).

Although process approach to writing instruction is commonly used in classrooms, its effectiveness has also been questioned. A meta-analysis conducted by Sandmel and Graham (2011) examined 29 studies on Grades 1-12 to see if the process approach to writing instruction is beneficial in improving the quality of students’ writing as well as motivation to write. However, they did not find that it improved the quality of students’ written product or their motivation to write. Baker, Gersten and Graham (2003) point out the problematic nature of this approach in teaching writing to students with LD:

Poor or inexperienced writers attempt to evaluate the composition of more experienced writers and attempt to articulate their own analysis of strengths and weaknesses. Without a common language, these attempts are usually unclear and result in explanations likely to confuse less sophisticated writers.
Many of us do not know how to analyze or articulate the reasons for our preferences.

Addressing students with LD’s lack of knowledge of the processes underlying effective writing practices, Baker, Gersten and Graham (2003) critique that the framework is limited for teaching students with LD. Instead, they suggest that a common language be established where teachers or peers make known to struggling writers the steps taken in each writing process when they are writing for a specific topic or organizing thoughts for arguments, as doing so will help their understanding of the writing process. Others point out that the process approach does not allow for enough attention to be paid to strategies of how to carry out writing processes and suggest that it be combined with the traditional skills instruction (Cutler & Graham, 2008; Harris & Graham, 2013). Sure enough, a writing intervention study conducted by Bui, Schumaker and Deshler (2006) found that fifth grade classes that received a comprehensive writing program that involved a combined instruction in planning and writing strategies, narrative structures, and the process approach showed greater improvement in their writing than those who received traditional writing instruction.

Explicit and direct approach.

Another instructional method for writing that has been proven to be effective in improving writing skills of students with LD is explicit and direct writing instruction. Research indicates that students with LD do need an “extensive, explicit, and supported instruction” in order to learn important writing strategies (Graham & Harris, 1994). When a study of fourth and fifth graders with LD compared the impact of process writing instruction and the highly explicit, teacher-directed instructional routine on their writing, the explicit teaching of three planning strategies (goal setting, brainstorming and
organizing) produced more effective results in improving students’ writing in terms of the quality and quantity of their stories than process writing instruction (Troia & Graham, 2002). Such direct instruction was also extended in an expressive writing program for high school students with LD which resulted in positive gains following instruction (Walker, Shippen, Alberto, Houchins, & Cihak, 2005).

Researchers have determined that explicit teaching of different types of strategies and skills is indeed effective in improving writing of students with LD. In an effective, explicit teaching of three critical steps in the process of writing (planning, composing a draft, and revising the draft), teachers used examples and provided different levels of support to the students (Baker, Gersten, & Graham, 2003). They explicitly taught the mnemonic aids, think sheets, planning sheets, and prompt cards to remind them of each step of the writing process. Guidance and structure was given to help and motivate students to approach writing as a completion of each step of writing. Also, a common language was established between students and teachers to talk effectively about the task at hand as well as giving feedback through interactive dialogue (Baker, Gersten, & Graham, 2003). Such studies suggest that clear and explicit instructions provide students with LD with tools to improve their writing (Walker et al., 2005).

**Technology and Students with LD**

Constant technological advances makes investigating the effectiveness of certain technologies challenging, as certain hardware and software tools are quickly becoming outdated and irrelevant. There has not been much research done on using technology for the writing of students with LD, but technology offers promising support for struggling writers. The literature offers some evidence-based practices for teachers to use in their writing instruction.
Accommodations and assistive technology.

Student who struggle with the physical process of handwriting could benefit from keyboarding or dictation options alternative to writing by hand in order to compensate for poor handwriting. Using this technology tool could alleviate the frustration of the physical task of handwriting and save time as well. Students could write using the keyboard on tablets, laptops, and computers through a word processor (e.g., Microsoft Word) (Edyburn, 2013). Word processors come in handy for both the transcription and revision processes as they contain the spelling checker and word prediction function (MacArthur, 2009). In a study conducted by Hetzroni and Shrieber (2004) with junior high school students, written products of students who used a word processor on a computer had less number of errors in spelling and better quality text structure and organization than those of students who used pencil and paper, while the length did not vary.

However, keyboarding accommodations might also be a hindrance to students’ writing in some ways if the students are unfamiliar with typing. When second, fourth, and sixth graders’ essays were composed using a keyboard, children (both with and without LD) wrote shorter essays and at a slower word production rate (Berninger, Abbott, Augsburger, & Garcia, 2009). A possible interpretation was that the students were too young or they had not had much practice with typing. Further, fourth and sixth graders wrote less complete sentences when using keyboard (Berninger, Abbott, Augsburger, & Garcia, 2009). It seems important for teachers to help students master keyboarding skills in order to maximize the benefits from using such technology tool.

For students with LD who might struggle with both handwriting and typing or might have trouble with spelling and punctuation could benefit from various assistive
technology (AT) tools for dictation (e.g., Dragon Naturally Speaking, iDictate, SpeakWrite) (Edyburn, 2013). These speech-to-text or speech recognition tools could provide support for the transcription process, alleviating the spelling pressure and compensating for poor handwriting or keyboarding skills (Edyburn, 2013; MacArthur, 2009). When a speech recognition technology (SR) was used by students with writing difficulties (ages 11-14) to write narratives, they produced longer narratives with less surface errors, although there was no significant improvement in the narrative quality (Quinlan, 2004). Although more research is needed, these assistive technology tools have the potential to increase the quality of the writing in terms of content while increasing students’ engagement and motivation to write (National Center for Learning Disabilities, 2014a).

As can be seen, a wide range of strategies and support, including technology tools, are available for teachers to implement in their writing instruction for students with LD. The important question of whether these teaching tools are fulfilling their purpose in actual practice still needs to be further explored. This research study will explore how theories and evidence-based strategies are played out in middle schools by asking the overarching question “What do middle school teachers perceive to be the types of difficulties faced by students with LD in writing, and what strategies and support do they find helpful in improving the writing skills and academic achievement of those students?”
Chapter 3: METHODOLOGY

The goal of this study is to explore, understand and interpret the perceptions and experiences of teachers in teaching writing and supporting students with learning disabilities (LD) in writing. This research study was conducted by interviewing three exemplary teachers as well as reviewing the current literature in the field. Although the literature demonstrates the difficulties students with LD have with writing as well as evidence on successful strategies and theories in the research setting, little attention has been given to teachers’ perspectives on the actual practice of teaching writing to students with LD. This qualitative research enabled me to understand this problem from the teachers’ perspectives. The interview provided information about the teachers’ beliefs, insights, experiences and practices in teaching writing to students with LD in the Greater Toronto Area. The collected data was coded according to identified themes in the data as well as the literature of writing instruction for students with LD. This research offered insight about the effective strategies for and challenges in teaching writing to students with LD for practicing teachers who may be experiencing similar challenges in supporting students with LD and struggling to improve their writing.

Procedure

In this qualitative research, I conducted a literature review, then gathered information about teachers’ practices, beliefs, and knowledge related to teaching writing to students with LD in the classroom through face-to-face interviews. The main goal of the interviews were to gain an understanding of the kinds of strategies teachers are using and finding effective in teaching writing to students with LD. The interview questions were developed with the support of my research supervisor who is an expert in the field of literacy and writing instruction. The interview questions were sent out to the
participants prior to the interviews in order to maximize effectiveness and quality of the
interview answers. The interviews were conducted at a time negotiated by the participant
and myself, at a location of each participant’s choice. The interviews were conducted
individually.

Participants

Since this study focused on teaching writing to students with LD in the middle
years (grades 5-8), the participants in this study were two elementary and middle school
teachers from two different public schools in Toronto (TDSB). The participants were
selected based on the following criteria: a) They must be classroom teachers (preferably
at the Junior/Intermediate level) who are willing to share their experiences; b) They must
have interest in and experience teaching writing to students with LD; c) They must have
three or more years of teaching experience.

I found the teachers by visiting my former practicum schools and asking around
the teachers, including my former associate teachers, about potential participants. Once I
had some contact information and recommendations, I sent an information letter via
email to all teachers who met the criteria for this study and invited them to participate. In
the email, I explained my research study and asked for permission to conduct an
interview with her. I met with all interested teachers to further discuss the purpose of the
research and their involvement and selected three teachers to interview. A written
informed consent was sought from each participant. All participants were requested to
keep a copy of the form for their records.

Context and Background Information of Participants.

Both of the participants are full-time teachers currently working the in the Greater
Toronto Area (GTA). Both hold an additional qualification (AQ) in Special Education
and have extensive experience working with students with LD at the intermediate grades.

**Julia.** Julia is currently an eighth grade core teacher at an elementary middle school in the Greater Toronto Area (GTA). She is in her 20th year of teaching with approximately 8 years of experience teaching a self-contained LD class—5 years during which she was as the head of the Special Education department. She holds an additional qualification in Special Education. Most of the classes she has had to teach had over thirty students. In her current class, Julia’s students come with a wide array of ability levels. A handful of her class was labelled as having a LD—a few of them having a LD in writing, who are often assigned personal laptops to work with during class time.

**Leah.** Leah is into her 25th year of teaching with approximately 15 years teaching special education. She also has experience working with students on writing at a remedial center for a psychologist. Her specialization is English and Physical Health and Education at the Intermediate/Senior level, and she has an additional qualification in Special Education. Leah is currently a special education teacher working with two different classes of intermediate grades. Leah has been working with students with special needs on a withdrawal basis, taking students out of the classroom to work on their writing together.

**Data Collection**

This study involved informal interviews with classroom teachers and followed a semi-structured interview guide with open-ended questions about teachers’ perceptions about teaching writing to students with LD (see Appendix B). I first established rapport with the participants through email and face-to-face interactions. I explored the teachers’ teaching qualifications, teaching background, their experiences with students with LD and teaching materials, as well as their teaching goals. In the interview, we discussed the
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teachers’ rationales for the strategies employed in their lessons, investigated their
perceptions of factors contributing to their decisions, as well as choices they might make
in the future. The interviews and the transcriptions allowed me to explore recurring
themes related to my research questions with the participant.

Each interview was approximately 30-50 minutes in length and was audio-
recorded using a handheld device to facilitate transcription. I, as the researcher,
participated actively in discussion and took additional notes when deemed useful. The
notes that I took were shown to the participants for confirmation of truth. Follow-up
questions were asked to facilitate the interview process. The participants were asked to
reflect on a student who has LD in writing and had struggled/is struggling to meet
academic standards in the class. During the interview, I asked them to reflect upon what
they did for the particular student as well as why they took those actions and the result of
those actions. Some sample interview questions are “What strategy did you put in place
to support the student’s planning process/composing process/revision process?” and
“How do/did you teach the student with LD to self-regulate his/her own writing?”

Data Analysis

Following the interview, all names in the electronic version of the transcript were
removed and replaced with codes or pseudonyms in order to preserve confidentiality.
Transcribed interviews were examined and coded. I began by reading and rereading the
transcribed interview data, focusing on the writing difficulties faced by students with LD,
writing strategy instruction, accommodations, and issues faced by teachers. I analyzed the
data to identify teachers’ views of writing of students with LD in writing by examining
their actions to support them and reasons behind their actions. I used selective
transcription to focus on the relevant themes of my study while transcribing the
interviews. I started analyzing the data soon after each interview was finished. The transcripts were analyzed for comments about how teachers felt about teaching writing to students with LD as well as comments which suggest why certain strategies did or did not work for students with LD.

I used different coloured highlighter markers, underlining, asterisks, and made tables to highlight the important quotes and insights in the interview data. I made notes to myself as I went along. I also used my field notes to record my thoughts and feelings during and after each interview while reflecting on the conversation. Later, I compared the data collected from the three schools to find any similarities or differences. This interview enabled me to address differences and similarities in the teachers’ experiences, and highlight issues and commonalities raised during the interviews. It also enabled me to explore emerging themes during my data analysis. I used the data to identify emerging themes or patterns and narrow them down according to importance and relevance to the problem in this study and the rate of recurrence. I also identified sub themes, concepts, and categories related to my research questions from the interviews.

After conducting a content analysis of all notes and transcripts of interviews, I also created an inventory of strategies used by the three teachers in the classroom. Each teacher’s methodology was analyzed using the three frameworks (process approach, explicit instruction, and self-regulated strategy development approach) as lenses: this showed to what extent the strategies used by the teachers corresponded to one or more frameworks, thus establishing links with the literature, and could also provide insight into links among frameworks. The comparison of the literature with the actual practices of teachers revealed points of convergence, divergence and gaps relevant for further study.
**Ethical Review Procedures**

I followed the ethical review approval procedures for the Mater of Teaching program. Research participants were, prior to the interview, provided with letters of informed consent which they read and signed to agree to participate in the interview (see Appendix A for consent form). One copy of this letter was given to the participant, and a second copy was kept for research records. In order to ensure that the participants felt safe and willing to participate in the study, the purpose of the study as well as its confidentiality and anonymity of participants in the research was explained to them. For anonymity of the participants, pseudonyms were used for participants and institutions.

Before each interview session, I told the participants that they do not need to answer a question they do not feel comfortable with. I also informed them of the option, if need arise in the research process, for them to revise or review their answers or restrict the use of any of the data collected. Throughout the research process, the specifics of the consent forms were carried out without any changes. The research participants were also aware of and had given consent to my research supervisor reviewing my results and analyses before submitting a finalized paper.

**Limitations**

Due to the small sample size of having only two participants, this study is limited in generalizing the results beyond the research context. Nevertheless, I believe this study achieves the goal of examining current effective practices and beliefs of teachers and gaining insights for my own pedagogy development. Putting generalizability aside, this study helped make connections between theory and practice, and addressed aspects of teaching the middle years that have been less represented in the literature. By highlighting the classroom practice of two teachers, this study provides a window into
some strategies and perspectives that teachers may have towards teaching writing to students with LD. The teachers’ perspectives provided insight into teachers’ understanding of students with LD. A larger sample size is needed to widen this range of understanding and for making more substantive and informative conclusions.

Although my research questions are limited, I believe that they will help us understand what teachers believe and know about the realities of the writing of students with LD and how to respond and support their academic success. Also, it is my hope that by identifying effective teaching strategies for teaching writing to students with LD, as well as some issues and difficulties faced by teachers in implementing them, we can bring better awareness of the current practice in schools and benefits to the educational community.
The findings from this study were gathered and analyzed from transcripts of interviews conducted with two experienced teachers—Julia and Leah (pseudonyms)—who have done extensive work with students with LD in and out of the classroom successfully.

This chapter will provide an overview of what was discovered through coding and analyzing open-ended questions from the teacher interviews about effective writing instruction for students with LD in writing. I coded the data collected based on four identified themes: 1) writing and academic difficulties experienced by students with LD in writing; 2) effective strategies for and approaches to writing instruction; 3) helpful accommodations for supporting writing, including the use of technology; and finally, 4) challenges in teaching writing to students with LD in writing and recommended solutions. In this chapter, the participants’ statements and ideas are compared and contrasted in reference to the relevant themes guiding the research. The participants’ teaching experience with students with LD in writing and beliefs in supporting their writing and academic achievement provided valuable insights into what effective writing instruction can look like in practice.

**Theme 1: Difficulties Faced by Students with LD in Writing**

Both of the participants acknowledged that students with LD in writing have difficulties with writing, whether it be having trouble with motor skills, generating or writing down ideas, adding details, or following conventions, which often lead to challenges in their academic studies.
Writing difficulties.

Julia mentioned that she has noticed that some students with LD in writing have a hard time generating ideas as well as getting ideas down on paper. Both participants pointed out that students with LD tend to stick to simple sentences and have trouble elaborating or adding details to their writing. Leah described, “The hardest thing I found out was . . . sometimes their ideas were right on grade level. But they were so simplified. Maybe for an answer that a teacher was expecting a half a page, they’d write three lines. But whatever what they wrote there was rock on. You got to expand it out . . . They didn’t know that they needed to have that much. To them, what they wrote on their page was the entire answer and it probably was, in their mind.” Such adherence to simplified forms, as Leah suggested, might be due to their lack of knowledge of sentence structures, sentence variation, and vocabulary. Leah found that many also have limited vocabulary: “Vocabulary I find is also a big one. A lot of them need to develop their vocabularies, use more sophisticated wording, explaining what they have in their head.”

Both teachers also noted that students with LD in writing often have difficulty with writing conventions such as spelling, punctuation, capitalization, and proper use of space on the page. Other difficulties had to do with organizing the writing and revising, which is “knowing what to change” according to Leah.

Academic challenges.

Both participants stated that students with LD in writing have difficulty communicating ideas in other subjects that involve writing. Leah mentioned that writing difficulties affect “a lot of their academics in terms of being able to answer test questions,
Both teachers voiced a concern over the potential impact of writing difficulties on the student’s academic achievement. They suggested there is danger in having the writing component become the sole focus of assessment in other subjects. Leah expressed her concern that “students with LD could be seen as being less capable even though they are bright . . . [and] understand much more than [they] can produce on writing.” Julia advised that teachers should think about assessment focusing on the purpose to ensure fair assessment of the student’s knowledge, abilities and reasoning. Marking certain things for content only, for example, can help ensure students with LD do not get penalized for the struggle they have with writing: “In history, they’ll have difficulty communicating, but they still may be successful because you’re marking the content, rather than the language or the convention so to speak.”

**Theme 2: Strategies for and Approach to Teaching Writing to Students with LD in Writing**

In the interviews, both participants mentioned strategies they have used across all three stages of writing (i.e., planning, composing, revising) to teach writing to students with LD in writing. Julia emphasized having structure and chunking of assignments into small parts with small timelines, while Leah focused on think-aloud strategies used in shared writing. Leah also suggested turning to the curriculum document, which outlines effective strategies for teaching writing; she commented, “I found everything in the curriculum guidelines—a lot of that stuff works. Like using graphic organizers and talking before, a lot of those things work.” She also advised teachers to read to the
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curriculum guidelines and “look at the progression of all the parts of their writing. Look at the reading, too. Just see how it progresses so that you some idea of what skills build on what skills and what kinds of patterns are in language” such as general to specific, cause and effect, and transition words.

**Explicit/Direct writing instruction.**

Both participants expressed that writing instruction for students with LD needs explicit teaching, modelling, and having the students practice on their own. Drawing from her experience of working with other classroom teachers, Leah advised that explicit teaching of specific types of writing in all subject areas, involving teaching, modelling, having students practice, is helpful for students with LD. She provided an example of teaching how to write an “explanation”: “Say they need to know how to write an explanation for a science test, explain the process of ‘osmosis’. We have to go over that. We have to teach them how to do that because they don’t know how to do it . . . She would model it and have the kids practice it.”

Leah also stressed modelling structures and organization in writing to be important for students with LD: “I will try to find a way of organizing it. For example, let’s say, ‘There are many reasons why students are obese. First, second, third, fourth, furthermore, last.’ We would use that kind of structure for anything that fit that—that we were talking about.” She would also teach and model how to use transition words (e.g., first, second, but, on the other hand) to make the writing more organized and cohesive during the composing stage. She expressed her belief that students learn from what they have seen and heard, which is why modelling is essential to teaching how to write: “The actual structure of language and structure of writing came first from me and then onto
them. So it was kind of like a pass on . . . because I know they’re just learning from me, and what’s going in my head, and how I organize it, and that’s how they’re learning it,” explained Leah.

Leah also believes that repetition and practice are crucial in helping students master such structures and skills: “We repeated things over and over so they got used to talking about it and writing it, and talking about it and writing it, using these kinds of ways.” Julia also emphasizes practice because she believes that “good writers come from writing a lot; therefore, they are forced to write a lot, and then practice, practice, practice.” Julia believes that for the students with LD in writing in the intermediate grades, guidance is needed, but with more practice they’d be able to self-regulate their own writing, meaning they would be able put the writing strategies into practice when writing on their own: “I’m of the belief that at this stage of the game, the guidance is still necessary. They still need those structures in place. I don’t think they’re ready to be independent writers yet, completely . . . And I think the more times you go through the process, from start to finish, the more likelihood there is of them internalizing and doing more independently.” Leah expressed a similar belief and added that the teacher needs to be a facilitator, teaching strategies and having students practice so that it results in “a gradual release of responsibility . . . You don’t want to baby them and you do everything for them. It’s like a happy medium. And once they get competent at doing them, mastered it, they’ll do it; it becomes more natural to them and they’re a bit more motivated.” Leah stressed that it is important to remember that the end goal for teaching writing is to have the students to be able to write independently: “You gradually with practice, take it into being your own, and you want them to be able to do it themselves—that’s your goal in your head, in the teacher’s head, [which] is to have them do it themselves. You gauge
yourself. You know when to when to not help, when to say something, when to just let it go, or remind them of the strategy or skill, or give them a bit of a hint. The end goal is to have their writing be independent.”

As a special education teacher, Leah has found one-on-one “shared writing” to be a very effective strategy for teaching writing to students. She defines “shared writing” as “just writing together, to write the thing together, and whatever the kid can’t do, you do it for him until he is able to do it for himself.” During a shared writing session, the teacher can guide the student in terms of structure, provide help with word choice by asking questions and prompting the student in the following ways: “[Do] you want to add on anything? . . . Let’s get the thesaurus . . . I’ve got a good word for that. Let’s put a word in there. Oh yeah, that’s a really good word.” Leah commented that even if the student did not know the word before, they would be learning new words. One of the appealing features of the shared writing activity is that it involves a lot of thinking aloud by the teacher, which helps students understand and learn how writers write and see the process of writing and editing. Leah provided an example of working on word choice and elaborating to illustrate the point that teachers “think aloud whenever we do shared writing”. If the student wrote, ‘The girl was nice,’ she would ask the following questions such as, ‘What do you mean by nice?’ and ‘What else was she?’ She explained that “they only use one word for ‘nice’ when they meant she was generous, kind, caring, compassionate, empathetic, whatever. So you meant all that in the word ‘nice’ but we have to now explain each and one of these things that are relevant to the character.” She noted that such approach involves “a lot of getting to the kid’s thoughts pulling them out.” Leah pointed out that such strategy is metacognitive in nature since it draws upon what good writers do and helps students write for their readers. She has also found that
students often use the pronouns “it” with unclear referents, and she provides an example of how to deal with it: “I’ll be thinking aloud: ‘That doesn’t sound right. Let me see if I can think of a better way to say that, what’s a better word for that? What’s “it”? What do you mean by “it”? Oh, the incident. We can’t just put “it” we have to put the “incident” because the reader isn’t going to know what you’re talking about if you put “it”.’” Leah described this process as being “metacognitive,” since “you are the writer but you know the reader isn’t going to know unless you state it more explicitly.”

**Supporting students’ writing processes.**

Implementing prewriting strategies, such as graphic organizers for planning and writing before starting to write, was emphasized by both participants to be extremely helpful for students with LD in writing in terms of helping them organize their thoughts. Julia mentioned that when she works on her planning for a large assignment, she makes sure students get planning sheets, graphic organizers, webs for generating ideas, and fill-in-the-blanks for personal planning, along with lessons on how to use them. She emphasized that having a structure in place for writing helps students with LD in writing: “Structure. Lots of structure . . . And then, lots of check-ins to make sure they are where they need to be at certain times.” As one of the prewriting strategies, Leah repeatedly emphasized that first having a talk or discussion with the student where the teacher asks questions that encourage students to generate ideas orally is extremely helpful: “A lot of times too I found if you talk to them first, discuss, get their ideas, and restate their ideas to them, and then say, ‘Let’s get this idea down. Let’s get that idea down’, they can actually get the ideas down . . . I found talking with the child at the beginning was really important. To have some kind of discussion with him. And a lot of it was just one-on-
one, just one kid at a time, [asking,] ‘What do you think? What do you want to put down? What do you think the reason for this is? Let’s discuss it verbally first.’ And then from there, work on the written side of it.” For example, Leah said they would set up a topic such as ‘Why bees are disappearing all over the world’; then she would ask, ‘How can we start this out?’ and say, ‘Give me your five points.’

Similar to other stages of the writing, both participants stated that teachers should provide support for proofreading and editing in the revision stage, and that they should teach and model those as well. Leah expressed the ability to revise as “knowing what to change.” She stated the focus of the revision stage is more on expanding, adding details and varying sentence structures with intention. For example, Leah explained that ‘The tall tree stood majestically beside the steep mountain,’ can also be written as ‘Beside the steep mountain, the tall tree stood majestically,’ but students with LD often “don’t know that those things can be easily switched around to vary your sentences. You have to teach them that . . . [and ask,] ‘How can we turn the sentence around and have different ways of saying the same thing?’ so you don’t have simple sentences of the same formula.”

As for encouraging students to proofread and edit, Leah recommended having students share and publish their own writing can give purpose to revise their work. But she also advises teachers to only display the finished product, as making a work in progress public can perpetuate the feeling of failure in the student: “Kid hasn’t bothered to edit it or fix the spelling then that’s just, especially if the other kids are like, ‘You spell bad.’” Sometimes, Leah says, students with LD could be reluctant to revise and if that is the case, the teacher should guide them and work with the student in shared writing: “Some kids can feel tedious to deal with that kind of stuff and they’re not ready, you can
just do it for them. Let’s put a capital there. You can just do it for them if they are not at
the point they can do it themselves.”

**Tracking students’ writing progress.**

Both participants talked about tracking the writing progress of students with LD on an on-going basis. Julia said that she does frequent check-ins with students to ensure they are on track during all stages of writing. Leah keeps track of students’ writing mostly through observing and keeping a portfolio with students’ work in it, which can be used to “go back and forth to see if there’s been improvement.” Diagnosing, monitoring and assessing students’ writing can help inform future writing instruction and the next steps to take. Julia stated that she conducts diagnostics in the beginning and periodically over the year to assess where students are at in terms of writing, to implement appropriate strategies as well as to plan the next steps of writing instruction. Diagnosing, as Leah explained, can be done through assessing a couple pieces of the student’s writing, looking at various aspects of writing such as spelling, vocabulary, and word choice. The next steps to work on for the student can be written on the IEP, which gets updated as needed; Leah explained, “Write on the IEP what you want to work on. A lot of times at the beginning is, ‘Can they actually write a paragraph?’ Once they’re able to write a paragraph, [ask,] ‘Can they revise and edit?’ But I try not to be all over the map; I try to be specific and go on a continuum.” In addition, Julia considers communicating with the student with LD and his/her parents to be important in making an accurate evaluation of the student’s progress: “Frequent check-ins with him, [meeting] with parents as needed or when they felt needed, and diagnostics done couple times in a year, gives you a sense of overall progress.”
Theme 3: Accommodations and Other Support for Students with LD in Writing

“In the social constructivist theoretical perspective, it means that the environment needs to be changed for that kid. He can’t learn by you saying write a paragraph on this, and not providing any instruction whatsoever, or the instruction you provide is not enough for him.”—Leah

General accommodations.

Students with LD in writing in mainstream classes generally are given accommodations only. Both participants stated that because students with LD are at grade-level, they have the same expectations as those of other students, so no modifications are necessary. Common instructional accommodations include the use of graphic organizers, chunking of assignments, and having oral and written instructions, as mentioned by Julia. Also, as Leah indicated, because students with LD generally take longer to write, often they are either given less writing (reduced length) or more time to work on their writing. For example, “They’d do one paragraph on compare contrast paragraph and the rest of the class would have done 2-3 paragraphs.” She also mentioned a helpful accommodation of giving the students an opportunity to practice first round before they write for marks: “I always try to do one practice one and one with a little less support for them. Let’s say that it was to be graded but you need to continue practising them throughout the year.” Having had some practice, the students would be able to gain a better understanding of the task and become familiar with the writing structures and forms.

Another useful accommodation is focusing on one thing at time. Assigning writing tasks that focus on a few strategies at a time, depending on the purpose of the
writing, can benefit students with LD by helping them focus on the purpose and by lessening the burden of thinking about too many things at once when writing: “Be assessing it for the purpose that it is. If it’s to write an explanation question in science you’re not too worried about spelling at that point. But if it’s something more produced for an audience who’s going to be reading it, then conventions are more important . . . Or you just say, ‘I’m not going to worry about conventions I’m just going to look at your word choice in this one,’ . . . or ‘I’m going to look at your sentence variety and your word choice, but if you make spelling mistakes, it doesn’t matter.’ You’d make some concessions there depending on what you really want to focus on in the writing,” explained Leah. Providing the students with a focus will help them well learn a few strategies at a time. Having students with LD in writing focus on all aspects of writing could be overwhelming or anxiety-provoking for them.

In addition, Leah noted that sometimes having a scribe or scribing for the student herself was a helpful accommodation for writing tests. Having a scribe enables teachers to assess the student’s knowledge without putting the pressure on students with LD to go through the painstaking process of writing: “But we used to have kids down here and we would scribe for them so that they’d get the mark that they had deserved on the test . . . There was no way he could have written that down, but he knew everything,” described Leah. Such accommodations can be useful in ensuring fair academic achievement of students with LD in writing. It is also worthwhile to note that accommodation needs can change over time and those should be updated on the IEP to ensure that appropriate accommodations are being made for the student: “But you change your accommodations based on needs, so needs can decrease and then you’ll lose your accommodations over time,” stated Julia.
Assistive technology.

Both participants stressed the usefulness of computers and word processors for students with LD in writing, as they make the writing process more convenient and less time-consuming, especially for revising and producing multiple drafts: “Every stage of the writing progress can be stored on the computer, used to see where we come from and where we’re going, [and if] we have to go back. That’s why I’m totally against having students write things out on paper. What a waste of [time and effort],” explained Leah. Leah noted that students could be encouraged to use their computers for writing tests or doing assignments because most of the time “they’re much faster at typing.” Furthermore, using a computer also helps students who have trouble with motor skills by helping them organize and keep a neat appearance of their writing.

Leah noted that she has the students use the word processor as much as possible because of the above advantages along with spellcheck and thesaurus functions for editing and revising purposes, while admitting that that is her sole use of assistive technology for students with LD in writing. On the other hand, Julia has had her students use a wide array of different types of technologies (e.g., iPad, computer, laptop) for writing accommodations, which she found were helpful most of the time. Some programs she mentioned that were used to support the writing of students with LD were word processor, Inspiration (software supporting visual learning through graphic organizers, diagrams and outlines), SMART Ideas (“great as a graphic organizer and can be transferred to a word doc”), Dragon Naturally Speaking (voice-to-text program), and Photograph (“for taking notes, other organizational tools”).

Unlike Julia who showed strong interest in and support for the use of assistive technologies, Leah expressed her concern that overreliance on technological
accommodations can undermine the importance of writing instruction from the teacher. Leah hinted that sole reliance on technology is a common problem that often fails to successfully assist students with LD in writing: “I don’t know if it’s a resource thing, they don’t want to spend money on human resources, or trying to fill the gaps with technology. It’s not going to work. The kid can’t get down what he wants but he can do it orally, then he still needs the assistance that you need to provide for him. And I don’t think that that should be denied to the kid. Just give him the laptop . . . that’s not going to work because that’s not how people learn language.” Leah also expressed that it is important to remember that although speech-to-text software technology could be used as accommodation by students with LD, it will not be helpful for teaching students to write, as writing and speaking are different methods of communication: “Writing is not speaking; writing is different than speaking . . . Speech is not writing; speech is oral communication. And writing is taking oral communication and putting it into a different format that’s collectively agreed upon.” By providing an example of the use of Read&Write Gold software program for students, she further explained that “It’s not going to teach them anything . . . Some of them won’t learn anything sitting there if you don’t provide more support for them. . . They need guided practice. If that’s included in that, then that’s fine . . . But a lot of the times I get they need to work independently, but it doesn’t work like that.”

Drawing from her social constructivist approach in teaching, Leah emphasized the importance of human resources and interaction among teachers and students, and that teachers need to support students along the way by monitoring and providing advice and guidance on their writing: “They still need some human interaction in some form or another—either before they’re doing it or after they’re doing it.” She further explained
that “the teacher and her planning and the way she is going about it will help the kid to improve his writing . . . The actual writing instruction has to come from the teacher and the feedback on how he is doing and to get at his thinking and what he needs has to come from the teacher.” In conclusion, Leah suggested that technology be used as “a duo” with writing instruction from the teacher, repeatedly emphasizing throughout the interview that the role of technology is a “tool” and that it “has its function and its place” and “it can benefit them a lot if it’s used properly.” By “properly”, Leah meant using it as a supplementary tool on top of solid teaching of skills and strategies: “All those things help if you know what you’re doing. If you have a plan, purpose, and mind and the kid has the other skills and strategies to use to write with.” She strongly expressed her belief that students need both the tool and the teacher to improve their writing.

In terms of how technology was used in the classroom, both participants acknowledged that there were many factors, such as willingness to use technology and resource availability, that determined the effectiveness of technological accommodations for students with LD in writing. Julia cautioned against using technology for all students with LD in writing. She discussed that the success of technological accommodations depends on the student’s attitude toward technology and his/her technological skills: “If a child does not gravitate toward technology and does not have really strong computer skills, then assistive technology can be a very frustrating thing for the kids and teacher. Ultimately, the child has to buy into it.” In terms of the factor of resource availability, Leah voiced her concern over the lack of computers available at her school which can create unfair situations and controversies in the class: “Right now I’m the one with the computers, they’re the only ones getting and the rest of the class has to write everything out. I don’t think it’s fair for the kids who are writing it out and it’s not fair for the kids to
be singled out. Because it can start a lot of controversy . . . If we’re going to use a computer, . . . it should be equally amongst everybody in the classroom.”

**Theme 4: Challenges to Teaching Writing and Teacher Recommendations**

Julia and Leah suggested that there are a myriad of interrelated factors in play for how much improvement a student with LD in writing can make in writing: “A lot of [times it] doesn’t have anything to do with writing: ‘Can they accept feedback? Can they pay attention long enough? Are they motivated? Do they have self-esteem?’ All those factors play a role in how much improvement you’re going to see and the end result. It’s like more than one thing is going on at the same time,” described Leah. The following are some of the potential challenges a teacher teaching writing to students with LD could face.

**Writing anxiety, low self-confidence and lack of motivation.**

I start this section by drawing on Leah’s example of looking at the characteristics of other students who struggle with writing but are not identified as having an LD. She suggested that how those students differ from students with LD does not have to do with writing skills, but with the emotional state and development of the students: “That child has never been identified; he’s never been tested. What is the difference between this child and that child? He has self-confidence. The kid is motivated. He is not afraid of things. He may not be as intelligent or have higher reasoning skills . . . The reason between the two of them is not anything with intelligence—it has a lot to do with the kid’s emotional state, his self-esteem and his self-development, and that is not at the same level as the other kid,” described Leah. This comparison underscores the important role emotional state and motivation have in improving students’ ability write.
As Julia mentioned, one challenge for teachers in teaching writing to students with LD in writing is that students might not be motivated by the subject matter of writing. Such resistance towards writing could spring from student’s perceived incompetence or actual incompetence in writing which results in low self-confidence: “Sometimes, they just don’t like [writing] and but [disliking] it can be because they don’t feel they are good at it, [or] because they are not good at it,” explained Julia. Similarly, Leah commented that low self-esteem is common among students with LD because they internalize their learning disability: some go on “producing absolutely nothing or something that everybody thought was just terrible. And they get that engrained in their heads: ‘I’m no good at this,’ and it takes a long time to switch around.” What results from such low self-esteem is anxiety and, at often times, inattentiveness. Leah summed up what hinders the writing improvement of students with LD as “lots of anxiety. Inattentiveness for whatever reason, and a lot of inattentiveness is also anxiety. I would say the biggest non-academic deterents to teaching writing is anxiety in some form or another: performance anxiety, low self-esteem, low self-confidence.”

For ways to overcome such anxiety over writing, Leah suggested making writing more enjoyable and fun by having students explore and play with language, which can help students build up confidence. She suggested, for example, that using a thesaurus to play with words, such as by finding weird words in the thesaurus and making raps out of them, can help students relax and “realize language isn’t so bad, it’s fun, it can be fun. That there are patterns in it and patterns are going to help [them] to cope with it . . . Once they start seeing that it’s not that hard that they have somewhere to go to get different words, they’re more happy to write, they’re more motivated to write.” Leah also advised teachers to build a positive rapport with the students to make them feel safe, calm, and
ready-to-learn: “With the kid, just build a really warm rapport so that he doesn’t feel threatened by you. The closer you can be with the kid, the more relaxed they’d be when they start writing. Lots of encouragement and acceptance for whatever they put out.”

Leah believes that the teacher’s role is two-fold: to provide writing instruction as well as emotional support: “You need both at the same time. You need the instruction, you need somebody to help you cope with your anxiety, and you need somebody to help you build your self-esteem at the same time.” On this note, Leah advocates that shared writing is a strategy that “does all those three things at once: to deal with anxiety, the person acts as their container and helps them to cope with their anxiety; they can boost their self-esteem by any strategic praise they’re given,” explained Leah.

For an effective strategy to motivate and increase the self-esteem of the student, Leah emphasized having students complete meaningful written products and giving praise for their work: “The biggest thing is that they do something, they accomplish something, they have a product that they can show; . . . it makes them feel good about themselves.” Leah mentioned that students love to display their work; they can put it up on the wall for others to read, make booklets or a collection, or post them up online, putting it into frames. She explained, “It shows that you appreciate what they’re doing. You want to go through the entire writing process and have it produce something at the end. The product and the process is important and for them to have produced something is a big deal.” Leah believes that even if the product was from shared writing, praising and celebrating is important for increasing the student’s self-esteem: “Let the kid think he did it all. It doesn’t matter; it’s not going to hurt them. When I’m marking them, yes, they just get a two because it was shared writing. And the parents are aware of this, but the kid doesn’t care. He sees something good that he did and you move from there.”
Resistance to feedback.

Another challenge teachers will certainly face in providing support for writing to students with LD in writing is resistance to feedback. According to Leah, the crucial question to ask when looking to improve their writing is, “Can they accept feedback?” Leah emphasized that being able to receive feedback is essential to learning anything, let alone writing: “There are some students who won’t change anything. They’re not able to accept knowledge from another person. And a lot of that giving and receiving is very vital for them to learn anything. That’s the kind of underlying thing that deters anybody from learning—writing or anything. That could be emotionally-based.” The underlying cause of such resistance “a lot of the times can be indication that the kid has to be perfect or that he has other kinds of insecurities,” suggested Leah.

Leah made a suggestion to use a gentle approach when dealing with such resistance. Rather than putting on a fight with the student, teachers should show patience and encouragement. Leah advised, “You don’t make a big deal of it, or make the kid change anything, but slowly I’ve talked to the kids, ‘It doesn’t have to be perfect; it’s okay to make mistakes.’ Slowly, they start being able to say, ‘It’s okay. You can change that’ . . . It takes a while. It may take months . . . There is something that you have to undo before you can move on. If you can get to that point, you’ll see some success. If you can find out why the kid doesn’t want to accept any feedback, why is so need to be right all the time, if you can work on those things at the same time, then you’ll see a lot more ability to accept feedback, change things, and more relaxed, and then you’ll see more improvement in writing.”
The goal of this research was to discover and to help inform educators of the effective ways to teach writing to students with LD in writing through answering the question, “What do middle school teachers perceive to be the types of difficulties faced by students with LD in writing, and what strategies and support do they find helpful in improving the writing skills and academic achievement of those students?” The components of this overarching research question will be discussed throughout this chapter by looking at how the findings of this study connect with the current literature, as well as through discussing implications/recommendations for practice from the findings and areas of further study in the future. Most of the themes reviewed in the findings of Chapter 4 connect in some way to the current literature discussed in Chapter 2. The below are key similarities and differences between the literature and findings that call for further discussion.

Writing Difficulties Faced by Students with LD in Writing

Knowledge, strategies and skills.

All of the participants’ answers from this study confirmed what the literature has stated to be major writing difficulties faced by students with LD in writing, including trouble with motor skills, generating or writing down ideas, adding details, and following conventions, all throughout the planning, composing and revision stages of writing. Both participants stated that students with LD find it difficult to generate ideas prior to writing, reflecting how they write with very little prior planning (Graham, Harris, & McKeown, 2013); this struggle often results in written products that are short with limited detail or explanations (Graham & Harris, 2003). During the actual composing process, both participants noted, students with LD have trouble with elaborating, expanding, as well as
organizing ideas, which confirms the findings from the literature that students with LD have trouble evaluating writing, and, therefore, often produce writing that lacks coherence and logical sequence and flow (Graham, Harris, & McKeown, 2013). Both participants also found another major difficulty for these students to be revising to enhance the quality of the writing, such as using sentence variety and effective vocabulary. The literature elaborates on this issue, stating that students with LD tend to only notice and focus on changing minor or surface-level errors involving grammar, spelling and neatness, rather than overall organization (Graham, Harris, & McKeown, 2013; MacArthur, Graham, & Schwartz, 1991). Lastly, both the literature and participants determined that following writing conventions, such as correct spelling, punctuation, capitalization and use of space, is also a challenge for students with LD in writing (Weintraub & Graham, 1998).

Motivation.

Through the responses from the participants as well as the current literature, it can be concluded that students with LD lack the knowledge, skills and strategies needed for typical writing development (Graham, Harris, & McKeown, 2013). However, it is also worthwhile to discuss the role of motivation in the writing development of students with LD. Although the research on motivation had a relatively late start and still requires more investigation, both the literature and the findings from this study acknowledge that motivation, or will to write, is one of the major factors of writing development (Graham, 2006; Graham, Harris, & McKeown, 2013). As one of the major challenges experienced in teaching writing to students with LD, both participants mentioned the student’s lack of motivation to engage in the writing process, which is often due to having low self-esteem and self-confidence from internalizing their learning disability and feeling like an
incompetent writer. Similarly, research has demonstrated that motivation is affected by beliefs and attitudes about writing and themselves as writers, and self-efficacy for writing (Graham, 2006; Harris & Graham, 2013; Pajares, 2003). In fact, many students with LD experience lack of motivation concomitant with learned helplessness, unrealistic expectations, low task engagement, maladaptive attribution, academic failure and devaluation of learning (Harris, Graham, & Mason, 2003; Troia, 2006). All of the above conditions can interfere with developing the writing skills and abilities of students with LD in writing. Leah mentioned that overcoming negative self-statements such as, ‘I’m no good at this,’ can be a long and hard process. How to deal with such problems will be discussed in the implications/recommendations section.

Strategies for and Approaches to Teaching Writing to Students with LD in Writing

**Process writing and explicit/direct instructional approach.**

Keeping in mind the various difficulties students with LD have with writing and their impact on their writing performance, writing instruction clearly needs to be designed to address both the content and surface-level mechanical skills of writing. The writing instructional strategies and approaches used by the participants of this research study reflect those deemed effective for struggling writers by many researchers in the field: namely, the process writing and the explicit instructional approach. Both participants incorporated the process writing approach in their teaching, as they both saw and taught writing as a process, focusing on the writer’s thoughts and actions at each stage of the writing process and providing opportunities to practice writing skills, such as planning, drafting, and revising (Sandmel & Graham, 2011). However, both of the teachers’ practices for teaching writing reflected this approach interwoven with explicit instruction of writing skills, as well as with much guidance, structure and support—a
It is important to recognize the need for explicit writing instruction for students with LD in writing. Research indicates that students with LD do need an “extensive, explicit, and supported instruction” in order to learn important writing strategies (Graham & Harris, 1994). Numerous studies in current literature have demonstrated that explicit teaching of different types of strategies (e.g., goal setting, brainstorming, organizing), skills (e.g., handwriting and/or keyboarding, paragraph writing, evaluating, revising), and knowledge (e.g., writing genres, devices, conventions) are effective in improving the writing of students with LD in terms of its quality and quantity (Baker, Gersten, & Graham, 2003; Datchuk & Kubina, 2013; Harris & Graham, 2013; Saddler & Graham, 2007; Troia & Graham, 2002). Aligning with this research, both participants stressed that effective writing instruction for students with LD requires explicit teaching throughout the writing process. Leah advised to explicitly teach specific types of writing in different subject areas, as well as structures and organization in writing, such as how to use transition words for organization and flow in writing. Participants discussed the importance of providing support for proofreading, editing, and expanding during the revision stage. The key to such explicit instruction, both participants stated, is teaching, modelling and having the students practice. Demonstration and modelling with examples is essential to teaching how to write because students learn about how and why to use certain text structures in their own writing from observing other writings (Baker, Gersten, & Graham, 2003). Both participants also stated that reinforcement of the explicitly taught writing strategies and skills through repetition and practice are crucial in helping students
master such structures and skills; in fact, researchers have found that reinforcement can improve the writing output and quality for students with LD (Harris & Graham, 2013). As Julia stated, “good writers come from writing a lot”; with much practice, students with LD will be able to internalize the taught skills and strategies and be able to self-regulate their own writing and become more independent and competent writers—the end goal for teaching writing (Harris & Graham, 2013).

One effective instructional method that serves as a good example of combining the process writing approach with the explicit instructional approach with guided support throughout is shared writing. Leah, in particular, stressed the value of one-on-one shared writing with students, where teaching writing happens through writing together with the student. Students learn by observing and participating in writing under the direction of a knowledgeable writer. The teacher, as a good writer, models good writing through think-alouds and engages students in a rich dialogue about how to generate ideas and compose to help students understand and learn the process of writing and how writers write. When engaging in shared writing, Leah stated, it is important for the teacher to also give feedback through interactive dialogue, which has been found to be an essential to improving the writing of students with LD (Baker, Gersten, & Graham, 2003). These metacognitive strategies used in modeling, sharing and dialogue allow for students to self-reflect, evaluate, and collaborate with others, which can help them develop their writing skills and abilities (Harris & Graham, 2009). In fact, Leah reported seeing an increase in her students’ motivation to write and in the quality of their writing through such individualized instruction fit for each student’s level and needs, confirming the
benefits of the writing process approach stated by the literature (Harris, Graham, & Mason, 2003; Sandmel & Graham, 2011).

**Supporting students’ writing processes.**

Guidance and structure were two recurrent themes discussed by both participants as well as the literature when it came to providing support throughout the three steps of the writing process (prewriting, composing, revising). The key to effective writing instruction for these students, Julia stated, is to be prescriptive, clear and explicit in instruction and to provide structure through appropriate support and tools, such as graphic organizers for organizing thoughts, and planning sheets and webs for generating ideas. The instruction, she added, however, does not end at merely providing such tools, but extends to explicitly teaching and providing lessons on how to use those tools (Baker, Gersten, & Graham, 2003). Julia also found in her teaching that having structure and chunking writing assignments into small parts with small timelines is extremely helpful for students with LD in writing. Similarly, research determined that providing guidance and structure while reminding students of the writing process as a completion of each step of writing can motivate students (Baker, Gersten, & Graham, 2003; Walker et al., 2005).

**General and Technological Accommodations and Support for Students with LD in Writing**

Providing writing support, including appropriate accommodations, for students with LD was another area of focus for this study. The literature as well as the participants both noted that students with LD in writing can benefit from accommodations that offer alternatives to handwriting, such as keyboarding or dictation options. The use of devices such as computers, laptops, and tablets along with a word processor can remove the stress
students with LD face with the handwriting process and help them organize and keep their writing neat (Edyburn, 2013). As both participants stressed, using a word processor, that come with spellcheck, thesaurus and word prediction functions, can immensely help the students when producing multiple drafts and making revisions by making the process more convenient and less time-consuming (MacArthur, 2009). In fact, researchers have found that this method often results in better quality written products with greater organization and less errors for students with LD (Hetzroni & Shrieber, 2004).

Assistive technology.

Julia, in particular, reported incorporating additional writing support through various software programs, such as Inspiration (graphic organizers, diagrams and outlines), SMART Ideas (mind mapping software), Photograph (note-taking and organizational tools), and Dragon Naturally Speaking (voice-to-text program), in her classroom as an accommodation for those that need it. It is important to note that speech-to-text programs have the potential to benefit students with LD by aiding the transcription process and removing the pressure to spell correctly (Edyburn, 2013; MacArthur, 2009). Using such technology can also helped students with LD produce more lengthy written products than when handwriting or keyboarding (Quinlan, 2004). Although further research needs to be done on if such assistive technology can increase the content of writing, current research and both participants of this study view these assistive technology tools as promising for increasing the quality of the writing and increasing students’ engagement and motivation to write as well (National Center for Learning Disabilities, 2014a).
There were two issues raised from this research project around the use of technology for writing instruction and support. First, both participants agreed that in order for technological accommodations to work, the student needs to have a positive attitude towards the technology as well as the necessary technological skills; technology can be frustrating if the student does not have those skills. In fact, research found that students who lacked keyboarding skills produced shorter written products, less complete sentences, and wrote at a slower speed when keyboarding as opposed to handwriting (Berninger, Abbott, Augsburger, & Garcia, 2009). Current research acknowledges this issue, suggesting helping students acquire keyboarding skills so that keyboarding accommodations do not hinder, but benefit, students’ writing. The second issue warranting attention, although missing from the literature, is the role of and the place of technology in teaching and supporting the writing of students with LD in writing. Leah raised the concern that importance of writing instruction from the teacher can be overlooked when over-relying on technological accommodations. Stating that technology cannot replace instruction, Leah emphasized the important role teachers have in providing instruction of writing skills and strategies, as well as advice, support and guidance on students’ writing.

**Implications/Recommendations:**

The section provides implications for teacher practice for teaching and supporting writing of students with LD in writing. Implications include evidence-based practices for teachers to use in writing instruction, steps teacher can take for implementing those
strategies, as well as things to keep in mind in practice. Implications on how the educational community can assist teachers in supporting students with LD also follow.

**Implications for the teacher/researcher.**

Through this research study, I have discovered various evidence-based practices elementary and middle school teachers implement to teach writing to students with LD in writing. I have learned about the high-level and low-level writing skills students with LD often lack; different effective strategies for teaching writing to students with LD; and, supportive accommodations that could and should be put into practice in today’s schools. An overarching theme for effective writing instruction for students with LD in writing was having them observe good writers at work across all three stages of the writing process (i.e., planning, composing, revising); using explicit/direct instructional approach to teach knowledge, strategies and skills in each writing stage, based on the needs of the student; and, providing well-supported and structured writing opportunities for the students.

When teaching writing skills or strategies to students with LD, both Julia and Leah stressed, it is important for the teacher to clearly model and scaffold the ways in which writers work for the students while providing multiple examples. I learned that in order for teachers to model as good writers and transfer the structures of language and writing, we need to be good writers ourselves, or, at least, be knowledgeable in the types of skills, strategies, and knowledge needed to write well. As Leah advised, teachers should start by looking into the curriculum guidelines for teaching writing in order to gain knowledge of the sequential development and acquisition of writing skills, different genres, structures and forms of writing, and patterns in language (e.g., cause and effect, transition words). Once the students have observed and have been taught how to write,
reinforcement should follow. I learned that practicing writing is crucial to improving the writing of students with LD; therefore, educators need to allot much time and provide as many opportunities for students to practice their writing and the learned skills and structures.

An especially useful instructional strategy to use with students with LD, as recommended by Leah, is shared writing which involves revealing the thoughts and actions of the writer at each stage of the writing process through think-alouds done by the teacher. During shared writing, teachers can help and guide the student in various ways, including generating ideas, working on word choice or sentence expansion, developing knowledge on a topic, or revising for clarity and cohesion. The teacher will show, teach, and ask or encourage input by the student throughout. Shared writing allows the teacher to focus on the areas that the student needs the most help in and provide feedback through interactive dialogue with the student. Although there are many benefits to shared writing, such as better quality of writing and increased motivation level of the student, it could be a challenge for classroom teachers to implement such one-on-one instruction that is individualized to fit the level and needs of the individual student for all students with LD in the class due to time constraints. Perhaps, ways for teachers to implement shared writing at the whole-class level can be investigated further.

It became apparent in this study that apart from writing instruction, many students with LD also need appropriate accommodations and support to meet academic success in school. Middle school come with higher expectations for students compared to elementary school—the same goes for writing: students are expected to write faster and longer (National Joint Committee on Learning Disabilities, 2008). As these high expectations and academic demands add on more pressure for students with LD, it is
crucial that teachers implement helpful instructional accommodations. Because students with LD in writing could have trouble with the content (high-level) and/or mechanical (low-level) skills, such as handwriting, teachers can chunk or break down writing assignments into small parts with small timelines or provide writing tasks that focus on only a few strategies at a time so as not to overburden the students. Also, I learned that for students who experience transcription problems, their ideas can get lost due to writing too slowly or focusing on mechanical matters, which also makes it hard to consider the purpose or intention of the writing (Graham, 1990). As such, it is important for teachers to accommodate those students either by reducing the length of a writing task, giving more time, or allowing the use of a scribe or speech-to-text technology; these accommodations could alleviate the pressure students with LD might have with the physical task of writing or keyboarding. I have also realized that in order for teachers to provide appropriate accommodations, amongst the variety of support available for students with LD, they would need to assess and learn about the specific difficulties and needs of individual students with LD, updating the IEP as needed.

An unexpected learning this research study brought me was that the success of writing development depends not only on the writing skills and abilities acquired, but also on other social, emotional, and behavioural factors. A common challenge teachers face in teaching writing to students with LD was found to be student’s resistance or lack of motivation to write. Julia and Leah discussed the struggle of teaching writing when students are resistant towards writing or show a lack of motivation due to their writing anxiety, low self-esteem or self-confidence, which are all deterrents to improving their writing. I learned through Leah that teachers need to build a positive rapport with the students and take a gentle approach, showing much patience and encouragement in order
to make students feel safe to make mistakes when writing. Teachers can give strategic praise to increase students’ self-esteem; they can also introduce fun language activities for exploring writing or give an authentic purpose to writing tasks, such as through publishing or sharing students’ writing, to build on motivation to write. Other ways to deal with this challenge comes from the self-regulated strategy development (SRSD) approach for teaching writing: teaching students to use positive self-statements, attribute success to effort, and self-monitor and use self-speech to address improvement as well as difficulties faced in writing (Harris & Graham, 2013).

One of the takeaways of this research study for educators, I find, is the importance of providing guidance and structure in teaching writing for students with LD. I learned that whatever tool or support a teacher decides to provide the student, whether it be a graphic organizer or a word processor, the teacher needs to explicitly teach how to use such tools. Technology does offer promising support for students with LD; however, as Leah emphasized, technology is only a tool, and the role the teacher has in providing the actual writing instruction is indispensable. Writing support and tools should be used on top of solid teaching of writing skills and strategies. Also, it is important to keep in mind that an instructional strategy might not work for all students with LD as each student is different; teaching strategies, as well as other types of writing support, need to be altered to fit the needs of each student. Teachers should always strive to do what is best for individual students by assessing each student’s level and needs, implementing various evidence-based strategies, and determining and using the ones that are found to be the most effective in promoting writing development of the individual student.
Implications for the educational community.

I hope that this research study will help the educational community discover more about the problems facing students with LD in writing within mainstream classrooms, the effective teaching approaches and strategies educators use to support students’ writing, as well as additional writing support for students with LD, including technology and resource teachers. Schools should communicate with the classroom, as well as special education, teachers on an ongoing basis to assess the kinds of difficulties students with LD are having in writing and provide assistance that is needed. Also, schools could provide funding for resolving potential resource availability issues. Julia and Leah emphasized the usefulness of having students with LD use the word processor, which makes the writing task easier and faster; however, Leah mentioned that the lack of computers available at her school created unfair and/or inconvenient situations, such as students taking turns to use the computer, having only some students using the computer, or students having to work on a computer in another isolated space.

One way the educational community, including teacher education and professional development, can work to assist teachers in teaching writing to students with LD is by helping teachers become better writers themselves. Writing is a complex process and writing development depends on many different factors, such as knowledge, skills, strategies, and motivation of the writer. When writing, students benefit greatly from observing what good writers do through examples provided by the teacher and teacher modeling. In order for teachers to guide the students through the process of writing step by step and provide explicit teaching of writing skills and strategies, teachers themselves need to have the knowledge, skills, strategies, and motivation to write and teach writing. Perhaps, the pre-service education could provide courses and/or workshops
on how to become better writers and also on how to combine the process writing approach with the explicit/direct instructional approach when teaching writing, as this combined approach has been found by many researchers to be effective in supporting the writing of students with LD (Bui, Schumaker & Deshler, 2006; Cutler & Graham, 2008; Harris & Graham, 2013).

**Further Study**

As mentioned in the methodology section of this study, due to the small sample size of the study, the findings here cannot be representative of the beliefs and practices of all educators teaching writing to students with LD. A study could be done with a larger sample of participants to gain more conclusive findings regarding this topic. Also, further research on this topic could be done in the secondary level to investigate further the writing development of students with LD and the types of effective teaching strategies for supporting their writing in the upper grades. Longitudinal studies on the impact of writing instructional strategies on the writing development of students with LD will be valuable in evaluating the effectiveness of those strategies.

It has become apparent in this study that writing is an important determinant of academic success of students, as writing is present in almost all subjects, and that whenever writing shows up, it will pose a challenge for students with LD in writing. Thus, it is of great importance to investigate the writing process, writing development, writing difficulties students with LD have with writing, as well as effective writing instructional approaches and strategies. As teachers need to model good writing for the students, they need to be knowledgeable about all of the abovementioned topics. Further studies could investigate how the educational community can better prepare teachers to
teach writing, such as through curriculum development, pre-service education courses, and professional development.

This study has revealed that students with LD face complex writing challenge, due to various learning and behavioral challenges they have, which is why they need more extensive and explicit instruction to form and retain writing skills and strategies. By discovering more about the difficulties students with LD have with writing, researchers can develop more effective writing interventions for them. Lack of motivation to write, for instance, was one of the major challenges participants in this study faced in teaching writing to students with LD, but information on this topic is lacking in the literature (Harris & Graham, 2013). Further research is needed in learning about the role of motivation in writing development and ways to increase the will to write for students with LD.

The use of technology to aid the writing instruction for students with LD could be another area of further study. Although it has been determined that the use of certain technology tools, such as word processors, allows for easier and faster revision processes, the literature lacks information on the effective use of technology that aid teachers with the actual instruction; this gap is perhaps due to the rapid and constant nature of technological advances today. Although technological tools seem promising for supporting students with LD, further research needs to be done to assess the effectiveness of technological tools used in writing and to investigate practical and effective ways to utilize technology to enhance the quality of writing instruction for students with and without LD. For example, technology tools could perhaps be used to help teachers implement more individualized, effective teaching approaches and strategies for students with LD or help them track students’ writing progress of the more easily and effectively.


WRITING INSTRUCTION & LEARNING DISABILITIES


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Appendix A: Letter of Consent for Interview

Date: ___________________

Dear ________________,

I am a graduate student at OISE, University of Toronto, and am currently enrolled as a Master of Teaching candidate. I am studying writing of students with learning disabilities for the purposes of investigating an educational topic as a major assignment for our program. I think that your knowledge and experience will provide insights into this topic.

I am writing a report on this study as a requirement of the Master of Teaching Program. My course instructor who is providing support for the process this year is Dr. Arlo Kempf. My research supervisor is Dr. Shelley Stagg Peterson. The purpose of this requirement is to allow us to become familiar with a variety of ways to do research. My data collection consists of a 30-40 minute interview that will be audio-recorded using a mobile device. I would be grateful if you would allow me to interview you at a place and time convenient to you. I can conduct the interview at your office or workplace, in a public place, or anywhere else that you might prefer.

The contents of this interview will be used for my assignment, which will include a final paper, as well as informal presentations to my classmates and/or potentially at a conference or publication. I will not use your name or anything else that might identify you in my written work, oral presentations, or publications. This information remains confidential. The only people who will have access to my assignment work will be my research supervisor and my course instructor. You are free to change your mind at any time, and to withdraw even after you have consented to participate. You may decline to answer any specific questions. I will destroy the recording file after the paper has been presented and/or published which may take up to five years after the data has been collected. There are no known risks or benefits to you for assisting in the project, and I will share with you a copy of my notes to ensure accuracy.

Please sign the attached form, if you agree to be interviewed. The second copy is for your records. Thank you very much for your help.

Yours sincerely,

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Consent Form

I acknowledge that the topic of this interview has been explained to me and that any questions that I have asked have been answered to my satisfaction. I understand that I can withdraw at any time without penalty.

I have read the letter provided to me by Essa Chang and agree to participate in an interview for the purposes described.

Signature: ________________________________________

Name (printed): ___________________________________

Date: ______________________
Appendix B: Interview Questions

Your answers to the interview will help me understand your experience as a teacher with students with learning disability (LD) in writing. It will take about 30 minutes of your time. Your privacy will be protected. You have the option of skipping over questions that you do not want to answer. Thank you for sharing your experiences and perspectives with me. Your contribution will help the education community and students with LD in writing in general.

Background
- How many years of teaching experience do you have? (which grades/specific students/specialty)
- How much experience have you had with students with LD specific to writing?
- What preparation have you had, prior to or since the start of teaching, to work with and support students with LD in the classroom? (course work and/or professional development)
- How much time do you devote to teaching writing? In a week? In a month?
- What do you recommend as the best ways to teach writing? What do you believe is the most important to consider when teaching writing to students with LD?

Example
- Tell me about a current or former student with LD in writing. What is (student A)’s background? Tell me a bit about him/her. How is he/she currently doing in terms of writing?
- What happened when (student A) first came to your attention?
  - What records did you check?
  - What steps did you take to learn about his/her writing? (diagnostic?)
  - Assessment—did you request/conduct any?
  - Did you confer with anyone else? (e.g., parents, resource, previous teacher) How many times and when?
- Did you do anything special for this student in the classroom?
  - What did you try? Why did you do that?
  - How did you deal with curriculum expectations in writing?
  - Did you have instructional accommodations for writing?
WRITING INSTRUCTION & LEARNING DISABILITIES

- What do you think are the kinds of accommodations that (student A) needs?
- Did you accommodate for the needs of the student using technology?
- Did the student use any assistive technology? Did you encourage the student to use any?
  - How useful was this assistive technology for the student?
- Did you make any changes to the assessment of the student? If so, what kind of changes? Why?

- How do you keep track of (student A)’s progress?
  - Do you do anything to keep track of his/her individual progress? Why? How often?
  - Do you monitor progress on the IEP? Who else does this with you?

- Do you work with any other teachers on staff? (e.g., resource, principal, etc.)
  - How does that happen? Why do you do that?
  - How useful did you find this for (student A)? for you (as a source of advice or support)?
  - Who else do you work with?

- How has your writing instruction affected that student?

- How has your writing instruction affected other students (those without LD)?

Perception of Students with LD

- What are the specific difficulties you see students with LD have with writing? (e.g., generating ideas, punctuation, organization, cohesion, etc.)

- What other academic challenges have you noticed they have from having these difficulties?

Writing Instruction & Support

- What are the strategies you use to support the writing (e.g., planning/composing/revision process) of students with LD in your classroom?
  - How do you teach the student with LD to self-regulate their own writing?
  - What kind of accommodation or modification did you use for students with LD for writing?

- Which strategies have not worked well?
  - How did you modify them?

- Please provide specific examples of assistive technology you have incorporated in the classroom to assist the writing of students with LD.
  - How useful was this assistive technology for the students?
Writing Instruction & Learning Disabilities

Challenges
- What are the challenges you have faced in teaching writing or providing support to students with LD?

Closing
- Please describe any additional writing support available in your school for teachers and/or students (e.g., workshops, conferences, writing centres, etc.)
- What advice would you offer to others who have to teach and support the writing of students with LD?
- Is there anything else you would like to tell me about writing instruction for students with LD?