Teaching Writing to Learners who have Complex Communication Needs: A Mixed Methods Study of New Zealand Specialist Teachers' Experiences and Perspectives.

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Abstract

Writing is a critical skill for living in today's society. It is even more crucial for learners who have complex communication needs as it opens a pathway to independent communication. This study explored the perceptions and experiences of Specialist Teachers involved in teaching writing to learners who have complex communication needs in inclusive school settings in New Zealand using an explanatory sequential mixed methods design. Initial data was collected via an online survey, and this was followed up by semi-structured interviews with a nested sample of Specialist Teachers. Quantitative data were analysed using descriptive statistics. Qualitative data from the survey were analysed using a general inductive approach. Qualitative data from the interviews were analysed using a more theoretical approach where the codes from the survey data provided the initial framework for analysis. However, new codes were added as the need arose when data did not fit into the existing coding scheme. Results indicated that Specialist Teachers had generally positive beliefs related to writing for learners with complex communication needs. They believed strongly that writing is important for all learners and that they should have daily writing opportunities. Worryingly, their belief in the capability of all learners who have complex communication needs to learn to write was somewhat lower. Overall, Specialist Teachers' confidence in their ability to enable learners who have CCN to develop as writers and undertake relevant teaching activities was fairly moderate. Areas of particular confidence were in providing meaningful writing opportunities and selecting appropriate writing tools. Areas of lower confidence included assessment, feedback and planning of next steps. A number of facilitators and challenges to the teaching of writing were also identified. In particular, the attitudes, beliefs, and knowledge of all team members were seen as crucial factors. Details of practical aspects of writing instruction were also examined. Recommendations for practice and future research are outlined.

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Chapter 1: Introduction

It is essential to communication, learning, and citizenship. It is the currency of the new workplace and the global economy. Writing helps us convey ideas, solve problems, and understand our changing world. Writing is a bridge to the future.

(National Writing Project, 2021, Why writing? section)

Full participation in today's society requires the ability to write because writing "embodies knowledge, information, invention, service, social relations, [and] news "(Brandt, 2015, p. 16). Indeed, Brandt goes on to argue that "writing is overtaking reading as the skill of critical consequence" (p. 161). In today's technology-driven world, writing plays a crucial role in social interaction and communication and is an essential skill for learning and demonstrating learning and employment. New Zealand's Ministry of Education (2017) argues:

> Written language is a vital medium for communication, accessing information, developing cultural, social and personal identity, national awareness, and for understanding other perspectives. Students encounter a range of written language forms in a variety of settings: in the home, school, and community.
>
> Writing enables students to gather, process, and present information, as well as to express themselves creatively. When students have opportunities to write for an audience, they can communicate across time and location, enabling wider participation in society and the global community. (p. 2)

This study will investigate the experiences and perceptions of Specialist Teachers (STs) involved in teaching writing to learners who have complex communication needs (CCN) in inclusive school settings in New Zealand (NZ). In this first chapter, key constructs relevant to the study will be defined and discussed, and the research aim presented. The chapter concludes with an overview of the structure of the thesis.

Key Constructs

This section introduces the key constructs relevant to the current study.

Writing

It is acknowledged that writing is a "complex cognitive, physical, social and cultural endeavor" (Daffern et al., 2017, p. 76) with many elements to be attended to (Erickson et al., 2009). In this study, writing is conceptualized in line with the work of Erickson and Koppenhaver (2013, as cited in Erickson & Koppenhaver, 2020) as "a process of constructing texts in traditional orthography, either print or Braille, that communicate experiences, thoughts, feelings, and understandings for diverse audiences and purposes" (p. 210). This aligns with the NZ Curriculum (Ministry of Education, 2007b), which locates writing in a strand of the English learning area focused on "creating meaning for themselves or others" (p. 18).

Learners Who Have CCN

This section will define who learners with CCN are; discuss the particular importance of writing for these learners; and outline concerns about writing for learners who have CCN.

Who are Learners Who Have CCN? Learners who have complex communication needs (CCN) have temporary or permanent impairments that limit their ability to meet all their communication needs (Clendon et al., 2013). These may impact gestural, spoken and/or written communication, and may result from developmental conditions (such as intellectual disability, cerebral palsy, or autism spectrum disorder) or acquired conditions (such as traumatic brain injury or stroke) (Beukelman & Mirenda, 2013a).

Learners with CCN benefit from access to augmentative and alternative communication (AAC) to support language development and communication. AAC includes various modes of communication from unaided (such as gestures or sign language) to aided (such as communication boards and computers or tablets that generate speech). Aided AAC often involves the use of symbols or text to create messages.

Particular Importance of Writing for Learners Who Have CCN. Beyond the already identified benefits of being a writer, writing takes on added importance for AAC users. Without the ability to use the alphabet to compose text, users of AAC will always be reliant on others to provide language for them in the form of pre-stored words or symbols. The ability to compose any word by using the letters of the alphabet enables unlimited self-expression, allowing the independent translation of thoughts into language and thus supporting self-determination (Ruppar, 2014). Furthermore, Clendon (2006) suggests that communicating through AAC may be more akin to writing than to speaking.

In addition to providing access to communication, it is suggested that learning to write can help to improve thinking skills and comprehension (Fu & Hansen, 2012). Learning to write may also help with more general literacy and reading acquisition. Wollak and Koppenhaver (2011) explain: "written message construction slows down the processing of letters, sounds, words and texts and consequently allows students with disabilities to examine more carefully how print works" (p. 1). Finally, Koppenhaver and Erickson (2003) share how one learner began, unexpectedly, to speak aloud letter names during emergent writing activities, suggesting that literacy skill development may precede other forms of symbolic communication for some learners.

Concerns Related to Writing for Learners Who Have CCN. Sadly, despite all the benefits writing could provide to learners who have CCN, evidence suggests that many, if not most learners who have CCN, are unlikely to become competent writers. Erickson et al. (2017) suggest that, even today, 70-90% of learners with CCN are likely to be well behind their peers in literacy learning, including writing. Whilst there is no data specific to the writing achievement of learners who have CCN in NZ, there is evidence that learners with high special education needs lag behind their peers in writing achievement (National Monitoring Study of Student Achievement, 2013).

NZ's Educational Context

The Education and Training Act (2020), which provides for free education at State schools, affirms that "students who have special education needs (whether because of disability or

otherwise) have the same rights to enrol, attend, and receive education at State schools as students who do not" (Section 34). Whilst the Act does allow for learners who require special education to be educated at a specialist school with approval from the Ministry of Education, data indicates that, as of 1 July 2020, only 0.47% of school-aged learners in NZ attended a specialist school (Ministry of Education, 2020c).

Given the overwhelming majority of learners, including those who have special education needs, attend their local State schools, the Ministry of Education is striving to build an increasingly inclusive education system. This means

> all children and young people are engaged and achieve through being present, participating, learning and belonging. It means all learners are welcomed by their local early learning service and school, and are supported to play, learn, contribute and participate in all aspects of life at the school or service. (Ministry of Education, 2021a, What inclusive education means section)

Inclusive education is underpinned by obligations in two key documents: the New Zealand Disability Strategy (Office for Disability Issues, 2021)and the United Nations Convention on the Rights of Persons with Disabilities (United Nations Convention on the Rights of Persons with Disabilities, 2006). It is supported by all three of NZ's curriculum documents, which written from an inclusive standpoint. For example, the NZ Curriculum (Ministry of Education, 2007b) includes inclusion as a key principle. It states: "the curriculum is non-sexist, non-racist, and non-discriminatory; it ensures that students' identities, languages, abilities, and talents are recognised and affirmed and that their learning needs are addressed" (p. 9).

Courses in inclusive education have not been compulsory as part of initial teacher training, and there is evidence that teachers may not be well prepared to teach learners with a diverse range of needs in their classrooms (Hornby, 2014; Kearney, 2011; Morton & Gordon, 2006; O'Neill et al., 2009). From 2021, all trainee teachers will need to meet the new Standards for the Teaching Profession (Education Council, 2017) prior to graduation. These standards include clear statements

about teachers being informed about "teaching for diverse learners, including learners with disabilities and learning support needs" (p. 18) and "demonstrating high expectations for the learning outcomes of all learners, including for those learners with disabilities or learning support needs" (p. 20).

Ongoing Resourcing Scheme

For learners with special education needs, including those with CCN, who attend their local school, there are various funding avenues available to provide support. This includes the Ongoing Resourcing Scheme (ORS) (Ministry of Education, 2021b), which is aimed at the approximately 1% of learners with the highest levels of ongoing need for specialist support to participate and learn at school. There are various eligibility criteria, including language and communication difficulties, for the two tiers of ORS funding ('high needs' and 'very high needs'). According to the Ministry of Education, 10,160 learners (1.2%) received ORS funding as of 1 July 2020 (Education Counts, 2021).

The ORS funds a variety of specialist supports (such as physiotherapy, speech-language therapy, or educational psychology services), teacher aide time, and additional teacher time equivalent to either a half-day (high needs) or a full day (very high needs) above the school's staffing entitlements. It is the teachers who fulfil this additional teacher role that are the focus of this study.

Specialist Teacher

In this study, Specialist Teacher (ST) refers to a teacher employed, at least in part, to provide the additional teacher time allowance allocated to one or more learners funded under the ORS. Schools are encouraged to employ teachers with relevant qualifications and experience. However, as with classroom teachers, there is no statutory requirement for STs to have qualifications or experience in special education, although some do.

STs may be employed directly by the particular school or the school may enter into a contract with a provider school, often a specialist school in the area, from the Specialist Teacher Outreach Service (STOS; Ministry of Education, 2018). STOS provider schools have particular expertise in the area of teaching students with special educational needs. Teachers in the STOS role

generally work on an itinerant basis, travelling to local schools to support learners and their wider teams.

Classroom teachers, theoretically at least, have responsibility for the learning of all learners in their class. They are encouraged to use the additional teacher time in various ways to help meet the learner's learning needs (Ministry of Education, 2015, 2018, 2020b). Indeed, the guidelines for the STOS state that STs should "support, not supplant, the pivotal responsibilities of the class teacher and the wider school/kura community" (Ministry of Education, 2015, p. 12). As will be seen in the current study, theory and practice do not always align. It seems that STs often find themselves taking full responsibility for the learner's writing programme, with little collaboration with classroom teachers.

Research Aims

As discussed above, learning to write is crucial for learners who have CCN: for the sake of writing itself, for its ability to support other learning, and for its contribution to the development of autonomous communication. As such, the fact that evidence suggests a significant proportion of learners who have CCN lag well behind in their peers in literacy, including writing, is a significant concern. In the NZ context, STs are one avenue used to provide additional support to promote the inclusion and achievement of learners with high or very high needs, including learners who have CCN. This study aims to investigate the experiences and perspectives of STs working in inclusive school settings in NZ. In addition to the practicalities of supporting the teaching of writing, it will consider their beliefs about writing for learners who have CCN, their confidence levels to undertake various writing-related teaching tasks, and their perceptions of facilitators and challenges to the teaching of writing for these learners.

This study explores the question: What are the experiences and perspectives of STs related to the teaching of writing to learners who have CCN?

Structure of the Thesis

This thesis is organised into five chapters. The first chapter has provided an overview of the key constructs and outlined the study's research question. Chapter 2 presents a review of the literature related to writing, and more specifically, to writing for learners who have CCN. It also highlights the paucity of research in the area of writing for learners who have CCN, leading to the rationale for this study. In Chapter 3, the study's methodological approach is outlined, including the rationale for the chosen two-phase research design, an overview of the data collection and analysis procedures, and the ethical considerations relevant to the study. Integrated results from the two phases of the study are presented in Chapter 4. The final chapter discusses significant findings relevant to the research question, considers limitations and implications of the study for future research and for practice, and ends with a brief concluding statement.

Chapter 2: Literature Review

This literature review will examine the cognitive processes involved in writing before considering effective practices in writing instruction. The review then provides an overview of understandings about writing and learners who have CCN, including identifying a range of challenges and an overview of effective writing instruction for these learners. Finally, the review discusses the paucity of research in this field, leading to the current study's rationale.

Cognitive Processes Involved in Writing

Research into the theory about the cognitive processes involved in writing is a relatively new and evolving field, only really beginning in the late 1970s (Graham & MacArthur, 2016). One of the seminal studies in this area is the work of Flower and Hayes (1981; see also Hayes & Flower, 1980), who analysed verbal protocols, collected by asking writers to think out loud whilst engaged in a writing task, to develop a cognitive process model of writing. Unlike previous models, which tended to focus on the stages of completion of the written product, typically assumed to proceed linearly, Flower and Hayes' model focused on the cognitive processes used by writers in the process of written composition. The model includes contextual elements such as the task environment (factors such as the writing task, the intended audience, and the influence of the text composed thus far); the writer's background knowledge of the topic; the audience; and the typical structure and elements of various genres and types of writing. It also incorporates the major writing processes of planning, translating, and reviewing, and their associated subprocesses. These writing processes and subprocesses have a hierarchical structure, rather than a linear structure, allowing each to be employed, repeatedly if necessary, alone or in combination with other processes, at any stage in the writing process. According to Flower and Hayes, movement between the writing processes is determined by a monitoring function, monitoring both the current process and overall progress, that writers engage in throughout the act of composition.

Drawing information from both the task environment and long-term memory, the planning process entails the generation of an internal representation - linguistic, visual, or perceptual - of the

knowledge to be used during writing. The planning process incorporates three subprocesses: (a) **generating** ideas, which involves the retrieval of information, be it well developed and coherent, or fragmentary, disconnected or contradictory, from long-term memory; (b) **organizing** which relates to structuring and making meaning from the ideas generated, and to decisions about the ordering of ideas within the text and other issues of presentation; and (c) g**oal-setting** which is the ongoing process of setting process-oriented and content-oriented goals, which both guide the current effort and identify criteria for evaluating the text (Flower & Hayes, 1981; Hayes & Flower, 1980)

Flower and Hayes (1981) describe the process of translating as "the process of putting ideas into visible language" (p. 373) – the representation of the information generated through the planning process, which may or may not be represented as language, must be translated into acceptable written English. Within this process, the writer must manage various demands, including spelling, grammar, syntax, vocabulary, and the motor task of forming, or typing, letters. Beginning writers and those who struggle with the mechanics of writing often need to pay conscious attention to the demands of translation, placing additional load on working memory, which may interfere with other processes within the model and affect the quantity and quality of writing (Baker et al., 2003; MacArthur, 2000).

The reviewing process serves to improve the quality of the written product and encompasses two subprocesses: evaluating and revising. Whilst reviewing may occur as a planned action, it can also occur as an unplanned action prompted by something in the text or even in the planning process. Consequently, revision can occur even before ideas or information have taken written form (Hayes & Flower, 1980).

Individual processes within the Flower and Hayes cognitive process model may look different when undertaken by beginning and developing writers (Bereiter & Scardamalia, 1987; Berninger et al., 1996; Hayes & Flower, 1987). Berninger et al. (1996) discuss some suggested modifications that would allow the model to more fully account for the early writing stages. However, they concede that the modifications "are consistent with the broad framework" (p. 196) of

the model and consist mainly of additions that aim to "flesh out the details of the processes involved in writing" (p. 196). Others have modified the Flower and Hayes model to recognise additional challenges faced by children with disabilities, including CCN. Wollak and Koppenhaver (2011), for example, added three additional elements. Production, the process of putting words on paper or a screen using a traditional or alternative writing tool, was added in recognition of the significant effort and attention many learners with disabilities need to direct to using a writing tool. Two contextual factors (motivation and social context), which impact learner inclination to engage in a task, were also added.

Sturm and Koppenhaver (2000) used the Flower and Hayes model to examine the writing development of an adolescent with developmental disabilities. In the article describing that work, they assert that "all children engage in the same cognitive process when writing, although with varying degrees of sophistication based on ability, experience, technologies, and environmental support" (p. 75). This assertion is supported by the work of Staples and Edmister (2012), who undertook a study with learners, including some with CCN, in two special education classrooms. Evidence from six months of observations of the learners during a writing activity called "Big Paper" indicated that the students engaged, at some level, in most, if not all, of the cognitive processes identified in the Flower and Hayes (1981) model. The model has also been used in other investigations of writing instruction for learners with disabilities, including CCN (Koppenhaver & Williams, 2010; Sturm, 2012; Wollak & Koppenhaver, 2011).

Effective Practice in Writing Instruction

It is acknowledged that research into the instructional practices that support learners to become successful writers remains limited (Cutler & Graham, 2008; Gadd & Parr, 2017; Graham et al., 2016; Troia, 2014), but some guidance is available to teachers about effective practices. Graham et al. (2016) established a set of evidence-based practices by re-examining all the studies reviewed in 19 previous reviews to identify evidence-based practices in writing. Their findings are condensed into six key recommendations, as shown in Table 1.

Table 1

Graham et al. (2016) Evidence-Based Practices for Writing.

Essential Component	Associated Evidence-Based Writing Practices
1 Write	• Increase time spent writing • Provide frequent opportunities to write • Write for a range of purposes
2 Create a supportive writing environment	• Setting clear and specific goals • Student collaboration • Prewriting and inquiry activities • High expectations • Individualised adaptations • Enthusiastic environment • Effort emphasized • Scaffolded support • Engagement through activities that require thoughtfulness • Evidence in belief of student capability
3 Teach writing skills, strategies, knowledge, and motivation	• Teach strategies for drafting paragraphs • Teach strategies for planning, revising and editing of text • Teach self-regulation procedures • Teach visualization and creativity. • Use models, explanations, and guided practice • Teach foundational writing skills (e.g., transcription, vocabulary and sentence construction) • Use of model texts
4 Provide feedback	• Teacher feedback • Self-evaluation and monitoring of writing • Use peer feedback • Use computer-based feedback
5 Use 21st-century writing tools	• Using a word processor • Use additional writing support software
6 Use writing as a tool to support student learning.	• Writing about content material to improve learning and comprehension • Write for a range of purposes

In the New Zealand (NZ) context, Gadd and Parr (2017) undertook a study aimed at identifying features of effective practice that "appear to be critical to generating positive academic outcomes in writing" (p. 1553). They used classroom observations, interviews with teachers and focus learners, and data on learner gains to investigate the practices of effective teachers of writing in upper primary and middle school classrooms in NZ. Their data were analysed in relation to 52 instructional strategies across eight dimensions of effective practice, established via a synthesis of studies of effective practice in writing instruction. Results suggested that, whilst all the identified strategies play a part in effective writing instruction, eight (linked to three of the dimensions) seemed to have particularly strong associations with positive writing outcomes. Firstly, it was found to be important that teachers: (a) provide learning tasks seen by students as being purposeful; and (b) promote student ownership of writing tasks by supporting them to select or develop their own tasks. Secondly, results suggested that clear demonstration and explanation of what is expected (in particular, the use of active demonstration whereby the teacher collaborates with learners to compose text), and effective use of questioning, particularly high-cognitive-demand questions, were particularly significant. A further four strategies stemmed from the dimension of self-regulation. They included teachers providing time and opportunities for students to write on self-selected topics; to write across the day, not just during writing instruction; and to work collaboratively on writing tasks. The final key feature of effective writing instruction identified was teaching and encouraging learners to be responsible for seeking assistance when required. These findings correspond closely with the findings of Graham et al. (2016) discussed above.

Writing and Learners who have CCN

This section examines a variety of topics related to writing and learners who have CCN. It begins by discussing a range of salient challenges and then reviews effective writing instruction practices for learners who have CCN.

Challenges

Notwithstanding the assertion of Sturm and Koppenhaver (2000), and despite clear evidence that, with comprehensive instruction, ample opportunities, and appropriate assistive technology (AT) and support, learners who have CCN can learn to write (Bedrosian et al., 2003; Koppenhaver, Evans, et al., 1991; Light et al., 2008; Sturm, 2012; Williams et al., 2007), many of them do not (Erickson et al., 2017). It must be acknowledged that learners with CCN may face a myriad of challenges when it comes to writing and learning to write. This section begins by highlighting challenges that can be seen as intrinsic to the learner. It then reviews a range of challenges that result from the learners' interactions with their learning environments and the people within them. These include limited early literacy experiences and the limited expectations of parents and teachers. Potential sources of low teacher expectation are also reviewed.

Intrinsic Challenges. Some writing challenges can be considered intrinsic to the learner with CCN – they pertain to the capabilities, attitudes, needs and skills of learners with CCN. In addition to challenges related to communication, learners with CCN may experience one or more of the following challenges, which may make learning to write even more complicated:

- Sensory challenges, such as visual impairments or hearing impairments.
- Motor impairments that affect mobility and access to commonly available writing implements.
- Cognitive impairments that can affect working memory and the cognitive processes required for writing (for more on students with cognitive disabilities and CCN, see Erickson & Geist, 2016).
- Impairments across a variety of language domains (for a discussion of the implications of impairments cross different language domains on writing, see Sturm & Clendon, 2004).
- Limited world knowledge and experiences of the world, which impacts children's background knowledge, semantic development, and vocabulary (which may be further

constrained by the use of an AAC system), all of which are important for generating ideas and content (Sturm, 2012; Sturm & Clendon, 2004).

- Reduced motivation due to previous lack of success or limited participation opportunities (Erickson & Clendon, 2009; Erickson & Koppenhaver, 2007; Light & McNaughton, 2013a; Sturm, 2003)
- Learners on the autism spectrum may experience difficulties with some of the social aspects of writing, such as sharing information. They may also demonstrate a reduction in the significance of reinforcers like reader feedback, which typically support motivation to sustain effort in writing (Pennington & Carpenter, 2019).

These additional challenges may directly impact a learner's capacity to engage in writing instruction unless supports are put in place to mitigate their potential effects. Equally, these challenges may impact on writing development in less direct ways through their interactions with learning environments and the people within them. Some of those potential indirect challenges are discussed next.

Limited Early Literacy Experiences. Today, it is understood that literacy development, including the development of writing knowledge and skills, begins well before learners attend school and are exposed to formal literacy instruction. Indeed, literacy development is seen as a continuum that commences from birth, if not before (Erickson & Koppenhaver, 2020; Koppenhaver, Coleman, et al., 1991). Consequently, the literacy-related opportunities that learners encounter in their home environment are recognised as essential experiences that build the foundations for later literacy success with writing in school (Daffern et al., 2017; Erickson & Koppenhaver, 2020; Light & Kelford Smith, 1993).

These early experiences support the development of a range of literacy-related knowledge, skills and attitudes, which precede the formal literacy instruction associated with attending school, and are referred to as emergent literacy (Teale & Sulzby, 1986). Previous conceptualisations of literacy instruction implied that literacy could only be taught in the formal school environment.

Further, they suggested that children must first master a set of prerequisite skills, including the suggestion that children need to read before learning to write (Teale & Sulzby, 1986). In contrast, an emergent literacy perspective views listening, speaking, reading and writing as developing in an interconnected and concurrent, rather than sequential, way (Teale & Sulzby, 1986; Whitehurst & Lonigan, 1998). Emergent literacy also recognises literacy-related experiences and behaviours occurring prior to, and in the very early stages of formal schooling, as "legitimate and important aspects of the developmental continuum of literacy" (Whitehurst & Lonigan, 2001, p. 12; see also Teale & Sulzby, 1986). Based on a constructivist perspective (Phillips & Lonigan, 2005), emergent literacy acknowledges that the social and environmental context in which children experience literacy plays a crucial part in their literacy development. Children experience literacy in real-life contexts and consequently learn about both the functions, and forms, of literacy (Teale & Sulzby, 1989).

Emergent literacy development is understood to be driven by opportunities to engage actively in literacy-based experiences, rather than being dependent on age or cognitive or linguistic skill levels (Erickson, 2017; Erickson et al., 2010). Children who have fewer opportunities to engage with literacy-related materials and activities have reduced opportunities to develop their early literacy knowledge (Justice et al., 2016). Consequently, some older learners, even adults, may still be emerging in their literacy understandings due to limited literacy learning opportunities and experiences (Erickson & Koppenhaver, 2020). Children seen as being at particular risk of not developing emergent literacy skills in a timely manner, with consequent impacts on the development of conventional literacy skills, include those with language impairments, those with intellectual disabilities, and those who have had limited access to literacy experiences in their home environment (Justice et al., 2016; Justice & Kaderavek, 2004). Sadly, evidence suggests that children with disabilities generally, and those with CCN more specifically, may be amongst those who are disadvantaged by reduced literacy experiences in those early years (Justice et al., 2016; Light & Kelford Smith, 1993).

Parental priorities that emphasise physical needs (such as independent mobility, feeding and toileting) above literacy-based activities, and reduced time available due to increased time spent on therapy and care routines (Hanser, 2006; Light & Kelford Smith, 1993) may explain some of the reduction in opportunities to engage in early literacy experiences in the home environment. Further, Justice et al. (2016) and Light and Kelford Smith, found that whilst access to printed materials in the home environment was not significantly different for children with and without disabilities (including CCN), the children with disabilities showed significantly reduced levels of engagement with those materials. Suggested reasons for this include: additional challenges these children experience in interacting with written material due to language impairments; constraints in children's ability to access, manipulate, and otherwise engage with those materials due to restrictions in independent mobility; and other issues related to a child's diagnosis, such as children on the autism spectrum not wanting to engage with materials that are not related to their particular areas of interest. Pebly and Koppenhaver (2001) point out that children with CCN, especially if they do not yet have a robust communication system, are limited in their ability to ask questions, make personal connections to the written material, or request access to print materials or experiences. Indeed, Light and Kelford Smith found that whilst children without disabilities often initiated literacy activities themselves, literacy activities for children using AAC tended to be initiated by others (typically their mothers).

Indications are that the situation may be even direr when emergent writing experiences are considered more specifically. Research suggests early writing experiences and skills significantly impact later literacy achievement (Dunsmuir & Blatchford, 2004; Zubrick et al., 2015). Emergent writing activities are essential for helping children explore the use of text to create, organise, and represent information in a visual format, as well as providing opportunities to discover sound-symbol relationships (Erickson & Koppenhaver, 2007; Light & Kelford Smith, 1993; Light & McNaughton, 2013a). Given the importance of writing, especially for children with CCN, it is troubling that, even at this early stage, children with CCN appear to spend considerably less time engaged in writing-based activities than in reading-based activities (Koppenhaver, Evans, et al.,

1991; Light & Kelford Smith, 1993). They also tend to have significantly fewer writing experiences that their non-disabled peers, even though the availability of writing materials in their homes seems similar (Koppenhaver & Yoder, 1992; Light & Kelford Smith, 1993). The motor impairments that often accompany CCN play a part in this, as they impact children's ability to use conventional writing tools and make writing a frustrating and challenging proposition (Light & Kelford Smith, 1993; Light & McNaughton, 2013a). Furthermore, issues related to mobility, positioning, and vision impairments that affect some children with CCN may restrict their exposure to others' writing for various purposes, thus impinging their developing awareness of the functions of writing (Hanser, 2006).

Consequent to the challenges discussed above, children with CCN often arrive at school with early literacy experiences and understandings about the value and functions of literacy that may be substantially different from what might be expected of children at that age. Unfortunately, evidence suggests that similar issues are apparent in the school environment. Limited time is allocated to literacy instruction, and much of that crucial instructional time appears to be swallowed up by personal care, therapy, positioning challenges, and transitions between activities (Koppenhaver & Yoder, 1993; Light & Kelford Smith, 1993; Mike, 1995; Zascavage & Keefe, 2004). Of the time given to literacy instruction, substantially less time is spent on writing instruction and practice than on reading (Koppenhaver & Yoder, 1993; Ruppar, 2015; Sturm et al., 2019). In addition, there appears to be a lack of social interaction (Koppenhaver, Evans, et al., 1991; Mike, 1995), with students often passively rather than actively engaged in literacy-based instructional activities (Light & Kelford Smith, 1993; Ruppar, 2015).

Limited Expectations of Parents and Teachers. One final challenge in the development of writing, and literacy more generally, in learners who have CCN, is the expectations of those around them. Evidence confirms that learners with CCN can improve their literacy skills, including writing, with active participation in systematic instruction, ample opportunities for practice, and support from appropriate AT (Erickson et al., 1997; Koppenhaver & Williams, 2010; Williams et al., 2007). However, it appears that, in some cases, parents and teachers have limited expectations of success

in the acquisition of literacy (Light & Kelford Smith, 1993; Peeters et al., 2009; Ruppar, 2017; Ruppar et al., 2015; Sturm et al., 2019; Williams et al., 2007; Zascavage & Keefe, 2004). These low expectations undoubtedly have an impact on literacy development. Indeed, Light and McNaughton (2013a) argue that low expectations feed into "a vicious cycle of literacy failure" (p. 313), with low expectations leading to the reduced provision of literacy learning opportunities, which in turn leads to limited progress, thereby confirming the initial low expectations. Teacher expectations are bound up with their beliefs about teaching and learning; with their levels of self-efficacy; and with their level of relevant pedagogical knowledge and skill (Ruppar, 2017; Ruppar et al., 2015) - areas that are now examined in more detail.

Teachers' Epistemological Beliefs. Epistemological beliefs are beliefs about the nature of knowledge and learning (Schommer, 1990) which tend to be reasonably stable over time and difficult to change (Jordan & Stanovich, 2003; Kagan, 1992). These beliefs impact what and how teachers choose to teach (Cunningham & Fitzgerald, 1996; Jordan & Stanovich, 2003; Kagan, 1992; Schraw & Olafson, 2002), and their notions about ability and disability, which may influence perceptions about roles and responsibilities (Jordan et al., 2009; Jordan & Stanovich, 2003). Jordan & Stanovich (2003) found that teachers who consider ability to be flexible and able to be developed, even if incrementally, are more likely to believe that children can learn given appropriate instructional accommodations. These teachers are likely to have a deeper level of engagement with learners, including those with disabilities, both in terms of time spent interacting with them and the cognitive level of those interactions. They also tend to favour supports provided within the classroom environment rather than through a withdrawal model. Furthermore, the work of Jordan et al. (2009) indicates that these teachers tend to: consider themselves responsible for the learning and progress of all learners in their classrooms; teach in more interactive, student-centred ways; build on students' intrinsic motivation; and be more effective teachers for all their students.

Whilst decisions about what and how to teach and assess undoubtedly impact student learning, some contend that those decisions and actions also affect the learners' evolving

epistemological beliefs (Olafson et al., 2010; Schommer-Aikins, 2004). Johnston et al. (2001) compared two classrooms where teachers held vastly different views about the teaching and learning of literacy, leading to contrasting teaching and classroom discourse styles. The results indicated that the learners' understandings of competence, of what literacy is, and their sense of belonging to a literate community, and, consequently, their personal literate identities, differed substantially between the two classes, reflecting the epistemologies of their respective teachers. It is vital that teachers are aware of this ability to impact on learners' epistemological beliefs. Indeed, Schommer-Aikins argues that "belief about the ability to learn is critical to the learning process" (p. 20), and points to evidence of how a learner's epistemological beliefs may impact on indicators such the level of reflection, ability to comprehend text, achievement, value placed on education, and perseverance on difficult tasks.

Bock and Erickson (2015) examined the implementation of a comprehensive literacy program by two teachers of students with severe disabilities, some of whom had CCN. Observing the differences in how the two teachers approached this work, the researchers identified each teacher's epistemological beliefs as one factor that influenced the way the program was implemented. In the early stages of the research, one teacher appeared to hold relatively low expectations for her learners, evidenced by a highly teacher controlled, skills-focused teaching style in which learners were presumed to require maximal support to achieve even the simplest of tasks. The researchers theorised that this might have played a part in the disengagement and frustration exhibited by those learners and potentially limited their learning outcomes. As the study progressed, the teacher shifted in her teaching style and, presumably, in her underlying beliefs about her learners' ability. As this happened, learner engagement increased, as did their ability to apply the skills being taught and demonstrate competence.

Ruppar's (2017) case study of a single classroom implementing a new literacy program highlights how a teacher's beliefs about ability levels and perceived potential impacts what is taught, how it is taught, and subsequent outcomes for learners. Ruppar discusses the role of teachers' self-

efficacy beliefs and pedagogical knowledge and the impacts of these on how and what teachers teach.

Teachers' Self-Efficacy. Bandura (1997) defines self-efficacy as "*beliefs in one's capabilities to organize and execute the courses of action required to produce given attainments*" (p. 3) [emphasis in original. He argues that these beliefs, perhaps even more than actual capabilities, are powerful drivers of a person's motivation to act, including the amount of effort applied to a task and the level of perseverance and resilience when faced with barriers or failure. For teachers, self-efficacy relates to beliefs about their ability to engage and motivate learners and facilitate learning, even for learners who struggle (Tschannen-Moran & Woolfolk Hoy, 2001). Teacher self-efficacy beliefs impact teacher attitudes, motivation, and behaviour. Importantly, evidence indicates that teacher self-efficacy beliefs also influence their learners' motivation, achievement, and sense of efficacy (Bandura, 1997; Pfitzner-Eden, 2016; Tschannen-Moran & Johnson, 2011; Tschannen-Moran & Woolfolk Hoy, 2001).

After developing and validating an instrument to measure teachers' efficacy for teaching writing, Graham et al. (2001) used the instrument to examine the links between teacher efficacy, their beliefs about writing instruction, and their actual classroom practices. Their results indicated apparent differences in the beliefs and practices of high- and low-efficacy teachers. Higher efficacy teachers were less likely to focus on the correctness of the written work and more likely to take advantage of learner errors to guide teaching activities. Perhaps most importantly, high-efficacy teachers spent more time teaching about the writing process, and their learners spent substantially more time engaged in the process of composition.

Teachers' Knowledge and Skills. Teachers' lack of knowledge about effective instructional strategies and the lack of the skills required to implement those strategies successfully have been identified as two significant challenges to the effective participation of learners who have CCN (Beukelman & Mirenda, 2013b; Pebly & Koppenhaver, 2001). Bandura (1997) argues that both knowledge and skills are required for effective performance. He contends that opportunities to

implement that knowledge and those skills, what he terms “enactive mastery experiences” (p. 80), and to learn from the successes and failures of those implementation attempts, are instrumental in the construction of self-efficacy. Bandura recommends a “mastery modelling” (p. 440) approach (incorporating modelling, guided practice, and support to transfer newly acquired knowledge and skills into work situations) for the development of the competencies and skills required to master a given occupational role. For teachers, the ideal opportunity for this to happen is during the practicum portion of their preservice training. A study of two groups of preservice teachers (one group early in their teacher preparation program and one near the end of their program) during their practicum experiences supports the pivotal role of these mastery experiences in building teacher self-efficacy (Pfitzner-Eden, 2016).

Internationally and in NZ, there are questions about the ability of some initial teacher training programs to produce teachers with inclusive mindsets who have confidence in their ability to meet the needs of the diverse learners they will have in their classrooms (Arthur-Kelly et al., 2013; Copeland et al., 2011; Koppenhaver & Yoder, 1993; McMenamin et al., 2004; Morton & Gordon, 2006; Morton & McMenamin, 2011; Ruppar et al., 2015; Sturm et al., 2006; Zascavage & Keefe, 2004). Some programmes may lack the provision of information about effective practices for inclusion and for teaching learners who have additional educational needs. There are additional concerns about the lack of opportunities to gain experience working with learners with various learning needs during teaching practicums. Indeed, teachers themselves identify limitations in their training, skills, and knowledge (Kent-Walsh & Light, 2003; Koppenhaver & Yoder, 1993; Moni & Jobling, 2013; Ruppar et al., 2015). Furthermore, a lack of exposure to, and training in the selection and implementation of AT, be it for communication, promoting access to resources, or facilitating teaching and learning, is also evident (Jost & Mosley, 2011; Judge & Simms, 2009; Kent-Walsh & Light, 2003; Ruppar et al., 2016; Zascavage & Keefe, 2004).

Effective Writing Instruction for Learners Who Have CCN

In line with their assertion that the cognitive processes underlying writing are the same for all learners, Sturm and Koppenhaver (2000) argue that the principles of effective writing instruction also apply to all learners. This notion has been reinforced in more recent times (Erickson et al., 2017; Gadd, Berthen, et al., 2019; Joseph & Konrad, 2009). A recent, small-scale inquiry by Gadd et al. (2019) investigated the impact of implementing the effective instructional strategies identified by Gadd and Parr (2017) with a group of learners with intellectual disabilities, including at least one with CCN. Their results indicate that these strategies were closely associated with improvements in task engagement and the quantity and quality of the writing. Particularly strong gains were noted in the quantity of writing (including not only the number of words and sentences written but also the range of ideas expressed) and in the level of complexity and grammatical fluency.

There appears to be growing evidence, then, that the strategies for effective writing instruction discussed in Section 2.2 should underpin writing instruction for all learners, including those who have CCN. However, thoughtful adaptations, along with environmental and technological supports, may be required to minimise the impact of some of the additional challenges faced by learners who have CCN. Some effective strategies and potential adaptations that are proving successful are discussed below. These include providing ample time for writing, providing appropriate writing tools, and writing for authentic, meaningful purposes and audiences. Finally, this section reviews a useful structure for writing instruction.

Ample Time for Writing Activities. First and foremost, sufficient time must be allocated to literacy instruction, including writing. Vaughn et al. (2007) argue that all learners in their first 4 years at school should receive a minimum of 90 minutes a day of literacy instruction. That requirement rises to 150 minutes per day for those at risk of literacy development problems, including learners with CCN. For some learners with CCN, this requirement may extend beyond 4 years. Within that time, learners must receive both explicit writing instruction (focused on strategies, processes and

specific skills) and multiple opportunities to practice and develop their writing skills by writing for authentic purposes (Copeland & Keefe, 2016; Erickson & Koppenhaver, 2020).

Learners who have CCN may have had limited emergent writing opportunities prior to attending school. These learners will require frequent opportunities to explore drawing, scribbling and creating text in an environment where adults encourage, support, and respond positively to their writing attempts. This will help them build the skills and understandings required to benefit from more conventional writing instruction (Erickson & Koppenhaver, 2020; Light & McNaughton, 2013a). Additionally, they need to witness others using writing for various purposes so that they may develop their understanding of the functions of writing. It is suggested that learners at this stage have opportunities to engage in both shared and independent writing. Shared writing involves the teacher using "naturally occurring opportunities to work with students to figure out how to use writing to record events and experiences" (Erickson, 2017, p. 196). Independent writing, with access to all 26 letters of the alphabet, provides learners with the opportunity to put what they are learning into practice.

Writing Tools. For some learners, particularly those with concomitant physical or sensory needs, the use of traditional writing tools and surfaces may be problematic. Teachers supporting these learners need to problem solve and experiment to find viable alternative options to enable engagement in writing experiences (Erickson et al., 2010; Erickson & Koppenhaver, 2020; Sturm, 2012). Alternative pencils such as low-tech partner-assisted writing tools; modified keyboards; and switch-accessible onscreen keyboards may need to be considered (Hanser, 2006). Open-mindedness and creativity are required here – Erickson and Koppenhaver give the example of a learner who, for a time, used a label maker as his preferred writing tool. Learners do not need to know or be able to identify the alphabet letters, nor do they need to know how to use the selected writing tool before beginning to use it. They learn much about both these areas as they actively engage in writing tasks with the writing tool (Hanser, 2006).

As learners progress in their writing skills, other AT such as word prediction applications can assist with the quality (supporting both spelling and grammar skills) and quantity (by reducing required keystrokes) of the written work produced (Pennington & Carpenter, 2019; Williams et al., 2007; Wollak & Koppenhaver, 2011)

Authentic, Meaningful Purposes and Audiences. Wollak and Koppenhaver (2011) reported a study involving an email partnership between learners with significant writing disabilities, including learners with CCN and undergraduate teaching students. The learners were supported by AT relevant to their individual needs. The e-mail exchange provided learners with real, authentic, and meaningful reasons to write as they engaged in reciprocal conversations with their e-mail partners. Study outcomes indicated positive impacts on the learners' engagement, motivation for writing, view of the writing process, and self-image as writers. Encouraging gains were seen in the quantity and quality of learners' written output and their independence as writers.

An Effective Structure for Writing Instruction. Sturm (2012) describes an approach, the Enriched Writers' Workshop (EWW), to writing instruction that has shown to be effective for a range of learners, including those who have CCN. Indeed, Sturm asserts that this approach "offers individualized, differentiated instruction that fosters access to meaningful writing experiences and promotes high expectations for all students within a classroom" (p. 339). Sturm maintains that the EWW has a positive influence on learners' motivation for writing and their perception of themselves as authors.

Grounded in evidence-based writing practices, EWW integrates explicit instruction with a process-based Writers' Workshop approach that establishes writing as a social communication act (Sturm, 2012). The approach incorporates many of the effective practices identified by Graham et al. (2016) and Gadd and Parr (2017). Firstly, EWW is undertaken in an environment where everyone is viewed as an author and where learners are encouraged to collaborate, share, and support each other in their writing endeavours. For learners who have CCN, this may have a two-fold advantage, providing opportunities for developing and practising communication skills and writing skills.

Secondly, the approach facilitates differentiation to meet the needs of diverse learners. Careful consideration is given to the provision of technological and instructional supports, adaptations, and accommodations to assist individual learners with writing tasks and communicating about the writing.

Thirdly, explicit instruction is incorporated into the approach by way of mini-lessons - short instructional sessions involving teacher modelling, learner participation in discussion, co-construction of text, and opportunities for guided practice. Mini-lessons may focus on such topics as strategies for planning, translating, reviewing or publishing/sharing written work; instruction in the use of specific technological supports; self-regulation strategies; or providing effective feedback to peers.

A fourth element of the EWW approach is the opportunity for learners to write independently on a topic of their choosing. Sturm (2012) argues that self-selecting the writing topic ensures learners are writing about something of interest and about which they have some knowledge. This helps build intrinsic motivation for, and ownership of, the writing. As Perry and Drummond (2002) explain: “when students have choices, they are typically more interested in and committed to activities, and committed learners are more likely to increase effort and persist when difficulty arises” (p. 306). Furthermore, Erickson and Koppenhaver (2020) point out that the ability to generate a topic for writing is an important part of the writing process. Importantly, self-selection means that students may elect to write on the same topic multiple times, or to go back to a previous piece of writing to revise and edit it as they prepare their writing for publication and sharing.

Finally, the EWW provides opportunities for feedback from teachers through individual conferencing with learners and peers through thoughtfully structured and supported feedback activities. Learners are explicitly taught how to provide feedback, through comments and questions, during some mini-lessons. Supports such as tip sheets and communication systems are part of these during feedback sessions. Learners providing feedback may also be prompted to expand responses

and provide additional information. Learning to provide feedback to others may help learners become more adept at evaluating and monitoring their own writing.

Results from a selection of case studies provided by Sturm (2012) indicated that the EWW had a positive impact on the quantity and quality of writing produced. Furthermore, improvements were apparent in the range of topics and genres learners chose to write about, their engagement when writing and when sharing writing with peers and others, and across a range of communication-focused indicators.

Paucity of Research

Examples such as the work or Sturm (2012) demonstrate how effective instructional strategies for all learners can be melded with appropriate individual supports to provide writing instruction that supports learners who have CCN to become more proficient writers. Unfortunately, however, many do not. In fact, Erickson et al. (2017) suggest that even today, the literacy levels of 70-90% of students who have CCN are likely to be significantly behind their peers without disabilities. As discussed earlier, some of the most significant barriers to acquiring writing skills for learners who have CCN are likely to be their teachers' beliefs and skill and knowledge levels.

While there is a growing base of research related to effective instructional strategies for teaching writing to learners with CCN, there appears to be little research seeking to build a picture of teachers' epistemological and self-efficacy beliefs or of their current levels of knowledge and skill in that regard. Some investigations do exist (Bock & Erickson, 2015; Peeters et al., 2009; Ruppar, 2017; Ruppar et al., 2011, 2015), but they are not necessarily specific to writing or learners who have CCN.

In the NZ context, the research in this area is scant. As part of a thesis on practices related to emergent literacy instruction for children on the autism spectrum in preschools, Wright (2014) looked at early childhood teachers' beliefs about emergent literacy. This included beliefs about the importance of the early writing skills of naming and writing letters; the range of writing materials available in their centres; and descriptions of specific ways in which emergent writing was supported in the centres. Through both the survey and the interviews, it was apparent that writing was not a

preferred activity for the children. However, this study was not focused on children with CCN, considered writing as an element of comprehensive emergent literacy approach, and did not delve into teacher beliefs about writing for the target children. The majority of teachers had had some professional learning in emergent literacy and felt competent in supporting the children to develop emergent writing skills.

Interestingly the teachers, overall, appeared to hold positive beliefs about the importance of emergent literacy and the children's ability to participate in emergent literacy routines. However, there were also indications that emergent literacy was not a priority for some children and that expectations of what children on the autism spectrum could achieve were lower than for other children. Given the impact that teacher beliefs can have on their practice, these findings may have implications for communication and literacy development.

Rationale for the Study

The significance of developing writing skills for learners who have CCN was discussed in Chapter 1, as were the gravely concerning the statistics about their levels of achievement in writing. This chapter reviewed the growing evidence about effective strategies for the teaching of writing and the indications that these strategies are equally effective for learners with various needs. In addition, this chapter has identified a range of challenges facing learners who have CCN as they learn to write, not least of which are the beliefs, perceptions and attitudes of those responsible for their learning.

As noted, there is a paucity of research about writing for learners with CCN, both internationally and in NZ. By investigating STs' experiences and perspectives, this study aims to contribute by building an understanding of the current state of affairs in this area in the NZ context. It is hoped that it may serve to identify what is working and what needs further investigation or review. In doing so, it may assist in pointing a way forward to developing a teacher workforce that believes in all learners' ability to develop into writers and has the knowledge and skills to support those beliefs in practice.

The following chapter outlines the methodology used in the study. The research question is specified, and participant recruitment processes are described. The selected research approach and specific research design are discussed, along with data collection methods and procedures and data analysis procedures for each of the study's two phases. It concludes with relevant ethical considerations.

Chapter 3: Methodology

This chapter describes the methodology of the study. It begins with a statement of the research question before describing the participant recruitment and sampling process, the overarching research approach, and the specific research design guiding the study's implementation. It then turns to the specific research methods related to each of the two phases of the study. For each phase, the instrument, data collection, and data analysis processes are described. This is followed by a discussion of how the results from both phases were integrated. Finally, the chapter explores the ethical considerations related to the study.

Research Question

In this study, STs involved currently, or in the past two years, in teaching writing to learners who have CCN were surveyed and interviewed to explore the following research question: What are the experiences and perspectives of STs related to the teaching of writing to learners who have CCN?

Participants

This section describes the target population and participant recruitment and sampling procedures.

Target Population

The NZ Ministry of Education has a focus on building inclusive learning communities. This includes equipping “educators with knowledge and strategies to deliver a rich, engaging curriculum in an adaptive and personalized way” and building “collective curiosity, intelligence, inquiry and critical thinking to engage all learners in meaningful learning”(Ministry of Education, n.d., An inclusive learning community section). In keeping with this focus, this study's target population was STs, working in inclusive school settings in NZ, who had been involved in teaching writing to learners who have CCN within the past two years. Two years was considered a reasonable timeframe to garner a sufficiently sized sample of STs with recent experience teaching writing to learners who have CCN to draw upon as they completed the survey and responded to interview questions.

Participant Recruitment and Sampling

Participants were recruited through The TalkLink Trust, STOS provider schools, Te Aho o te Kura Pounamu (The Correspondence School), and through relevant social media groups. An email (see Appendix A) containing a brief description of the study was sent to these agencies, along with the Participant Information Sheet (see Appendix B) and a request for the information to be distributed to STs who had worked with learners who have CCN within the past two years. STs interested in participating accessed the Phase 1 survey via a link provided in the Participant Information Sheet. This provided a criterion-based, purposeful sample of participants with knowledge and experience relevant to answering the research questions (Creswell & Plano Clark, 2018; Oliver, 2006; Onwuegbuzie & Collins, 2007; Palinkas et al., 2015). This sample could be expected to give "some indication of the prevalence of behaviours and attitudes in the particular group" (Bynner, 2011, p. 3).

Upon completing the survey, participants could elect to register their interest in participating in Phase 2 (interview) of the study. Given that the follow-up interviews aimed to explain and illustrate the survey findings, a nested sample (Onwuegbuzie & Collins, 2007) was deemed appropriate. A nested sample ensured that Phase 2 participants were a subset of those in Phase 1 and should, therefore, be able to respond to questions related to the data collected in the survey (Creswell, 2015; Creswell & Plano Clark, 2018; Greene, 2007). Interview participants were selected using a stratified purposive sampling scheme (Onwuegbuzie & Collins, 2007; Palinkas et al., 2015; Teddlie & Yu, 2007). Participants who registered interest in being involved in an interview were sorted by total self-reported confidence score, and four interviewees selected to provide a range of confidence scores.

Research Approach

This study was undertaken using a mixed methods research (MMR) approach. MMR draws on the strengths of both quantitative and qualitative approaches to provide a richer understanding

of the phenomenon of interest than either approach alone (Creswell, 2015; Creswell & Plano Clark, 2018; Greene, 2007; Morgan, 2018; Plano Clark & Ivankova, 2016). As Greene (2015) explains:

> A mixed methods perspective legitimizes multiple ways of seeing and hearing, multiple ways of making sense of the social world, and multiple standpoints on what is to be valued and cherished. A mixed methods perspective recognizes that each methodological standpoint is inevitably partial. Any single approach necessarily offers but one window on human phenomena. So, multiple approaches – each legitimized, each valued, and each positioned at a different angle – can offer a more complete and fuller understanding of the human endeavors being studied. (p. 750)

Quantitative and qualitative approaches each have unique strengths that bring value to a research undertaking (Ary et al., 2014; Miles et al., 2020; Morgan, 2018). Each can provide different insights into human behaviour (Greene, 2007). For example, quantitative approaches may offer findings that are more easily generalized through the analysis of data from a larger number of participants, whereas qualitative approaches may provide a more detailed or nuanced understanding of a phenomenon by considering context and by incorporating participants' voices (Creswell & Guetterman, 2019; Creswell & Plano Clark, 2018; Morgan, 2014).

MMR is touted as a useful approach to research complex human phenomena (Greene, 2012). Several writers echo this notion in their discussion of both the complexity of special education and the usefulness of MMR as an approach to research in this field (Collins et al., 2006; Klingner & Boardman, 2011; Newman & Houchins, 2018; Onwuegbuzie & Corrigan, 2018). MMR is seen as a way to bridge the gap between research and practice. It enables researchers "not only to answer questions of who, where, how many, how much and what is the relationship between specific variables" but also "to address *why* and *how* questions" (Collins et al., 2006, p. 84). MMR was, therefore, deemed an appropriate approach supporting the use of various lenses to build a comprehensive understanding of the experiences and perspectives of STs involved in the complex task of teaching writing to learners who have CCN.

Research Design

MMR should not consist of simply putting together randomly chosen research methods. Within MMR, a variety of research designs have been identified, which provide guidance for researchers making decisions about methods for the collection, analysis, interpretation and reporting of data within a study (Creswell & Guetterman, 2019; Creswell & Plano Clark, 2018). These designs provide an important link between the study's aims and research questions and the specific procedures or methods utilized (Morgan, 2014).

An explanatory sequential design, beginning with a quantitative phase and followed by a qualitative phase aimed at exploring, explaining, or illustrating the quantitative results (Creswell, 2015; Creswell & Plano Clark, 2018), underpinned this study. Morgan (2014) explains that this type of design enables closer examination of participants' perspectives and the inclusion of contextual details, which the more general results of the quantitative phase alone may lack. Priority is generally given to the initial quantitative phase, with the qualitative phase providing supplementary information (Creswell & Plano Clark, 2018; Morgan, 2014).

Within this design, integration occurs at two key points. Firstly, integration occurs at the interface between the quantitative and qualitative phases, when the results of the initial, quantitative phase are used to guide sampling decisions and the creation of the interview schedule for the qualitative follow-up phase. Secondly, on completion of the qualitative phase, an additional level of interpretation is undertaken to establish how the qualitative results explain or illustrate the quantitative results (Creswell & Creswell, 2018; Creswell & Plano Clark, 2018).

The explanatory sequential design was considered appropriate for this study. It allowed the researcher to gather initial data from a reasonably sized sample of participants, to identify results that merited further investigation, and to select participants for the follow-up phase who could reasonably be expected to provide a range of experiences and that would help to explain, illustrate and contextualise the results.

Research Methods – Phase 1

This section details the research methods relevant to the survey undertaken as Phase 1 of the study.

Data Collection Method – Online Survey

Surveys are a commonly used method in educational research that enable researchers to collect information to describe the characteristics of a population, their attitudes, opinions, values, beliefs, and behaviours (Creswell & Guetterman, 2019; Menter et al., 2011). Whilst surveys tend to be quantitative in nature, using predominantly closed questions, open-ended qualitative questions can also be included (Ary et al., 2014; Creswell & Guetterman, 2019; Menter et al., 2011). Surveys can be a time-efficient method of collecting data from a relatively large sample of people (Bynner, 2011; Menter et al., 2011).

Online, web-based surveys have become increasingly popular as access to the internet and mobile devices has become more widespread. People have become accustomed to completing many of their daily tasks online (Dillman et al., 2014). Online surveys allow for time and cost-efficient collection of data from participants (Ary et al., 2014; Menter et al., 2011; Rea & Parker, 2014), who can complete the survey in a place, at a time, and on a device of their choosing. Online survey services enable researchers to create surveys, with a range of question types, for online administration across a range of devices, with relative ease (Cozby & Bates, 2017).

Before electing to use an online survey, consideration must be given to the technological capabilities, computer literacy, and access to the internet and suitable devices of the target population (Ary et al., 2014; Dillman et al., 2014; Rea & Parker, 2014). With the widespread adoption of technology and online activity in the education sector, these issues were not considered major impediments to uptake and participation in this study. A further limitation is the difficulty in verifying participants' characteristics in an online study with voluntary involvement. However, it suggested that misrepresentation is no more likely to happen in an online survey than in other data collection methods (Cozby & Bates, 2017).

Survey Instrument Design

Survey-based research requires thoughtful planning of the instrument itself, how it will be administered, and how the results will be analysed (Ary et al., 2014; Menter et al., 2011). Designing a survey that will generate valid, reliable, and useful information in answering the research questions is a multi-faceted and often difficult task (Creswell & Guetterman, 2019). The format and presentation of the survey must be considered, in addition to the order, types, and wording of the survey items (Creswell & Guetterman, 2019; Fowler, 2014; Menter et al., 2011). According to Bourke, Kirby and Doran (2016), good survey questions are those that respondents can comprehend, are capable of answering, and are willing to answer. More particularly, care must be taken to ensure that questions:

- are written simply, clearly and concisely
- contain no jargon
- do not contain multiple questions in one question
- are not negatively worded
- are not leading (Bourke et al., 2016; Creswell & Guetterman, 2019; Fowler, 2014).

Consistent with the aim of describing and developing an understanding of the experiences and perspectives of STs, rather than developing theory or testing hypotheses about relationships between variables (Bynner, 2011; Punch & Oancea, 2014), a descriptive cross-sectional survey was utilized. The survey instrument (see Appendix C) included 60 items formulated by the researcher after consideration of the existing literature about literacy, and more specifically, writing instruction for learners who have a variety of learning support needs, including CCN.

A variety of question types were used including scaled items (*n* = 28), forced-choice questions (*n* = 8), multiple-choice checklists (*n* = 3), matrix tables (*n* = 1) and open-ended questions (*n* = 20). The survey was divided into ten sections: (1) introduction and screening questions; (2) teaching context and experience; (3) qualifications and professional learning and development; (4) beliefs about writing and learners who have CCN; (5) confidence levels; (6) perceived facilitators and

challenges; (7) writing instruction practices; (8) assessment and feedback practices; (9) closing comment; and (10) registration of interest for participation in the interview phase.

Following the recommendations of Johnson and Morgan (2016), response categories for all scaled items were presented in a logical order from negative to positive. Both verbal and numeric labels were used for each response category. In Section 4, a six-point scale (Strongly Disagree, Disagree, Somewhat Disagree, Somewhat Agree, Agree, Strongly Agree) was used to avoid neutral responses in relation to belief statements (R. L. Johnson & Morgan, 2016; Rea & Parker, 2014). In Section 5, a five-point scale (Not at all confident, Slightly confident, Moderately confident, Very confident, Extremely confident) was used. Section 7 used a five-point time scale (Never, Sometimes, About half the time, Most of the time, Always) to identify the amount of time spent in different contexts.

The survey was pre-tested in line with general survey research practice (Ary et al., 2014; Creswell & Guetterman, 2019). This was done in three ways: (1) the survey was extensively reviewed by the research supervisors; (2) two teachers with substantial experience working with learners who have CCN were asked to pilot the survey and provide feedback on timing, content, and format; and (3) a third teacher who has previously worked in the ST role and been involved in teaching learners with CCN engaged in a cognitive interview (Desimone & Le Floch, 2004) with the researcher, which helped to reduce the likelihood of misinterpretation of questions by participants and provided additional feedback on timing, content, and format. Together, these three processes enabled the researcher to modify items to enhance their effectiveness for this survey and resulted in some questions being removed for clarity and reducing the time required to complete the survey.

Data Collection Procedures

An online survey, developed and administered via the Qualtrics platform, was used to collect Phase 1 data. Participants accessed the survey via a link provided on the Information Sheet (Appendix B). Participants were informed that the survey should take approximately 20 minutes to

complete and that submission of responses implied consent for the use of their data. Due to the survey's anonymous nature, exiting the survey and returning to complete it later was not possible.

Data Analysis

The use of the Qualtrics platform facilitated the data analysis process. Data was progressively saved as participants moved through the survey and were immediately available to the researcher. On completion of data collection, raw data was exported from Qualtrics into Microsoft Excel™, where a master data file was created. Copies of this were used to allow data to be reorganized in various ways for analysis. In addition, the qualitative portions of the survey data were imported into NVivo, a qualitative data analysis software package.

There were 34 responses to the survey. Prior to commencing analysis, data from respondents who had not moved beyond the first three sections of the survey, which collected predominantly demographic and background information and were not considered useful in answering the research questions when provided in isolation, was removed from the database. This resulted in 26 useable responses. The researcher read through each set of survey responses to establish a sense of the data as a whole. The inclusion of both closed (quantitative) and open (qualitative) questions in the survey necessitated the use of different methods of analysis.

Quantitative Data Analysis. Consistent with the descriptive nature of this study, quantitative survey data were analysed using descriptive statistics and reported predominantly through frequency counts and percentages. Graphs and tables were used to provide visual representations of some data.

Qualitative Data Analysis. A generic qualitative approach was used to analyse the qualitative day from the survey (Percy et al., 2015). Kahlke (2014) argues that research into areas where little existing research or theory exists requires the flexibility provided by a generic qualitative approach. Percy et al. (2015) suggest that generic qualitative inquiry is useful for mixed methods studies; for studies where the researcher's focus is "on the content of opinions, on the actual-world experiences and happenings, on the thoughtful description and reflection of historical occurrences

in people's past" (p. 78); and for studies where the researcher has existing knowledge of a "topic that he or she wants to be able to more fully describe from the participants' perspective" (p. 78). Surveys using a mix of quantitative and qualitative questions and semi-structured interviews are commonly used data collection tools in this approach (Percy et al., 2015).

Data analysis in a generic qualitative approach generally involves thematic analysis and often uses an inductive approach (Percy et al., 2015). Inductive approaches to analysis are driven by the data, rather than by any pre-existing notions or categories, and aim to draw out significant or recurring patterns and themes from the raw data (Percy et al., 2015; Thomas, 2003, 2006).

Analysis of the qualitative portions of the survey data was guided by the thematic analysis with constant comparison approach described by Percy et al. (2015). The researcher read through the data several times and then highlighted text excerpts (words, phrases or sentences) that appeared to be meaningful to the research question. These text excerpts were coded, and related items were clustered together in categories. A codebook (DeCuir-Gunby et al., 2011) was established to provide definitions and examples of data related to a given category or code (a portion of the codebook for this study is provided in Appendix D). Subsequent responses were analysed by comparing and contrasting them with all the previously analysed data. Data that fit within existing codes and categories were attached to them, and new codes were generated when required. The constant comparison between existing and new data worked both ways, with previously developed codes and categories being amended, deleted, or assimilated with others to improve the coding scheme's overall coherence. As more submissions were analysed, over-arching themes began to emerge, supported by the categories and elucidated by specific examples of text from within the data.

Research methods – Phase 2

This section details the research methods relevant to the semi-structured interviews undertaken as Phase 2 of the study

Data Collection Method – Semi-Structured Interviews

Interviews, one of the most prominent methods of collecting qualitative data, are useful for collecting data about a participant's opinions, beliefs, perceptions, and feelings, as well as their experiences and the meaning they make of them (Ary et al., 2014; Josselson, 2013; Schensul & LeCompte, 2013). Interviews are a very flexible data collection tool (Ary et al., 2014; Punch & Oancea, 2014) and provide the researcher with some control over the data collected because questions can be formulated to elicit specific, targeted information (Creswell & Guetterman, 2019).

Individual, semi-structured interviews, very common in educational research (Creswell & Guetterman, 2019; Punch & Oancea, 2014), were chosen for this study. Schensul and LeCompte (2013) argue that semi-structured interviews are specifically designed to "explore systematically areas that already have been deemed of importance within the study" (p.172), which supports the aim of the follow up qualitative phase in the explanatory sequential design. Semi-structured interviews are guided by a series of questions related to specific areas of interest but also provide the researcher with the flexibility to rephrase questions, rearrange the order of questions, and to use follow-up questions, or probes, to expand on or clarify responses (Ary et al., 2014; Creswell & Guetterman, 2019; Hinckley, 2014; Punch & Oancea, 2014; Schensul & LeCompte, 2013).

In an interview, the researcher is seen as the research tool (Gillham, 2000; Kvale, 2007), and successful interviewing depends on the relationship and interaction between the researcher and the interviewee (Josselson, 2013). Creating an atmosphere that puts the interviewee at ease, active listening and engagement, being respectful, demonstrating interest in and understanding of what is being said, and being able to identify responses worth developing all help to create a successful interview situation (Ary et al., 2014; Josselson, 2013; Kvale, 2007). Gillham (2000) argues that "it is the interviewees who have the information" (p. 28) and, therefore, interviewers need to aim to speak less and build skills "allowing and encouraging the interviewee to respond (p.30). Josselson (2013) concurs, saying "if we want to understand our participants' experiences in their own terms,

we have to invite their narratives and get out of the way as much as possible, except to encourage elaboration and extension" (p. 11).

An interviewer's mere presence may impact how interviewees respond (Creswell & Guetterman, 2019). One potential issue is social desirability bias, where interviewees respond in what they deem a socially desirable way or provide responses they feel the interviewer wants to hear (Ary et al., 2014). Interviewees may also respond in disingenuous ways in an effort to portray themselves as they want to be seen (Creswell & Guetterman, 2019). In addition, how an interviewer responds to what an interviewee is saying can affect what the interviewee reveals as the interview progresses (Josselson, 2013). Care must be taken not to allow the researcher's personal biases, feelings, attitudes, or other characteristics to impact how questions are presented, or on how responses are interpreted (Ary et al., 2014), as this can influence both "the process and content of 'the data'" (Josselson, 2013, p. 1). This interviewer bias also needs to be monitored when analysing and reporting interview data (Creswell & Guetterman, 2019).

Interview Protocol Design

In line with the explanatory sequential design of this study, the interview protocol (see Appendix E) was finalised after the analysis of the Phase 1 survey data was completed (Creswell & Plano Clark, 2018). This allowed for the identification of specific Phase 1 results that needed further exploration, explanation or illustration.

Due to time constraints and because the interview questions were aimed at participants who had already interacted with the survey's content, no piloting or external review of the interview protocol was undertaken. However, substantial discussion with the research supervisors about which results to expand upon, which questions to ask, how they were best phrased, and the most appropriate order to ask them was undertaken prior to commencing the interviews.

Data Collection procedures

Participants selected for interviews were contacted via the email address provided at the completion of the Phase 1 survey and invited to participate in the semi-structured interviews. A copy

of the Participant Information Sheet (Appendix B) was sent to interviewees, along with a Participant Consent Form (Appendix F). Due to time and distance constraints, all interviews were completed using the Zoom video conferencing software. Each interview typically began with a personal introduction, including a quick review of the research project and the aims of the interview. A discussion followed to ensure the interviewee understood their rights and that the interview would be digitally recorded. Interviewees were requested to forward the signed consent form via email and were given the opportunity to ask any further questions before the interview proper began. Each interview was digitally recorded using the recording facility within the online meeting platform.

Data Analysis

In preparation for analysis, the recording of each interview was transcribed by independent transcribers, who signed a Transcriber's Confidentiality Agreement (see Appendix G). Each interview was then listened to and the transcript checked for accuracy by the researcher. Interviewees were provided with the opportunity to read their own transcript and add, amend, delete or clarify their responses. They were asked to return the edited transcript along with a transcript release authority (Appendix H). No interviewees made amendments to their transcripts. Transcripts were de-identified and allocated a code – ST1, ST2, ST3 and ST4.

Given that this second phase aimed to provide elaboration and examples to expand on the findings of Phase 1, analysis of the interview data was undertaken with the theoretical analysis approach outlined by Percy et al. (2015). Percy et al. clarify that this method of analysis

> is employed in a situation in which the research[er] has some predetermined categories (themes) to examine during the data analysis. In this situation, the research[er] may use his/her pre-understandings when conducting the data analysis. However, in this case the researcher also remains open to the possibilities of new themes emerging from the thematic analysis. (p. 81)

For the purposes of this study, the codes and understandings arising from the Phase 1 data analysis were used to guide the analysis of the Phase 2 data, with additional codes being added as required.

To begin, the researcher read and reviewed one transcript several times to build familiarity with the data. Meaningful units of text were identified, compared to the existing codes, and labelled with either an existing code or a new descriptive code if required. It is important to note that some text may not be coded (if it is not relevant to the research question), and some text segments may be assigned more than one code (Thomas, 2003). New codes were added to the existing codebook and relevant text segments to further elucidate the meaning of specific codes. As in Phase 1, constant comparison between existing and new data worked both ways to ensure the coding scheme's overall coherence.

Ethical Considerations

The project was judged to be low risk, and a low-risk notification was submitted to the Massey University Human Ethics Committee. A copy of the Ethics Notification is provided in Appendix I. Following are details of the key ethical issues considered in relation to this project and an explanation of how they were addressed.

Voluntary Informed Consent

It is important to provide research participants with a comprehensive overview of the study, including how their data will be used, their rights as participants, including the right to withdraw from the study, and any risks or benefits expected to be involved. This enables them to make informed decisions about whether to participate (Creswell & Plano Clark, 2018; Punch & Oancea, 2014). A Participant Information Sheet (see Appendix B) was provided to all participants outlining the study purposes and process and participant rights. For Phase 1, voluntary informed consent was implied when participants submitted survey results. This was communicated in the Participant Information Sheet. Interviewees in Phase 2 were asked to sign a consent form (see Appendix F) after having the opportunity to discuss any questions or concerns. In addition, a transcript release authority (see Appendix H) was also requested after participants had the opportunity to review their interview transcript.

Confidentiality

Whilst it is difficult, especially in smaller scale studies, and in studies relating to what Damianakis and Woodford (2012) term "small connected communities" (p. 709), to guarantee complete confidentiality (Punch & Oancea, 2014), this study aimed to provide as much confidentiality and anonymity as possible to participants. Recruitment emails (Appendix A) and Participant Information Sheets (Appendix B) were sent to agencies for distribution to prospective participants rather than direct to participants. The online survey was essentially anonymous and did not collect any personal details (beyond those related to the teaching context and levels of experience) unless the participant elected to submit an expression of interest in participating in an interview when name and contact details were requested. These details were separated from the survey database, and once interview transcripts were verified, this personal information was removed, and each interview transcript was assigned a code instead. In addition, signed transcriber confidentiality agreements (see Appendix G) were obtained from the transcribers who transcribed the semi-structured interviews. To protect the confidentiality of others, participants were asked not to mention by name or share identifying details of any other person.

Cultural Responsiveness

Cultural responsiveness is a key issue in research in the NZ context. The researcher engaged with participants in a culturally sensitive manner, giving particular consideration to the Treaty of Waitangi principles and was respectful of all opinions and beliefs. In addition, cultural advisors were available for consultation if required.

Acknowledgement of Participation for Interviewees

Interviewees were offered at $25 book voucher in acknowledgement of their participation in the interview phase.

Summary

This chapter has provided an overview of the methodology employed in the current study. The research question was stated, and participant recruitment processes were outlined. The chosen

research approach and design were described and justified. Data collection and analysis methods and procedures were reviewed, and ethical considerations relevant to the current study were discussed. The following chapter presents the findings of the current study, integrating the data from both phases.

CHAPTER 4: Results

The purpose of this study was to examine the experiences and perspectives of STs involved in teaching writing to learners who have CCN in inclusive school settings in NZ through a survey and a small number of semi-structured interviews. As described in Chapter 3, an explanatory sequential MMR design was used. In this design, priority is given to the initial, predominantly quantitative survey phase with the qualitative interview phase providing supplementary information. In line with this design, results from both phases are are reported together with survey findings providing the essential structure for this chapter and the interview data intertwined to provide contextual examples and further depth of understanding. The results are presented in nine sections: (1) participant background information; (2) professional learning and development (PLD); (3) beliefs about writing in relation to learners who have CCN; (4) confidence levels; (5) frequency, setting and team roles for writing instruction; (6) strategies, tools and materials; (7) assessment and feedback; (8) facilitators; and (9) challenges.

Participant Background Information

At the time of closing of the survey, 34 responses had been received. Eight respondents did not complete any questions beyond the initial background data collection, and these were removed from the data set. A total of 26 responses were, therefore, included in the final analysis. Not all participants responded to all questions; data reported as percentages is based on the actual number of responses to a particular question and, where appropriate, *n* = is used to denote the number of responses received. Background information on survey respondents is provided in Appendix J and a summary is provided here.

The majority of respondents undertook their work with learners who have CCN in primary school settings (*n* = 23), followed by middle/intermediate schools (*n* = 6) and secondary schools (*n = 5*). Note that some respondents may work in multiple settings. Three respondents indicated that they worked in a specialist school setting. For two of these participants, this was in addition to their work in other schools. Overall teaching experience for the respondents varied from 2.5 years to 37

years (*M* = 19.6 years). Six respondents had less than 10 years teaching experience, seven had 10 – 20 years, 11 had 20 – 30 years, and two indicated they had been teaching in excess of 30 years. Years of experience working with learners who have CCN was considerably lower, ranging between 1 year and 23 years (*M* = 8.5 years). Eleven respondents indicated they had less than 5 years of experience, nine had 5 – 10 years, and six had more than 10 years. When asked to indicate the number of learners who have CCN they had worked with, several respondents were less precise making it difficult to generate clear summary statistics. However, the range was from two learners to over 100 learners. Eleven respondents had worked with less than 10 learners, six with between 10 and 20 learners, and the remaining all indicated approximately 30 or more. Respondents also indicated a broad range of education related qualifications as indicated in Appendix J.

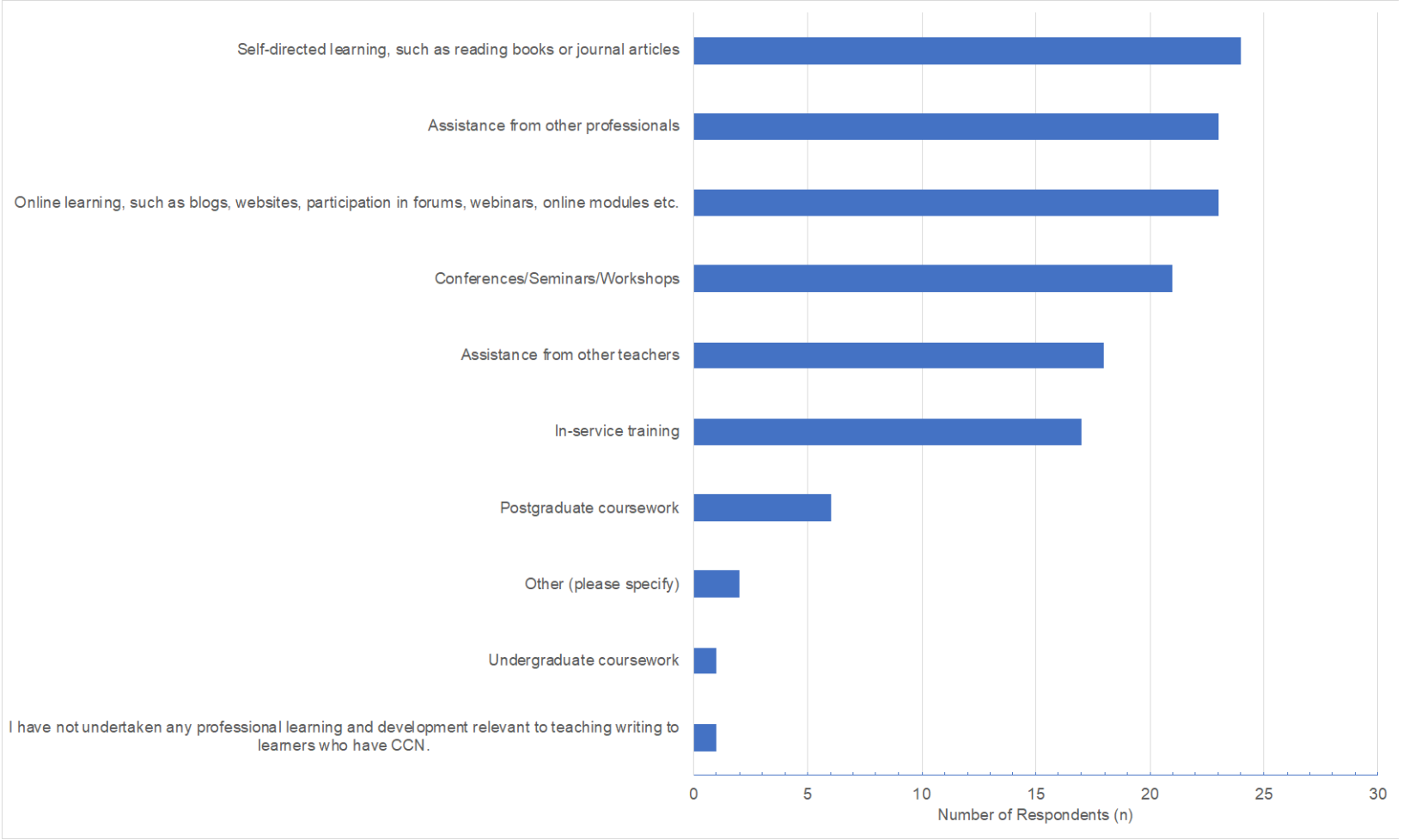
Survey respondents who registered their interest in participating in the semi-structured interviews were sorted according to their overall confidence scores (maximum possible total of 55). Four interviewees were selected to provide for a range of confidence scores. Interviewees are identified in Appendix J and in the following results as ST1 (confidence score = 19), ST2 (confidence score = 48), ST3 (confidence score = 52) and ST4 (confidence score = 37). Three (ST1, ST2 and ST4) interviewees are employed by their local specialist school as part of the STOS and one (ST3) is employed directly by the schools in which she works. All four work predominantly with primary aged learners, and their experience working with learners with CCN ranges from 3 to 16 years.

Professional Learning and Development

Participants were asked to indicate the types of PLD, relevant to teaching writing to learners with CCN, they had undertaken; which PLD experiences they had found most beneficial; and what further PLD they would be interested in undertaking. As shown in Figure 1, respondents indicated that they had undertaken a range of types of PLD. Self-directed learning, such as reading books or journal articles was the most popular (*n* = 24) form of PLD undertaken, followed closely by assistance provided by other professionals (*n* = 23) and online learning opportunities (*n* = 23).

Figure 1

Types of PLD Undertaken by Survey Respondents



Attendance at conferences, seminars or workshops (*n* = 21), assistance from other teachers (*n* = 18) and in-service training opportunities (*n* = 17) were also fairly common. Only six respondents had undertaken postgraduate course work, and one had undertaken undergraduate coursework. Two respondents indicated they had been involved in 'other' forms of PLD, and one had not undertaken any relevant PLD.

With regard to which PLD they found most useful, participants responded in a variety of ways (see Table 2). Some indicated specific programmes or presenters, others indicated more general areas of learning, and others particular styles of PLD. One respondent indicated it was a struggle to find relevant opportunities and that lack of time to participate in relevant PLD was an issue. Interestingly, not all PLD identified related directly to writing.

Table 2

PLD Identified as Most Useful

Response type	Specific examples
Training or PLD in specific programmes, strategies or software	Early Words See & Learn Numicon TEACCH Anchor-Read-Apply Clicker Tactile Communication Systems The Traffic Jam in My Brain
Specific presenters or organisations	Sally Clendon (*n* = 12) TalkLink (*n* = 6) Jane Farrall (*n* = 3) BLENNZ Susan Norwell Missy Morton Annie Guerin Project Core Other professionals (e.g., Ministry of Education staff, SLTs) (*n* = 3)
General areas of learning	Autism (*n* = 2) AAC
Type of training/PLD	Workshop style

In line with the survey results, all four interviewees included PLD with Sally Clendon as some of the most useful they had undertaken. They found the training "fully enlightening and … just very practical" (ST1). ST3 asserted that it "affirmed some of the things that I had already been doing but gave me masses of ideas to take it further" and ST4 spoke of how it "opened my mind to quite a lot of possibilities". Courses from TalkLink were also seen as particularly useful. The work of Jane Farrall, Karen Erickson, and David Koppenhaver was referred to, as was training by Ministry of Education staff, particularly in the area of technology. Two interviewees indicated that they often find useful PLD online, whether from specific programme webinars, blogs or YouTube. Additionally, networking with other STs and sharing practice was alluded to by both ST2 and ST4. ST2 spoke of the in-house PLD that her school provides, including opportunities for staff to share practice, and ST4 described sessions where STs involved in the STOS across her region came together for both PLD presentations and opportunities to share practice.

Finally, there were responses in a variety of categories related to areas in which STs felt they would benefit from further PLD (see Table 3). Again, not all PLD identified related directly to writing. Three respondents noted that they were interested in any relevant PLD.

The suggestion of increased opportunities to engage with other STs and to share practice was raised by ST3:

> STs almost need a network to belong to somehow … just so you can refresh yourself and see and connect with other people and share ideas. I think teachers are great for that. Teachers are really good for that, but STs – there's not as many of us.
>
> … Just to share ideas … I'm a great believer in sharing because there's no point reinventing the wheel. … And just having a person to bounce ideas off and share problems with as well.

ST4, who has been involved at regional level in this type of PLD also felt that a wider network would be beneficial, particularly for STs who may be outside the main regions where they are more isolated.

Table 3

Desired Areas for Future PLD

Response type	Specific examples
Technology related	Teaching typing AT generally (*n* = 3) AAC systems (*n* = 3)
Writing related strategies and skills	Ideas for independent writing Formats for writing Contextualising writing Function over form Creativity Sentence expansion Maintaining learner motivation for writing
Related to specific learner characteristics	Pre-emergent ASD Attention and behaviour challenges Profound and Multiple Learning Disabilities Low developmental levels
Specific presenters	Sally Clendon Karen Erickson & David Koppenhaver
Other	Life skills Rapid Prompting Method Supporting wider team Supporting learners with limited communication and/or limited life experiences Finding a balance in inclusive settings Opportunities to workshop with other STs about practice Desire to undertake own research

Two additional areas were raised by the interviewees: firstly, postgraduate study, with one currently undertaking the Postgraduate Diploma in Specialist Teaching and a second contemplating undertaking the same programme; and secondly, the need for sufficient training when a learner is provided with AT.

> When I think of my student who has just got his eye-gaze computer … there's all these people working with him, and they've had hardly any training with using the device. … If you think about the money that goes into it and how important it's going to be for him, … there

should be a lot more training and follow-up for people working with that sort of equipment. (ST2)

Beliefs About Writing in Relation to Learners Who Have CCN

The survey respondents were asked to indicate different levels of agreement with a range of statements about underlying beliefs related to the teaching of writing to learners who have CCN. Their responses are summarised in Table 4 and key findings are discussed here.

Significantly, 95.4% of respondents either strongly agreed (68.2%) or agreed (31.8%) that learners who have CCN benefit from daily opportunities to write. The importance of writing as a skill for all learners, and its importance as an element of literacy instruction, were also relatively strongly supported with 90.9% of respondents either strongly agreeing or agreeing with both statements. Furthermore, 81.8% strongly agreed or agreed that writing is a social activity and that learners who have CCN should be asked to write for authentic, meaningful purposes. Support was also evident for belief in the ability of writing to help improve other skills such as communication (81.8% strongly agreed or agreed) and reading (77.3% strongly agreed or agreed). Meanwhile, 81.8% of respondents disagreed (18.2%) or strongly disagreed (63.5%) with the statement that writing skills are best taught as isolated tasks such as handwriting practice, worksheets, or grammar lessons.

More neutral levels of support were seen for statements relating to (1) writing being an engaging and enjoyable experience for learners who have CCN (14.3% somewhat agreed and 28.6% somewhat disagreed); (2) all learners who have CCN being capable of learning to write (36.4% somewhat agreed and 4.5% somewhat disagreed); and (3) the importance of focusing on the form and structure of writing products from the beginning (31.8% somewhat agreed and 9.1% somewhat disagreed). The widest spread of responses was seen in the two questions relating to the importance of phonological awareness and phonics in writing where there were responses at all levels of agreement and disagreement.

Table 4

Survey Responses to Belief Statements

Belief Statements	*n*	Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree	Mode
Writing is an important skill for all learners.	22	0.0%	0.0%	0.0%	9.1%	40.9%	50.0%	SA
Writing takes on heightened importance for learners who have CCN.	22	0.0%	0.0%	18.2%	18.2%	22.7%	40.9%	SA
All learners who have CCN are capable of learning to write.	22	0.0%	0.0%	4.5%	36.4%	18.2%	40.9%	SA
Writing may help improve reading skills for learners who have CCN.	22	0.0%	0.0%	0.0%	22.7%	31.8%	45.5%	SA
Writing may help improve communication skills for learners who have CCN.	22	0.0%	0.0%	0.0%	18.2%	22.7%	59.1%	SA
Writing samples from learners who have CCN provide useful assessment information for teachers.	22	0.0%	13.6%	4.5%	22.7%	13.6%	45.5%	SA
Writing is an engaging and enjoyable experience for learners who have CCN.	21	0.0%	0.0%	28.6%	14.3%	33.3%	23.8%	A
The cognitive processes underlying learning to write are different for learners who have CCN.	22	0.0%	4.5%	0.0%	31.8%	40.9%	22.7%	A
Learners who have CCN benefit from daily opportunities to write.	22	0.0%	0.0%	4.5%	0.0%	31.8%	63.6%	SA
Writing is an important part of literacy instruction.	22	0.0%	0.0%	0.0%	9.1%	22.7%	68.2%	SA
Writing is a social activity.	22	0.0%	0.0%	4.5%	13.6%	22.7%	59.1%	SA
Writing skills are best taught as isolated tasks such as handwriting practice, worksheets, or grammar lessons.	22	63.6%	18.2%	9.1%	4.5%	0.0%	4.5%	SD

Belief Statements	*n*	Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree	Mode
Learners who have CCN should always be provided with access to the full alphabet when engaged in the writing process.	22	4.5%	0.0%	0.0%	22.7%	9.1%	63.6%	SA
It is important to focus on form and structure of writing products from the beginning.	22	40.9%	13.6%	9.1%	31.8%	4.5%	0.0%	SD
Learners who have CCN should be asked to write for authentic, meaningful purposes.	22	0.0%	4.5%	4.5%	9.1%	18.2%	63.6%	SA
Phonological awareness is important for writing.	22	4.5%	9.1%	9.1%	22.7%	22.7%	31.8%	SA
Phonics is important for writing.	21	4.8%	14.3%	4.8%	23.8%	23.8%	28.6%	SA

Some participants elaborated further on their beliefs about the teaching of writing to learners who have CCN. They touched upon a variety of topics: that writing needs to be meaningful, to have a purpose; that learners need to be provided with regular opportunities to write; and that writing and/or the teaching of writing (including references to differences in product, tools and strategies), may look different for different learners.

Interviewees were asked more specifically about whether they saw differences in the required skills and understandings critical to the writing process for learners who have CCN. ST1 focused on the understanding that writing is "a communication pathway" and "comes in many forms" and argued that that is the same for all learners. ST2 focused on oral language and a range of language related skills (spelling, vocabulary, etc.) and the ability "to be able to have a message and hold it in memory long enough to get it down". With regard to learners who have CCN, she maintained:

> I don't think it's massively different. I mean, they need the same skills and abilities but there's just that added element where we have to find them some sort of alternative pencil at times, or some alternative way to get it down on paper, so they have that additional … need to be able to use that. But … no, they still need the same language skills and abilities.

ST3 also alluded to both language-based knowledge, particularly phonics and phonemic awareness, and the understanding of writing as communication. She also believes that learners who have CCN "don't need to learn something different, but sometimes they need a different approach".

Interestingly, ST4, who also touched on both the purpose of writing and language skills as being critical elements for the writing process, felt that learners who have CCN do have different requirements. She states,

> I think they're quite different because a lot of the children with CCN are not talking in sentences, so, therefore, they're not aware of that sentence structure. Their comprehension levels might only be, for instance, at the two, or three, word level and we're then asking

> them to kind of write something which might have five words in it or more, so I think it's … quite different for them. …
>
> There's probably lots of other skills that are required, … it depends on whether you're talking about the physical act of writing, whether that be using a pencil or whether it's even using a device so an iPad or … a Chromebook or what have you, so there's obviously those physical barriers.
>
> There's also those kind of planning skills which they often lack as well, in terms of they might have an idea but to try and actually plan that and then use the skills that they have to get that idea down. There's just so many different steps … and it's being able to do all of those things together. There's also probably some of them might have big weaknesses in things like spelling, certainly reading could be a barrier. It could be, you know, their working memory is also a problem.

In addition, all four interviewees indicated that they felt that writing was an important skill for learners who have CCN. In particular, ST1, ST2 and ST3 focused on the importance of writing as a means of communication. ST2 spoke of the digital world we live in and how much communication generally is in written form today, whilst ST1 and ST3 spoke more of writing as being means for learners who have CCN to get a message out and communicate more generally. ST1 explained:

> I think it's actually one of the more important parts of what we do is about engaging them in understanding that the ability to be able to communicate in a written form, of whichever description they can do that, opens up their opportunities for choice and to be able to communicate with others in the general world. … It potentially is their voice.

ST3 concurred stating, "if they're non-verbal, then that's even more important that they've got that ability to write some message … to be able to say if there's anything wrong or, … just to be able to communicate with people."

ST2 also touched on the notion that oral language and written language are reciprocal and development in one can support development in the other. She spoke in particular of some of her learners on the autism spectrum, saying

> I think it can help them. You know, they have difficulty understanding language and how it all works and that. So, I think seeing it in a permanent, physical representation, a concrete representation, can help them understand how language works. So, I think that can be quite powerful for some students.

ST4, meanwhile, touched on the empowerment that writing can bring:

> I think it just empowers them to realise that they, you know, their ideas, are valued and they can be included in the same sorts of activities as their peers. They can also experience the same kind of recognition and joy when they share that writing with other people, and, I think, just them viewing themselves as a writer in whatever form it is, is really, it's really important for them.

The final question in the section on beliefs asked respondents whether they believed there were any prerequisite skills learners needed prior to commencing writing instruction, and, if so, what those prerequisites might be. Of the 22 respondents who answered this question, 11 (50.0%) replied yes. The necessity of a means of communication was the most commonly cited (*n* = 6) prerequisite. This was echoed by ST2, who spoke of the need for learners "to have oral language as a starting point – to be able to communicate their message orally".

Specific skills and experiences (*n* = 7) such as fine motor control, ability to point, ability to indicate yes/no, ability to make choices, shared attention, and prior exposure to books were identified by survey respondents. Interviewees, in contrast, focused more on the need for learners to have relevant language knowledge such as phonics, vocabulary, spelling, semantics, and sentence structure.

Three survey respondents indicated that a desire to write on the part of the learner was a prerequisite and one noted that the learner needs to "understand that 'writing' has meaning, that

'writing' can convey a purpose/need". Both ST1 and ST4 spoke of this being a focus of their work with their learners – building the desire to write by ensuring learners understand the purpose of writing. As ST4 explains:

> the thing that I've been focusing the most on is the purpose of writing. So, having an understanding of what writing can do and why you want to write, because for some students, for a lot of students the writing is one of the hardest areas, … writing is the area that they often struggle with the most and, therefore, they have to have a pretty good reason to want to be able to write.

Confidence Levels

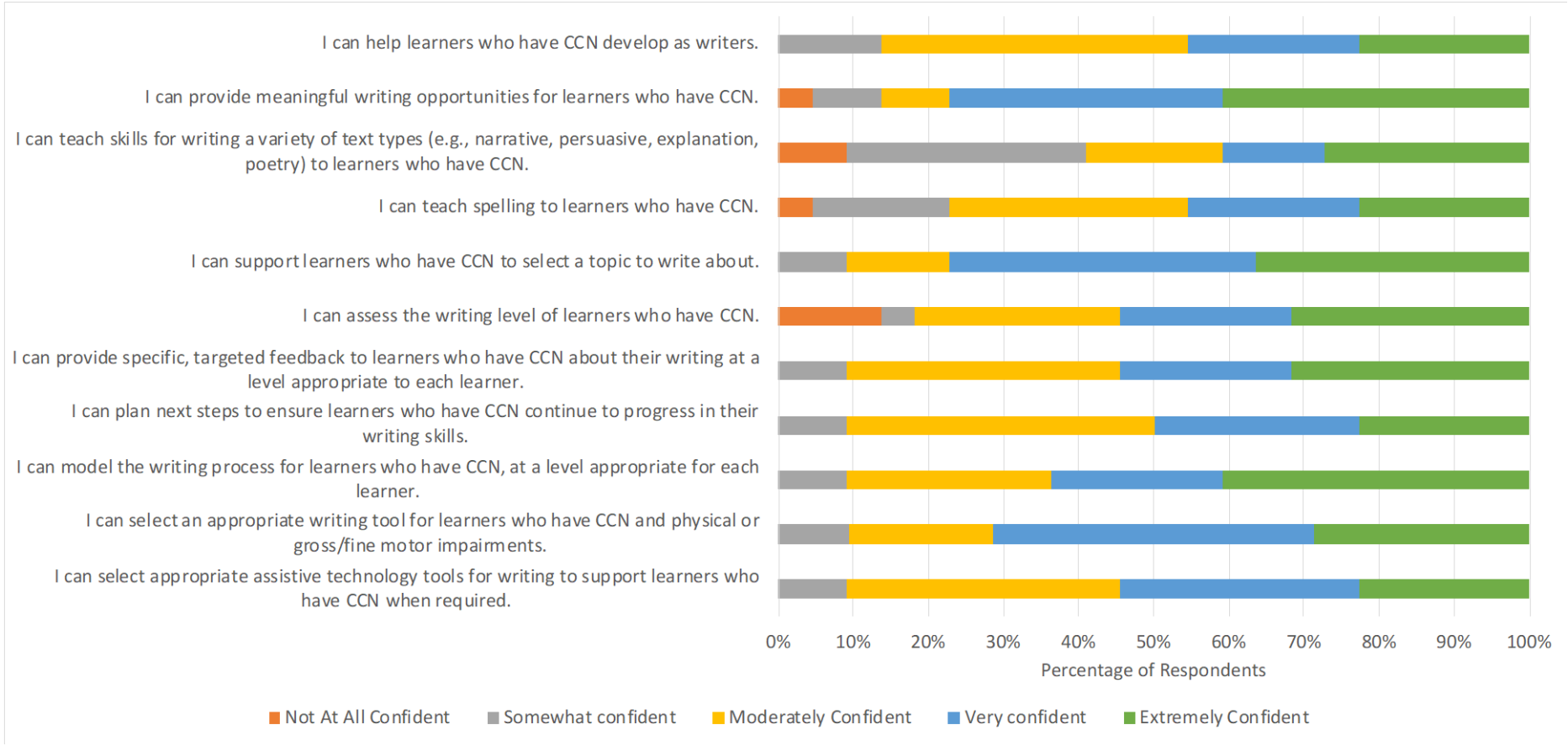
Figure 2 presents a summary of the survey participants' responses to statements related to confidence levels in a variety of areas related to teaching writing to learners who have CCN. Based on survey results, the overall level of confidence of STs to help learners who have CCN develop as writers was not particularly high with 40.9% of respondents indicating they were only moderately confident and a further 13.6% indicating they were only somewhat confident. Only 45.4% indicated they were either extremely confident or very confident.

Areas of particular confidence for survey respondents were the ability to provide meaningful writing opportunities (40.9% extremely confident and 36.4% very confident); supporting learners to select a topic to write about (36.4% extremely confident and 40.9% very confident); and selecting appropriate writing tools for learners who have CCN and physical or gross/fine motor skill impairments (28.6% extremely confident and 42.9% very confident). On the other hand, 40.9% of respondents were only somewhat confident (31.8%) or not at all confident (9.1%) of their ability to teach skills for writing a variety of text types.

Assessment of writing levels was the area with the most 'not at all confident' responses (13.6%). The teaching of spelling was also an area of lower confidence with 54.5% of respondents being moderately confident or below. There were three additional areas where the majority of respondents indicated they were moderately confident: (1) planning of next steps (40.9%

Figure 2

Survey Responses to Confidence Statements



moderately confident); (2) provision of specific, targeted feedback (36.4% moderately confident); and (3) selection of appropriate AT tools to support learners when required (36.4% moderately confident). Interestingly, whilst 40.9% of respondents indicated they were extremely confident in their ability to model the writing process, over a quarter (27.3%) of respondents were only moderately confident in their ability to do this. Interviewees tended to comment more on the confidence levels of other team members, an area that will be covered in the sections on facilitators and challenges.

Frequency, Setting and Team Roles for Literacy Instruction

This section reports results related to more procedural elements of literacy instruction. Participants were asked to indicate the frequency of, and settings for, writing instruction. In addition, they were asked who took on the primary responsibility for planning, implementing and assessing the effectiveness of the writing instructional programme. Each of these areas is considered separately here.

Frequency of Targeted Writing Instruction

Writing is instruction is reported (see Figure 3) to be targeted, on average, on four days per week by 38.1% of the 21 survey respondents who answered this question. A further 19% indicated it is targeted five days a week. However, over one quarter (28.6%) of respondents indicated that writing is targeted on less than 1 day per week (9.5%), 1 day per week (4.8%), or 2 days per week (14.3%).

Settings for Writing Instruction

Figure 4 illustrates how often various settings are reported as being used for writing instruction. Whilst results indicate that instruction is most likely to occur within an inclusive classroom setting, a significant proportion is not incorporated into whole class activities (70% of respondents indicated that writing instruction occurred in that setting never, sometimes or about half of the time). Rather, instruction is most likely to be provided one on one within the inclusive classroom (with 62% indicating this was the case most of the time or always).

Figure 3

Frequency of Targeted Writing Instruction.

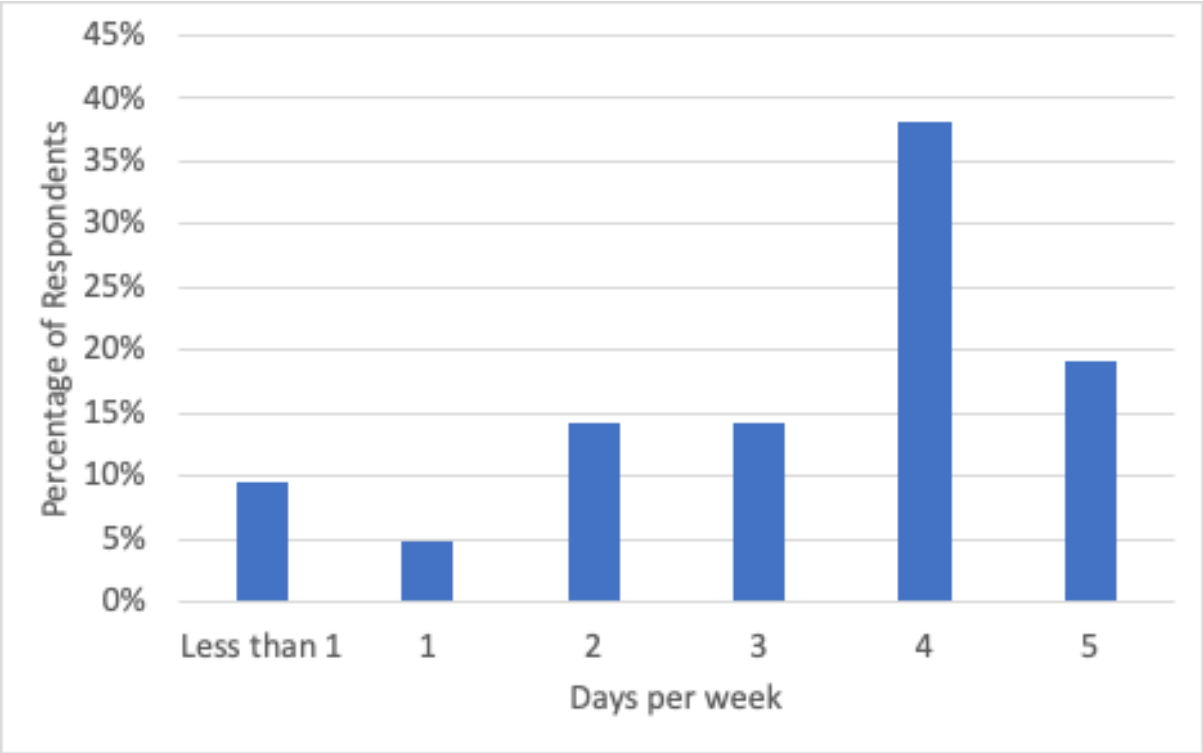
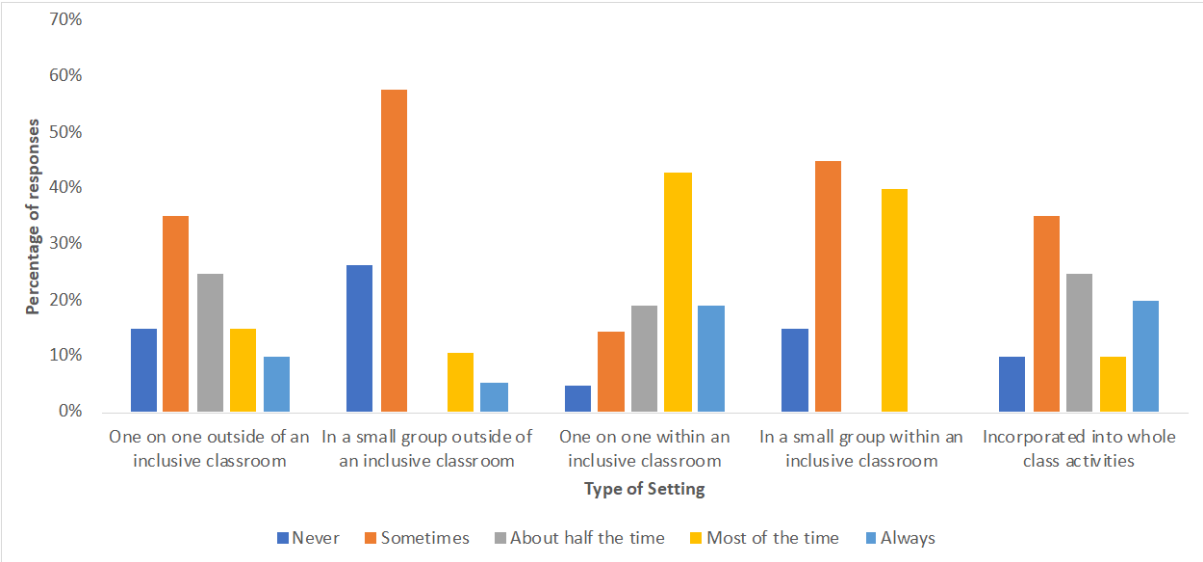


Figure 4

Settings for Writing Instruction.



The mix of settings used that is evident in the survey results was echoed by ST4 who explained that the setting varies depending on the learner, the class, and where support is needed:

> For a lot of students, I am working in the class and I'm supporting the teachers and the teacher aides to just adapt the programme that they're doing within the class. Then I've got other students, who have probably got much higher needs, who I'm probably working one to one with on a completely different programme but sometimes I will just do that alongside the rest of the children in the class. Some kids I will withdraw them maybe for half the session and then I'll work in the class with them. So, it's a real combination.

ST2 also works with many of her learners in the classroom setting, but generally in a one-to-one situation arguing that

> those students who have complex communication difficulties … they're not going to be able to engage in a classroom programme. So … just naturally turns out that you're, kind of, in one or another corner of the classroom with the student and … doing your thing. And … if someone's there seeing what you're doing, or even sometimes … they'll work with me which is great.

Roles in the Writing Instruction Programme

According to survey results (see Table 5), STs tend to take the lead role in the development (71.4%), implementation (57.9%), and assessment or monitoring (73.7%) of the writing instruction programme for learners who have CCN. Approximately one fifth of respondents indicated that it is the classroom teacher who takes the lead role in each of these facets. Teacher Aides, meanwhile, are not seen to have primary responsibility for development of the programme but 21.1% of respondents indicate that they have primary responsibility for its implementation, and some (5.3%) indicate that Teacher Aides have primary responsibility for for assessment or monitoring of the programme.

Table 5

Team Member Roles

Roles in writing instruction programme	n	Specialist Teacher	Classroom teacher	Teacher Aides	Other
Primary responsibility for development of writing instruction programme for learners who have CCN.	21	71.4%	19.0%	0.0%	9.5% [a]
Primary responsibility for implementation of writing instruction programme for learners who have CCN.	19	57.9%	21.1%	21.1%	0.0%
Primary responsibility for assessing or monitoring writing development of learners who have CCN.	19	73.7%	21.1%	5.3%	0.0%

[a] In the Other category, one respondent indicated that she, as the child's mother, took primary responsibility for developing the writing instruction programme. A second respondent indicated that when she was in the classroom teacher role, she was responsible for programme development and, whilst she is now in the ST role, that responsibility has stayed with her.

Interviewees did not speak directly about who takes primary responsibility, but some touched on how they interact with team members for implementation of the writing programme:

> If I've done a book in my session, I'll leave a plan with the school, with some … other things they can do with the book and some … things they could do with writing. … There's not many schools I can think of who do a lot of follow up though with it. So often, yeah, my sessions are pretty isolated.

In contrast, ST3, who works predominantly in one school, works closely with the teachers and teacher aides using the Google suite:

> Because of Google, I know what the teacher is planning, and she flicks it to me and then I flick through bits and pieces that need adapting for the student and then copy in the teacher aides. So, my students are, really, with adaptation, doing the majority of the same work and when I go in, I plug some gaps that I know are there.

Strategies, Tools and Materials

A total of 21 respondents indicated the various activities they use as part of their writing instruction programme. In Table 6 the activities have been loosely grouped according to similar themes. Nineteen respondents indicated that they provided opportunities for learners to experiment with a variety of writing tools and there was a good level of support for the various examples of writing tools included in the list of possible activities with word banks (*n* = 18), AAC system symbols (*n* = 17), and access to all letters of the alphabet in one form or another (*n* = 17) being the most commonly used. Almost all respondents (*n* = 19) indicated they asked learners to write in response to an adult provided prompt and 16 used topics self-selected by the learner. Having learners write for meaningful purposes was also common (*n* = 18). Whilst 16 respondents had learners share their writing with others and 14 had learners publish their work, only four indicated that they involved learners in providing feedback to others about their writing. Physical support during writing was not very common with less than half of participants responding that they used hand-under-hand support (*n* = 10), hand-over-hand support (*n* = 7), or some other form of physical support (*n* = 7). More traditional writing activities, including those that focus on specific skills in isolation were also used. Spelling activities (*n* = 10), handwriting practice (*n* = 9), copying (*n* = 9), and tracing (*n* = 8) were more common than the use of grammar activities, fill the gap type activities and worksheets (all *n* = 4). Mini-lessons related to components of the writing process with their learners were used by seven respondents. Finally, just under half of respondents reported providing opportunities for learners to write drafts that that are not marked or corrected (n=10), and also in revising or editing those drafts (*n* = 9)

One participant listed other activities used in the writing programme such as the use of recording speech and then scribing, speech to text, and providing learners with photographs, objects or experiences as prompts or motivations for writing.

Table 6

Activities Used in Writing Instruction

Activity	n	%
Writing tools		
Opportunities for learners to experiment with a variety of writing tools.	19	90
Writing using a word bank (e.g., in Clicker or similar software)	18	86
Writing using symbols in the learner's communication system (if they have one)	17	81
Writing with access to all of the letters in the alphabet (using traditional writing implement, keyboard, or another alphabet-based writing tool).	17	81
Opportunities for learners to experiment with writing on a variety of surfaces.	17	81
Putting whole words in sentence order.	15	71
Writing with symbol-based software support (e.g., writing with pictures in Clicker Connect)	14	67
Writing with the support of a word wall.	12	57
Purpose/Topic		
Writing in response to an adult provided prompt	19	90
Writing for meaningful purposes	18	86
Writing about a self-selected topic	16	76
Social aspect of writing		
Sharing their writing with others	16	76
Publishing work	14	67
Providing feedback to others about their writing	4	19
Physical support		
Writing with hand-under-hand support	10	48
Writing with hand-over-hand support	7	33
Writing with some other form of physical support	7	33
Traditional/Specific skill activities		
Spelling activities	10	48
Handwriting practice	9	43
Copying	9	43
Tracing	8	38
Grammar activities	4	19
Fill the gap activities	4	19
Completing worksheets	4	19
Draft writing		
Opportunities to write drafts that are not marked or corrected	10	48
Revising/Editing drafts	9	43
Mini lessons related to components of the writing process.	7	33
Other (Please specify)	1	5
recording speech then scribing, speech to text, photos or objects as prompts, experiences as motivation.		

In addition, survey respondents were asked to provide examples of tools and materials they use with learners in their writing instruction. Table 7 provides a summary of the responses from the sixteen participants who completed this question. The most frequently cited tool (*n* = 13) was various forms of technology, including items such as iPads, computers, and specific apps or software. Communication systems, a variety of writing or mark making tools (such as pens, chalk, crayons, paint brushes etc.), and alternative pencils (e.g., alphabet flipcharts, alphabet boards, and modified keyboards) were all listed by eight respondents. A range of other tools and materials were suggested including some related to supporting topic choice (such as photographs and other images, or the "fuzzy felt" strategy that allows learners with physical impairments to create a 'picture' with support).

Table 7

Tools and Materials Used in Writing Instruction

Tools or materials	n	%
Technology (iPad, Computer, software, apps etc.)	13	81
Communication system(s)	8	50
Various writing/mark making implements	8	50
Alternative pencils (flip chart, alphabet board, modified keyboards)	8	50
Range of surfaces or tactile materials to write in, on, or with	5	31
Access methods (PAS, eye gaze, direct access)	4	25
Visual or tactile symbols (not in communication system)	3	19
Letter, word or picture cards/tiles/magnets	3	19
Photographs or other images of interest	2	13
Pencil grips	2	13
"Fuzzy Felts" materials	2	13
Specific tasks (e.g., Fill in the gaps tasks or sight-word activities)	2	13
Purposes for writing (e.g., email, journaling)	1	6
Books	1	6
Colourful semantics	1	6
Interactive whiteboard	1	6
Personalised alphabet book	1	6
Social stories	1	6
Access to lists of words, names etc of importance to learner	1	6
Recording device	1	6

Assessment and Feedback

Survey respondents were asked to indicate any assessment tools or strategies they had used to monitor progress in writing. Nineteen responses were received to this question: results are provided in Table 8. The use of writing samples (*n* = 7) and observation and anecdotal reports (*n* = 7) were the most commonly cited assessment tools. P Scales (performance descriptors for learners with special educational needs from the United Kingdom) were identified by five respondents, and assessments linked to various literacy programmes by a further five. The NZ Curriculum (Ministry of Education, 2007b) and related documentation (*n* = 4), and the Level One curriculum frameworks, developed by the Central Region Special Schools Cluster (*n* = 2)were also used. Some respondents indicated that they used narrative assessment techniques (*n* = 2), or formative assessment techniques (*n* = 2). Two respondents indicated that they used the Developmental Writing Scale to guide assessment. Finally, overall teacher judgements, phonemic awareness and phonics focused assessments, and school established assessments and exemplars were noted by one respondent each. ST3 was the only interviewee to touch on assessment. She indicated that her learners typically are, with some adaptations, undertaking the same assessments as their peers.

The survey also inquired into the type and timing of feedback during writing instruction. Nineteen respondents provided information for this question and this information is summarised in Table 9. Results indicate that feedback is most likely to be provided verbally and whilst the learner is engaged in the writing process.

Facilitators of Teaching Writing to Learners Who Have CCN

Survey participants identified facilitators to the teaching of writing for learners who have CCN in a range of key areas, as summarised in Table 10. Each of these areas will be explored in this section. Responses related to the team supporting the learner were most common (*n* = 12), followed by those relating to technology (*n* = 10), and those related to characteristics of the learner (*n* = 9). A variety of strategies (*n* = 7), considerations related to resources and materials (*n* = 6) and tasks (*n* = 4), and factors linked to training and PLD (*n* = 4) were also identified.

Table 8

Assessment Tools/Strategies Used to Monitor Writing Progress

Assessment tool	n
Writing samples	7
Observation/Anecdotal reports	7
P scales	5
Various programme assessments (e.g., Engagement for Learning Scales, Quest for Learning, First Steps Literacy, Bsquared, ELAS)	5
NZ Curriculum and related documents (e.g., literacy progressions, learning progression framework for writing)	4
CRSSC/Expanded Curriculum	2
Narrative Assessment/Learning Stories	2
Developmental Writing Scale	2
Formative Assessment	2
Overall Teacher Judgement	1
Exemplars	1
Phonemic Awareness and Phonics assessments	1
Other school based assessments	1

Table 9

Type and Timing of Feedback

Feedback Features	n	%
Type of feedback		
Verbal	13	68
Read back writing	4	21
Written	3	16
Visual (symbols)	3	16
Visual (signal or sign)	3	16
Sharing with home	3	16
Sharing with peers	2	11
Compare to previous work to indicate progress	1	5
Reflective prompting	1	5
Modelling	1	5
Feed forward	1	5
Timing of feedback		
During writing	11	58
After writing	4	21

Personnel/Team Members

A variety of facilitators related to the wider team were identified, including positive attitudes, a willingness to be flexible and take risks, team member knowledge and experience, and collaboration.

Positive Attitudes. Positive attitudes from team members were seen as a key facilitator, demonstrated by responses such as "high expectations across the support team"; "having teachers, teacher aides who believe in what we are doing"; and "putting value on the learners' participation and message". These ideas were echoed by ST1 who observed, "a big thing is the attitude of the teachers and the class environment around them".

Flexibility and Risk Taking. The willingness of teams to work to meet individual learner needs by being flexible, taking risks, and trying different approaches was also identified as a facilitator. This was supported by the interviewees, with ST2 asserting, "I think an open mind really helps" and ST4 speaking of one learner for whom "just not kind of picking one method and sticking with that, you know, lots of different things which have all contributed to making her a really successful writer."

Table 10

Key Facilitators Identified in Survey.

Identified Facilitators/Enablers	n
Personnel/team members	12
Strategies that support the learning of writing	11
Technology (AT, AAC, low-tech, high-tech)	10
Learner characteristics	9
Resources and materials	6
Training/PLD	4

Knowledge and Experience. The knowledge and experience of team members, in terms of understanding the needs of the learner, and in knowing how and where to access guidance and support, were acknowledged by survey respondents and interviewees alike. Some indicated that this went beyond the immediate team to "other professionals with expertise" that could provide additional support. ST3 provided two examples of this. She has benefited from approaching a specialist school for assistance with a learner, and from the support of a Learning Support Coordinator at to one school, who shared useful resources with her.

Collaboration. The importance of "a team approach" was raised in the survey and reinforced by interviewees:

> I think the key thing is collaborative working. I know when I'm in a school and I have quite close contact with the speech language therapist, for instance, and we plan our sessions to sometimes collide and work together, I find that is much better and we get a much better result. … Whereas other children who I never see those people, that doesn't work quite so well. (ST4)

ST 3 described how the use of the Google suite facilitated collaboration, because she is able to see what the teacher has planned and consequently provide adaptations as required for a specific learner that the school team can follow through with.

Strategies

A range of strategies for facilitating the teaching of writing to learners who have CCN were suggested by survey respondents. These included different models for providing instruction (one-on-one, pairs, small groups); ensuring the provision of multiple opportunities to write for meaningful and authentic purposes; having a clear topic for a writing task; personalising and linking tasks to learner interests; providing "repetition with variety"; modelling the utility of writing; and, ensuring that communication tools are used throughout the day.

ST2 reinforced the importance of knowing the learner and personalising tasks to support engagement:

> You kind of have to be led by the student a bit. … By getting to know and building that relationship with the student, finding out … what interests them, what engages them. … I mean, everything is so, so much harder for these students that you … need something they're going to be really excited about for them to … have that energy to put into it.

She also spoke about the importance of combining routines and repetition with variety:

> Our students just thrive on routine. So … lots of repetition but with enough variety to keep things interesting. … We have the same format for our literacy sessions, so they understand what's coming up, and what's going to be required of them, but there's that … little bit of variety to keep them engaged and pushing a little bit.

Some additional useful strategies were also identified by the interviewees. Providing access to a variety of tools learners can use to generate language was deemed important by both ST1 and ST3:

> Things … that we have done is make sure that there's always alphabet boards and stuff like that up and visual, so if they get stuck you can just refer straight to that. … we assume that they can, and we have those tools around them so that their writing life is easier (ST1).

The importance of making "things as explicit as possible for them" was raised by ST2, whilst ST3 discussed adapting the work being done by the class: "it's just looking at ways that they can still participate doing the same thing, but by giving them a different method … my students are really, with adaptation, doing the majority of the same work". Finally, ST1 touched on the importance of "making sure the students are doing as much as they can" and provided a powerful anecdote to support this strategy:

> She's got some stuff up on the wall now and she was asked what was she most proud of - she wasn't most proud of any of the gazillion stories that the teacher aides had written for her. … She went to the piece on the wall that she had physically written herself. … I think that shouts a lot really that they do have pride in their work, when they work out that they can do it.

Technology

Several survey respondents identified technology as an important facilitator to the teaching of writing. Some indicated AT generally, whilst others specified the particular importance of AAC systems. All four interviewees also discussed the utility of various forms of technology. ST4 commented, "I think AT is great. … I think it opens up a whole world of possibilities for those students", whilst ST1 explained that AT supported learners to "show their learning without actually having to physically read and write".

Both high- and low-tech options were mentioned in the survey responses. T3 and ST4 indicated that low-tech tools were an important part of their toolkits, with ST3 asserting, "the low-tech stuff is my go-to. Low tech always, always works for me, it never lets me down."

Learner Characteristics

A variety of responses centred on learner characteristics as facilitators to the teaching of writing arose from the survey. Several related to the learner's desire or motivation to engage in writing and/or to communicate. Others related to specific understandings (e.g., that "writing contains a message"), knowledge (such as "phonemic awareness"), or skills (such as the "ability to generate ideas"). The importance of learners having "experiences to draw on" was also noted.

Some of these characteristics were also identified as facilitators by interviewees, in particular the notion of supporting the development of motivation and desire to write and the related idea of an understanding of the purpose of writing. This was clearly articulated by ST2:

> That's quite powerful … for those students that writing is so hard, so, … what's the point of this kind of thing? They can see that … their work is up for people to read and enjoy or do something useful. That can have quite a powerful effect for some students.

ST3 provided an example where she and the learner used multiple tools to establish the word the learner was looking for. She highlighted the importance of persistence on the part of the learner, even when things were difficult: "She was extremely persistent…she was definitely not going to quit" (ST3).

Resources and Materials

Several survey respondents pointed to the importance of having a range of materials available to suit the needs of individual learners. Whilst most of the responses were general, two wrote more specifically about the need for "finding a suitable writing tool" or "finding each child's 'pencil'". This was echoed by three of the interviewees, with ST2 asserting, "finding a pencil for students is so important, because, once they have that, … they're good to go. Got to take that element of 'this is too hard, and I can't do it' out". ST3 further explains, "yeah, the right tool for the right child on that day … I mean, there's got to be stuff that works outside, there's got to be stuff that works inside."

Training and PLD

The final key area that was seen as a facilitator, was quality training and PLD in the teaching for writing to learners with a variety of complex needs, and in relevant AT. This was reiterated by all four interviewees. However, ST1, ST2 and ST3 also made it clear that training and PLD were most effective when when the whole team were able to attend together, rather than just individual team members. As ST3 pointed out, "you need your team there, it's no good just one of you going…it's not me that just needs to go. You know, it's more than me."

Additional Facilitators Identified by Interviewees

One further facilitator not raised in the survey but raised by ST3 was the importance of allowing additional time for learners with CCN to complete writing tasks. Speaking about one of her learners she explained that

> he needs the same work as everybody else, but his output is slower because … it's so taxing for him to complete what you want him to do. But he can do it, but you just need to give him more time.

She went on to suggest that it may be prudent to consider the school timetable to find extra time in the day when learners can focus on completing work and managing fatigue levels.

Challenges of Teaching Writing to Learners Who Have CCN

Interestingly, many of the areas seen as facilitators were also raised as potential challenges. Table 11 summarises the challenges noted by survey respondents. Most commonly, respondents identified a variety of issues linked to team members (*n* = 14). Issues related to learner-centred characteristics (*n* = 9), and to technology (*n* = 9) were also common. Other barriers identified related to tasks (*n* = 3), time (*n* = 2), and the isolating nature of the ST role (*n* = 1).

Personnel/Team Members

A variety of issues related to members of the wider support team for a learner were identified as potential challenges, including negative beliefs and perceptions, lack of engagement, and lack of knowledge and/or experience.

Negative Beliefs and Perceptions. Various issues related to team members working to support a learner who has CCN were identified. Particularly common were references to negative beliefs and perceptions of team members regarding the need for, and ability of, learners who have CCN to learn to write. One respondent indicated that a key barrier was "when teachers do not believe that CNN learners have a voice, ideas, thoughts that they wish to convey to others", whilst another commented, "many people do not see these kinds of learners as being capable of writing and therefore that can cause the biggest problem. They don't get the same opportunity and exposure to writing as they should". These negative beliefs and attitudes were also evident in the narratives of the interviewees, with one reporting, "I've been having quite a lot of debate with

Table 11

Key Challenges Identified in Survey

Identified Challenges	n
Issues related to personnel/team members	14
Issues attributed directly to learner characteristics	9
Issues related to technology	9
Task related	3
Lack of time	2
Isolating nature of the ST role	1

various people about it recently, because I think some people would see that they don't really have the same need to write as say a typically developing child would" (ST4), and another reflecting "some people … are just, like, you know, what's the point of keeping trying? … If a student has got to a certain age, and they're still not writing, … why are we still trying?" (ST2). This barrier is perhaps best summed up by ST1 who commented that "there's just that deficit thinking really of that they can't, so why should we bother?".

Lack of Engagement. Another issue identified with team members was an apparent lack of engagement with the learner and his/her programme as evidenced by statements such as "engagement of the wider learning team has made progress and support to develop writing hard". Interviewees particularly lamented the lack of engagement of classroom teachers. ST1 notes that "Some teachers completely switch off from these complex kids, and don't take on that they're actually their student, … they just don't see that at all". Taking this further, ST1 reflected on the importance of the relationship between the classroom teacher and the student and commented "out of my current lot, … I've got, … half of them who really have no relationship whatsoever with their teachers, because they're quite excluded. They're not part of their class really and very isolated". ST1 went on to relate the experience of one of her students:

> I have one, for example, who refuses to work with any classroom teacher because they're now in Year 6 and never, in their entire schooling, have they ever worked with a classroom teacher. It's all just been teacher aides. And only ever worked one on one with teacher aides … So, every time the classroom teacher comes to try and interact, … she'll go hide under a table or she'll scream … because it's not what's in her norm I suppose.

An additional challenge arising from ST3's interview, was that of parental engagement, or lack thereof. Whilst parental engagement is ideal, ST3 noted that "some parents move heaven and Earth, and some parents aren't interested, and you just have to roll with it."

Lack of Knowledge/Experience. Survey responses indicated that a lack of knowledge and/or experience on behalf of team members created challenges. This included lack of

knowledge/experience relating to the challenges faced by learners who have CCN; what writing is for learners who have CCN; and suitable tools or programmes to support the writing progress of those learners. One respondent observed "teachers who try to be very traditional/conventional in their approach, need to really consider alternatives". This notion was supported by ST4 who stated, "it's the teacher going 'well this is what we're doing and we're all doing this writing', and not seeing that actually that student maybe needs that activity adapted or just presented a different way". ST1 notes that it may also be a question of confidence due to lack of experience:

> And just the confidence in teachers … or teacher aides even, potentially because they haven't had a student who has had these ways of learning before, is actually having the confidence to go, 'well, I can give it a go and we can do this'.

She also touched on the lack of knowledge of STs themselves, saying

> I want to know what to do. … I can wing it to a certain extent, but then there's actually some things I would like to know. I think that that is sometimes really missing. …Who do you actually speak to about this side of things, and who do you actually, … what manual do you go to? Because these complex students, they're all so unique, … they've all got such different things.

Compounding this, the lack of, or difficulty in accessing, professional learning and development for the team was also identified as a challenge. ST2 and ST4 noted, in particular, a lack of training related to AT.

Learner Characteristics

In addition to challenges ascribed to the wider team, a number of challenges were identified that are perceived to result from characteristics, attitudes or tendencies of the learners themselves. Responses ranged from comments about learner motivation, engagement and focus, to physical and/or cognitive impairments and wider health considerations, behavioural issues, and limited life and literacy experiences. Many of these themes were echoed by the interviewees. ST3 explains:

> Some of my pupils have got quite challenging behaviour, so that can be a barrier. Some of it is medical needs, just getting them into the right space so that they're able to. Whether it's positioning or the timing, whether it's they need food, they need a break. It's extremely taxing.

ST4 commented on the potential impact of peers in the inclusive setting on a learner's motivation:

> I think for some children it's the process just seems too hard and too much and, certainly in the mainstream, the rest of their peers are all moving on quite quickly. And they're getting left behind and, therefore, you can get to a point where they can become quite disillusioned with the whole process, and … they will just give up on it.

ST2 and ST4 made reference to the lack of experiences – both literacy based and wider world experiences. ST2 commented, "they've just got all those barriers around … world experience, and just access to all those language rich opportunities at times." Meanwhile, ST4 related the situation of a learner who

> missed a great deal of Year 2, when they were doing things like phonics and blends, so therefore his spelling is really, really lacking. … He doesn't have enough knowledge of spelling and kind of even blends and the initial sounds in words to really use … predictive spelling because he's not got enough of that word for it to work out what he's trying to say.

An additional challenge that arose from the interview with ST4 was the notion that learners can become over-reliant on support from an adult: "he's relied on somebody to write his work for him for so long, that now, to kind of break that barrier to him actually writing himself, is just like a huge challenge".

Technology

Whilst appropriate AT was found to be a facilitator, survey responses indicated it could also be a potential challenge. Three key areas of concern arose from the survey data: the

appropriateness of technology available or provided, the reliability of technology, and the lack of use of technology.

Interviewees also spoke of the challenges associated with AT. ST4 spoke of the frustrations inherent in finding technology that meets the specific needs of the learner and the time that process can take. ST1 and ST3 commented on reliability and access issues. ST3 pointed out that "high tech can be problematic. As much as it's lovely when it's great and it's working, when it's not working, or it's not charged, or it's not been put in the bag, it's not so great." Similarly, ST1 lamented that "technology's so … unreliable. … The technology is just infuriating. So, then you're back to using the low tech, but … it's not as insightful sometimes as what the high tech can be. Yeah, so definitely a barrier." A further concern raised by ST2 relates to the training issue described in the personnel section:

> They're incredible what they can do … but … then you've got the process of learning yourself how to, how it works and how … it can work best for the student and … getting everyone on the same page with … what are we doing, what's our focus, how it all works.

Tasks

Survey responses indicate that tasks presented to a learner who has CCN can be a challenge to learning when they: are unclear; are at an inappropriate level for the learner; lack a real, motivating or relevant topic or purpose; and are not appropriate for the desired outcome. This final point is touched on by ST1, who observes "I suppose that's one of the barriers of people understanding that copying isn't writing. … that's a massive one … yes, it's a great motor skill for them and things, but, yeah, it's not really the definition of actual writing".

Time

Whilst time, both in the classroom day and more generally, was mentioned as a specific challenge by only two survey respondents, three of the four interviewees indicated challenges related to time. Both ST2 and ST4 spoke about the lack of time for a learner who has CCN to complete tasks in the classroom setting:

> The mainstream setting just moves so quickly. … These students just need so much more time on one activity and … by the time they've got set up and they're ready to go, like, the class has moved on to the next thing. So, yeah, just the time to focus on it (ST2)

Lack of time was also seen as a challenge in terms of STs having tie "to sit down and reflect" (ST3), "to work collaboratively" (ST2), and "to upskill other members of staff" (ST3).

Nature of the ST Role

One survey respondent identified the isolating nature of the ST role and difficulty being able to work with other team members as a challenge. All four interviewees also referenced the nature of the ST role as a potential challenge. In particular, it was the sense of isolation and the lack of opportunity to work more collaboratively with the wider team, or with other STs. ST4 explains:

> As outreach teachers I find we're working very much in isolation, even from the rest of our team. We never see one another. We're just going into our mainstream schools, working one to one with our children, and kind of in our own little vacuum really. I think a lot more collaboration would be … really, really good

ST1 also discussed the instability of the ST role in general:

> It is every hard to stay working within the sector. When you know you're only ever going to be fixed term, and you're just relying on kids staying in your area and your school, so that you can still have your job.

Additional Challenges Identified by Interviewees

Two other important challenges, which were not present in the survey results, were identified through the interviews. Firstly, ST2 and ST4 referred to wider issues in the classroom or school environment which can act as challenges to effective teaching and learning. ST2 comments "when I think about the classroom situation … if you're dealing with a lot of behaviours or … just the usual around … staffing and welfare". Meanwhile ST3 found it particularly difficult working in a modern learning environment (MLE) because "she went here for reading, over here for writing, over there for maths but belonged to somebody else, it was a homeroom and there was nobody who

actually had ownership, if that's the right word, of her learning". ST3 also identified two further issues in this context: (1) lack of teacher attendance at the learner's IEP; and (2) difficulties for the learner's support people having to move all of her equipment and materials from place to place.

Secondly, ST1 and ST4 spoke of challenges related to a lack of consistency. ST1 spoke about consistency between home and school. Both ST1 and ST4 referred to frequent changes in team members and the impact that has on ongoing learning. As ST4 reports:

> The problem is you just get a child, well a team, trained up to know what they're doing, and then that child changes classes, has different teacher aides, a different teacher and you feel like you literally go back to square one with the whole process and start all over again, which is, for me, it's really frustrating.

Summary

In this chapter, results from the survey and interview phases were presented in an integrated manner, as suggested by the explanatory sequential research design. Findings suggested that whilst STs believe strongly in the importance of regular opportunities to engage in writing, their belief in the ability of all learners who have CCN to become writers is somewhat lower. STs appeared to have moderate levels of confidence in relation to a range of tasks related to teaching writing to learners who have CCN. ST's experiences related to the practicalities of teaching writing were presented, and strategies for assessment and feedback outlined. Finally, a range of facilitators and barriers were identified. These were largely concerned with team members' beliefs, attitudes, perceptions, and knowledge, although several other issues were identified. In the next chapter, key findings will be discussed, drawing links to relevant literature.

Chapter 5: Discussion and Conclusion

This study aimed to investigate STs' experiences and perspectives regarding the teaching of writing to learners who have CCN in inclusive school settings in NZ. In this chapter, significant findings from the results are discussed with reference to existing literature. The discussion focuses on three central topics: (1) key beliefs about the teaching of writing to learners who have CCN; (2) key elements of instructional practice as experienced by STs; and (3) levels of confidence, knowledge and skill. Several salient facilitators and challenges were identified, and these have been woven into the discussion of these central topics. Limitations of the current study are discussed as well as implications for future research. Finally, implications for practice are presented, along with a concluding statement for the study.

Beliefs About the Teaching of Writing to Learners Who Have CCN.

The current study inquired about STs' beliefs on a variety of topics related to the teaching of writing to learners who have CCN. The discussion here focuses on beliefs about the importance of writing and the expectations STs have of learners who have CCN. It then turns to STs' perceptions of the beliefs of others involved in the team supporting these learners.

Specialist Teachers' Beliefs

Importance of Writing. Almost all of the STs in the current study were positive in their beliefs about the importance of writing as both an important skill for all learners and an important part of literacy instruction. In both survey comments and interviews, the predominant idea was the importance of writing as a support for communication. Writing was seen as important; both because written communication is so pervasive in today's society and because it offers a means of communication for those who have CCN. These beliefs align with the literature in the area of CCN, which has long upheld the importance of being able to use the symbol set of the alphabet as a means of access to full self-expression because

> no symbol system, no matter how linguistically-based or how many thousands of vocabulary items it can represent, can compare to the alphabet. With just a small set of letters (e.g., 26

> in English), any literate individual who is unable to speak can write anything, in any way she or he chooses. (Blackstone, 1989, p. 1)

Expectations of Learners Who Have CCN. Although STs in the current study were shown to believe quite strongly in the importance of writing, over 40% were more neutral in their belief that all learners who have CCN are capable of learning to write. Beliefs about lack of capability appeared to be linked to particular learner characteristics for some participants. Characteristics mentioned ranged from learners' cognitive abilities and fine motor control, to behaviour and medical issues. This same perception of learners with greater levels of impairment being viewed as less capable by teachers was raised by participants in the study by Sturm et al. (2019), suggesting that

> teachers have a hard time seeing past severe disabilities that may include cognitive, physical, sensory, and behavioural challenges and shared that it is hard to see them as capable in another way because whatever they have going on is so extreme. (p. 216)

Other STs were more pragmatic. They recognised that whilst there are characteristics of learners that can create challenges, these can be managed and accommodated for and need not impact learners' capability to become writers. For example, one challenge identified was the slower, and potentially more taxing, production of text and the problems this can cause in the inclusive classroom's rapidly moving pace. Beyond just making teachers aware of the requirement for extra time, ST3 discussed ways of finding time during the day for her learners to complete tasks.

The reduced levels of certainty about learners' capability may be linked to the belief, held, to some degree, by the majority of STs participating in the current study, that the underlying cognitive processes related to writing are somehow different for learners who have CCN. In turn, this belief might suggest that known effective practices for teaching writing do not apply to this group of learners, leaving teachers unsure of how to proceed with writing instruction. Participants in Sturm et al.'s (2019) study reported the effects of teachers being supported to provide effective, comprehensive writing instruction to learners they previously felt were incapable of learning to write. "They are 'stunned with how their kids progressed'" and "'amazed' at student capabilities" (p.

217). Indeed, this belief about differences in the underlying cognitive processes sits in contrast to literature suggesting that those cognitive processes are likely the same for all learners (Koppenhaver & Williams, 2010; Staples & Edmister, 2012; Sturm, 2012; Sturm & Koppenhaver, 2000; Wollak & Koppenhaver, 2011). As a corollary, effective instructional practices, with individual adaptations and accommodations, should also be equally applicable to all learners (Sturm & Koppenhaver, 2000)

Others' Beliefs

STs identified the beliefs of other team members as both facilitators and barriers to the teaching of writing. High expectations, positive attitudes, a willingness to be flexible and take risks, and a valuing of, and belief in, the work being done were seen as important facilitators. In contrast, several STs described the challenges presented by team members' apparent lack of belief in the importance of writing for learners who have CCN and their ability to learn to write. This finding aligns with a range of literature pointing to limited expectations on the part of school staff and parents regarding literacy acquisition for learners who have CCN (Light & Kelford Smith, 1993; Light & McNaughton, 2013b; Peeters et al., 2009; Ruppar, 2017; Sturm et al., 2019; Zascavage & Keefe, 2004). Indeed, Sturm et al. (2019) argue that "at every level of the educational system, from administrators to paraprofessionals, the greatest barrier to writing for students with CLN [complex learning needs] is the perception that they are not capable of becoming writers" (p. 209).

Instructional Practices

The current study gathered information on a range of topics directly related to the provision of writing instruction, and those will be discussed in this section. The section begins by considering aspects of the roles and responsibilities of STs and other team members. It then examines the settings for and frequency of writing instruction before looking at instruction and assessment strategies. Finally, this section focuses on confidence, knowledge and the role of PLD.

Roles and Responsibilities

Insightful perceptions about elements of the nature of the ST role emerged from the current study. They are reviewed here, along with a discussion about the division of responsibility for teaching writing to learners who have CCN.

Isolation From Other STs. Three of the four interviewees alluded to feeling quite isolated in their role, including from other STs. Even those who worked as part of the STOS felt isolated from their wider team at times. One STOS teacher, based in a large city, observed that it must be even more isolating for those in more remote areas where "they're literally the only person probably for … a big radius…. They're just working completely on their own". ST3, who is not part of the STOS, spoke of her local Kāhui Ako /Community of Learning (Ministry of Education, 2020a) and noted, "there's 17 schools that feed in, and, you know, I've never met some of those STs, ever". Special education teachers' potential to experience feelings of isolation, particularly in more rural settings, was identified in Sturm et al.'s (2019) research.

Embedded vs Itinerant. Teachers who are part of the STOS are, generally, itinerant. They are often only in a school for short periods to undertake sessions with a specific learner. As ST1 noted: "the thing… which I find really hard, but it's part of our role, is we just, we dip in, and we dip out". ST2 also commented on this situation, saying

> sometimes you just … feel like you're there on your own, especially outreach. … You go and do your session, you might not see anyone really, unless you're lucky. And then … send your session notes and hope for the best.

The current study indicates that those working in the STOS role often worked in isolation and found it difficult to find time to collaborate with the wider team.

In contrast, ST3 provided a strong example of effective collaboration with classroom teachers and a clear focus on ensuring her learners are included as much as possible in the general classroom programme. Interestingly, ST3 is not in a STOS role. Rather, she is embedded in a particular school, having roles there beyond the ST role. It seems possible that being embedded in

the school may have afforded her the time to build more effective, collaborative relationships with classroom teachers. This idea is supported by literature from NZ and abroad, looking at collaboration between therapists and teachers in inclusive classrooms (Huang et al., 2011; Ministry of Education, 2007a). Where therapy was provided on an itinerant basis, effective collaboration was found to be difficult. In particular, a lack of times when both teacher and therapist were available was indicated as a key challenge. This was seen to have potentially negative impacts on teacher/therapist relationships and, sadly, on the quality of service provision to learners (Huang et al., 2011).

In the case of ST3, increased familiarity with systems (such as the Google suite) used in the school seemed to have supported the higher level of collaboration. Moreover, it may be that being embedded in the school setting allowed her to have more influence on the school's culture and approach to diversity. Or, perhaps, being based in an inclusive school setting, rather than in a specialist school (as the STOS teachers were), provided a different context and culture for the teacher to build her own beliefs and understandings about inclusion.

Individual vs Shared Responsibility. STs in the current study reported that they often took the primary responsibility for the planning, implementing, and monitoring the writing instructional programme. In addition, an apparent lack of engagement from other team members was noted as a challenge by several participants. In principle, "students receiving funding and support through the ORS are the responsibility of their class teacher. The class teacher should use the additional teacher time to help meet the student's additional learning needs" (Ministry of Education, 2020b, Working with and additional teacher section). It is of concern, then, that STs find some classroom teachers unwilling to take responsibility for, or ownership of, a learner in their classroom who has CCN. Sadly, it is not a novel occurrence.

NZ based studies by Kearney (2011) and Purdue et al. (2011) found that some teachers, in both early childhood and school settings, displayed a lack of responsibility for the teaching of children with disabilities in their classrooms. This manifested itself in a variety of ways: failing to undertake key teaching and learning activities; abdicating responsibility to teacher aides or other

support staff; believing “that disabled students were the responsibility of special needs teachers in special schools” (Kearney, 2011, p. 49); or simply ignoring the learner altogether.

It is suggested that lower levels of engagement with, and lack of responsibility for, learners with additional needs (including CCN) may be linked to teachers’ epistemological beliefs, particularly beliefs about the nature of ability/disability. According to Jordan et al. (2009), teachers with pathognomonic perspectives tend to see special education needs as “internal, fixed and unreachable characteristics that are beyond the teachers’ expertise and therefore beyond their help” (p.538). Consequently, they do not consider themselves responsible for the instruction or progress of those learners - that work is left to specialists trained for that role. In the current study, ST3 provided an example from her experiences working with a learner in a modern learning environment. She recalled, “there didn’t seem to be any ownership of the child, they seemed to think that is was my job to do everything”.

In contrast, teachers who have a more interventionist perspective believe all learners are capable of making progress with appropriate instruction and are more likely to take responsibility for the teaching, learning and progress of all learners in their classrooms. These teachers understand they have a responsibility to work to reduce barriers by providing adaptations and accommodations for individual learners as required (Jordan et al., 2009; Jordan & Stanovich, 2003). They are also more likely to seek information from, and work collaboratively with, other team members. Erickson (2017) argues that interprofessional collaborative practice involving families, a range of professionals, and learners themselves is key to ensuring effective literacy instruction. In the current study, collaborative practice was seen as a facilitator, with examples of collaboration between ST and classroom teachers, the wider team, and parents noted. However, challenges related to a lack of time for collaboration were noted, especially by the STOS teachers.

It is important to note that the notions of pathognomonic and interventionist perspectives can apply equally to classroom teachers and STs.The interaction between their respective

perspectives, and those of the wider team, will likely determine levels of collaboration and division of responsibility between those involved.

A further challenge to effective collaboration and sharing of responsibility was raised by ST1 and ST4 and is reflected in Sturm et al. (2019). This relates to the impact of personnel changes and the frustration that comes with "going back to the start again" (ST1) with new team members. Participants in Sturm et al.'s study noted that challenges can arise with personnel changes at a variety of levels, including teacher aides, teachers, principals, and other related professionals and therapists.

Settings for Writing Instruction

The inclusive classroom is the most prevalent reported setting for literacy instruction. However, it is notable that within that setting, learners are more likely to experience instruction on a one-to-one basis, or perhaps in a small group, rather than being incorporated into wider classroom activities. This preference for settings that effectively withdraw the student from the classroom programme, even if not physically, may be linked to underlying beliefs about the nature of a learner's impairment. Jordan and Stanovich (2003) note that teachers who tend to see the impairment as a fixed attribute limiting the learner's ability to respond to teaching prefer those students to be withdrawn for instruction. In contrast, teachers who believe that all students can learn if provided with appropriate instructional accommodations prefer support to be provided in the classroom setting and work more collaboratively with others. The current study suggests that these preferences, and underlying beliefs, can be found in STs themselves as well as in classroom teachers. Even amongst interviewees, there were apparent differences. ST3 was clearly focused on incorporating learners into the work being done by peers as much as possible and appeared to have a good collaborative relationship with the classroom teachers that facilitated this. In contrast, both ST2 and ST4 alluded to learners with higher needs needing one-on-one work on a separate programme, often with no engagement from other team members.

Frequency of Targeted Writing Instruction

Learners spending a substantial amount of time every day learning about and engaged in writing is suggested as an essential component of effective writing instruction for all learners (Copeland & Keefe, 2016; Erickson & Koppenhaver, 2020; Gadd & Parr, 2017; Graham et al., 2016). At first glance, ST's beliefs appeared to support this, with 95.4% indicating they believed learners who have CCN would benefit from daily opportunities to write. However, when asked how often writing was specifically targeted for their learners who have CCN, less than one fifth (19.0%) indicated that writing was targeted 5 days a week, and over one quarter (28.6%) indicated that writing was targeted 2 days per week or less – for some it was less than 1 day per week. These results echo the literature, which suggests that literacy, and writing more particularly, is often not allocated the time needed (Koppenhaver & Yoder, 1993; Mike, 1995; Ruppar, 2015; Sturm et al., 2019; Zascavage & Keefe, 2004). Referring to personal perceptions about teachers attitudes toward writing instruction for students with CLN (including those with CCN), one of the administrators in Sturm et al.'s study asserts:

> I need them to get it in their brains that these kids need this. They need to do this every day. Typical kids get it every day. What makes us think we can do it once a week? How can we progress with them if it's only once a week? It becomes a self-fulfilling prophecy, because they did not learn. Why not daily writing for these kids? (p. 216)

There are likely to be numerous reasons for this dearth of time spent on writing instruction and practice. Two potential factors arose in the current study. Firstly, health considerations and other additional learner needs, such as feeding, toileting, managing fatigue, positioning, setting up equipment, and dealing with behaviour, can impact the time available for instruction and practice. This is in keeping with Mike's (1995) finding that large amounts of instructional time may be used for various non-academic related tasks, leaving little time for the actual academic work.

The lack of shared responsibility for the writing programme, discussed earlier, may also impact time spent on writing instruction and practice. Given that the ORS funding provides learners

with either one half or one full day per week of ST time (Ministry of Education, 2020b), a ST may only work with a learner once or twice per week, or perhaps daily but for a very short time. Of course, writing is unlikely to be the only curriculum area covered within that limited time. Consequently, if other team members are not sharing responsibility for the writing programme, learners' writing experiences and opportunities to develop as writers may be extremely limited.

Strategies for Writing Instruction

There is mounting evidence that strategies identified as effective for writing instruction in general are also effective for learners who have CCN (Erickson et al., 2017; Gadd, Parr, et al., 2019). The current study touched on some of those strategies and strategies seen in literature more focused on literacy development for learners who have CCN, and these are highlighted here.

Time Spent Writing. Responses to the identified importance of spending substantial time every day engaged in writing were discussed in the previous section. Another component in effective writing instruction is that learners should write for a range of meaningful purposes (Gadd & Parr, 2017; Graham et al., 2016). Gadd & Parr (2017) also found that supporting learners to establish personally meaningful purposes for writing was beneficial for increasing engagement in writing. Erickson (2017) suggests two further advantages to learners self-selecting a topic: (1) learners are more likely to have knowledge and language to draw on to write about that topic; and (2) it teaches the learners that they can put their own thoughts and ideas into writing. Moreover, Erickson and Koppenhaver (2020) argue that teaching learners to create their own writing prompts supports their independence and ability to generate and organise their ideas. In the current study, responses indicated that STs are aware of the importance of these factors and aim to incorporate them into learners' writing experiences. Some STs provided examples of how they facilitate topic choice for their learners through the use of personally relevant photographs, for example. However, adult provided prompts were used by slightly more STs than learner selected topics.

Supportive Writing Environment. The importance of a positive, supportive classroom environment and opportunities for learners to collaborate on written work is another important

strategy identified by both Graham et al. (2016) and Gadd and Parr (2017). Sturm (2012) also advocates for creating a collaborative classroom culture, where learners have opportunities to share their writing and provide feedback to each other. Providing opportunities for learners to publish their work and share it with others was common amongst STs in the current study. However, only four indicated that they engaged learners in providing feedback to others about their writing. This may be a missed opportunity. Supporting learners to provide feedback to peers may, in turn, help them to develop skills to self-evaluate and monitor their own writing.

Provision of Access to Full Alphabet for Composition. Many participants in the current study reported that they provided opportunities for learners to experiment with various writing tools and surfaces to write on - a practice supported by Erickson and Koppenhaver (2020), who provide different examples of what has worked for some learners. Erickson and Koppenhaver also stress the importance of providing learners with appropriate access to all 26 letters of the alphabet when undertaking a writing task. They argue that this is important even for learners just developing alphabet knowledge, who require regular opportunities to apply their developing knowledge about letters and sounds and how they link to create a written product. In contrast, providing learners with whole words or symbols to 'write' with teaches them little about becoming a writer, able to independently "translate" (Flower & Hayes, 1981, p. 373) their thoughts and ideas into written form. Whilst many STs in the current study (17 of 21 respondents) reported providing access to all the letters of the alphabet for writing tasks, the use of word banks and/or symbol-based systems to compose text was also common.

Learners who have CCN and physical or sensory impairments may find producing text using traditional writing implements difficult. They may need a variety of different tools to ensure access to the alphabet across and within writing tasks (Erickson & Koppenhaver, 2020; Sturm, 2012). Some STs in the current study appeared to have knowledge of a variety of writing tools. Several STs identified the use of technology such as a computer, iPad or specific software/apps to support their learners, with some also indicating that a learner's communication system was used. A few

participants noted that they used other forms of alternative pencil such as alphabet flip charts (Hanser, 2006), alphabet boards, and modified keyboards. ST3, in particular, found paper-based tools, like the alphabet flipchart, invaluable. She described a situation where the combined use of the communication system and the flipchart enabled a learner to clarify the word she wanted and, hence, relieve mounting frustration.

Copying. Literature suggests that having learners produce written content by copying text created by someone else may not be useful for developing the skills to compose original pieces of writing (Erickson & Koppenhaver, 2020; Sturm et al., 2012). Indeed, Erickson and Koppenhaver (2020) suggest that some students may "have spent so much time on copying tasks that they do not understand the generative nature of writing" (p. 223). Interestingly, (Dyson, 1985) found that different learners may focus on different things when copying. Whilst some consider the meaning of what they are copying, others focus exclusively on individual letter formation and give no consideration to the possible message of what is being written. This has the effect of turning the cognitive task of writing into nothing more than a motoric task. The current study indicates that some STs continue to use activities like copying (and tracing) as part of their writing programme.

Assessment

Erickson and Koppenhaver (2007) call to attention the importance of learners engaging in writing for providing teachers with insight into the learners "understanding of print forms, content, and use (p. 86)." In addition, careful analysis of writing samples may provide information about the learner's phonological awareness level (Gillon, 2018). The use of an assessment tool such as the Developmental Writing Scale (Sturm et al., 2012) can support teachers to identify fine-grained differences in writing development from learner writing samples. In the current survey, belief in the ability of writing samples to provide useful assessment information was variable. However, writing samples were indicated as one of the most common strategies used to assess and monitor writing progress, and the Developmental Writing Scale was familiar to at least two participants.

Confidence, Knowledge & PLD

Graham et al. (2001) assert the importance of teachers being confident in their ability to "perform the actions that lead to student learning" (p. 178). It is of concern that STs reporting of their own levels of confidence indicated only relatively moderate levels of confidence overall and across most of the specific teaching tasks inquired about. Teachers' levels of confidence, or self-efficacy, are bound up in their attitudes and beliefs about their ability to engage, motivate and facilitate learning and their knowledge and experience. In addition, variations in knowledge and experience levels within the wider team were identified as potential challenges or facilitators by participants. Knowledge, understanding and experience in areas such as the additional challenges faced by learners who have CCN, what writing might look like for those learners, and the tools and strategies that can support the teaching of writing were seen as particularly influential. An awareness of the need for further training to increase their own knowledge base and that of other team members was evident.

Consequently, the provision of relevant information and experiences at the initial teacher education stage and through ongoing PLD, once teachers are in service, has an important role in improving those confidence levels. It has already been noted (see Chapter 2) that initial teacher education programmes may not be preparing trainee teachers effectively for the inclusion of learners with additional needs. Some programmes may lack the provision of knowledge and skill development and crucial opportunities for trainee teachers to gain experience using those skills during practicums. Practicums offer the opportunity to engage in what Bandura (1997) terms "enactive mastery experiences" (p. 80), which he argues are vital in the construction of self-efficacy. Practicum experiences should also support pre-service teachers "to examine and foster their beliefs and learn desirable lessons about how to address the needs of diversity in the classroom" (Jordan et al., 2009, p. 541).

STs in the current study specified a variety of beneficial PLD opportunities, but it is interesting to note that several of those listed are not directly related to writing. Further, whilst

participants highly regarded some specific PLD opportunities, the overriding sense was that finding relevant PLD, and having the time to engage in it, presented significant challenges. This mirrors the work of Sturm et al. (2019), who found that whilst effective PLD can shift teacher perceptions and encourage them to make writing a priority, it is scarce, and most teachers have had minimal opportunities to engage in relevant PLD. In NZ, McMenamin et al. (2004) reported similar findings regarding the availability of, and access to, PLD relevant to learners with higher needs more generally.

The potential for isolation of teachers working with learners with additional needs identified in the current study and in Sturm et al. (2019) was discussed earlier. Participants in the Sturm et al. study suggested the development of "professional communities of learning … for peer-to-peer support" (p. 223). This suggestion was also raised in the current study, with two interviewees advocating for the benefits of such a network for STs as a basis for support, discussion, problem-solving and sharing of experiences, strategies and resources. ST1 spoke about the lack of job security in the ST role. She speculated about whether reviewing the ST role, with a view to increasing job security, might motivate STs to become more invested in further training, "because they'll know that there's a long-term vision. Rather than 'Oh, this is just me for this term'."

Limitations and Implications for Future Research

Although efforts were made to ensure the current study followed a robust methodological process, it is essential to acknowledge some limitations. In doing so, implications for future research may also be identified.

This study's results may not be generalisable to the population of all STs working in inclusive settings in NZ. The study sample was relatively small, and many participants were STs working in the STOS and, therefore, based in specialist schools. Any extension or replication of this study would benefit from gathering data from a larger sample, including a greater number of non-STOS teachers, who, like ST3, may be more deeply embedded in an individual school.

Also, whilst care was taken to create a clear definition of the target participants, it appears that there was some ambiguity in the terms “specialist teacher” and “inclusive settings”. Some participants may have been specialist school-based classroom teachers rather than teachers working in local primary, middle/intermediate, or secondary schools. Future research in a similar vein would benefit from reviewing and carefully crafting the intended target participants' descriptions. However, it may be interesting for future research to undertake a comparative study investigating the perspectives and experiences of the specialist school teachers themselves and STs working in inclusive settings.

Finally, some of the limitations inherent in the use of internet-based surveys were discussed in Chapter 3. Because internet-based survey tools are commonplace within the education sector, it was hypothesised that such limitations would be minimal and were unlikely to have had any significant effect on the results.

The current study has also highlighted other areas for potential future research. Firstly, this study could be expanded to compare the espoused theory and theory-in-use (Argyris et al., 1985) of STs and potentially also of classroom teachers in both inclusive and specialist school settings. Adding document analysis and observation to the survey and interview data would allow examination of the congruency of espoused theory and theory-in-use. Secondly, a comparative study between teachers working in inclusive settings and those working in specialist school settings using a similar survey tool may provide insights into differing perspectives and experiences. Finally, a study investigating teacher understandings of the writing process's cognitive underpinnings may help identify particular gaps in teacher knowledge. This might allow more targeted PLD to develop the knowledge and the skills to support all of the cognitive processes involved.

Implications for Practice

Despite the acknowledged limitations, this study has identified several implications for practice. Perhaps most importantly, schools need to look carefully at their inclusion practices and their teachers' beliefs concerning their responsibilities for all learners in their classrooms. Teachers’

willingness and ability to collaborate with other team members, especially where there are itinerant team members involved, is also crucial. It will also be important, given the findings of Sturm et al. (2019), that school leaders take an active role in promoting inclusion, enabling collaboration, and supporting the implementation of new strategies in their schools. Initial teacher training institutions will also have a part to play in this. Jordan et al. (2009) argue that

> What may be needed in both teacher education and in-service preparation is to challenge teachers' beliefs about ability and disability as immune to learning, and their resulting beliefs about their roles and responsibilities, as well as their epistemological beliefs about the nature of knowing, knowledge and the process of acquiring knowledge. (p. 541)

Finally, there is a need for more targeted PLD focused on teaching writing to learners with CCN, but likely also to learners with a range of other additional needs. In the meantime, to further support STs, particularly those working in situations where they may tend to feel isolated, an online network could be set up as suggested by study participants. This would allow STs from across NZ to interact, provide mutual support, and share experiences, strategies, and resources.

Final Thoughts

This study combined survey data with elaborations from interviews to provide an overview of STs' experiences and perspectives regarding the teaching of writing to learners who have CCN in inclusive school settings in NZ. Overall, STs believed in the importance of writing for their learners and used a range of strategies and materials to provide writing instruction that incorporated some elements of evidence-based effective writing instruction. Facilitators and challenges various areas were identified, many aligned with the existing literature in the field. Concerns were raised regarding negative attitudes and beliefs related to the ability of all learners who have CCN to learn to write and about the perceived importance of this. These are evident in ST's narratives about their experiences with other team members and the responses of some of the STs themselves. If these attitudes and beliefs are to shift, then teachers, including STs, need to be provided with high-quality PLD relevant to teaching writing to learners who have CCN.

In addition, the importance of effective collaboration and a sense of shared responsibility for learners' progress cannot be underestimated. There are clear examples in the study of how effective collaboration facilitates progress.

Ultimately, writing is an essential skill for learners who have CCN if they are to become "confident, connected, actively involved, and lifelong learners" (Ministry of Education, 2007b, p. 8) as the NZ Curriculum envisages them to be. Ensuring that their teachers have the attitudes, beliefs, knowledge, and skills to support their development into effective writers should be a priority.

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Appendix A

Recruitment Email

MASSEY UNIVERSITY
INSTITUTE OF EDUCATION
TE KURA O TE MATĀURANGA

Teaching writing to learners with complex communication needs: A mixed methods study of New Zealand Specialist Teachers' experiences and perspectives.

Kia ora

My name is Helen Brunner and I am completing a Master of Education through Massey University under the supervision of Dr. Sally Clendon and Dr. Elizabeth Doell. I am based in Invercargill, and am currently employed as an Additional Teacher (ORS) at Te Aho o te Kura Pounamu (The Correspondence School) and as a Teacher/Trainer at TalkLink Trust.

I am undertaking a project exploring the experiences and perspectives of Specialist Teachers involved in teaching writing to learners who have complex communication needs, in inclusive school settings in New Zealand.

For the purposes of this project:

- a Specialist Teacher is a teacher, with or without specialist qualifications, employed, at least in part, to provide the additional teacher time allowance allocated to one or more learners funded under the Ongoing Resourcing Scheme (ORS); and
- learners with complex communication needs are learners who have temporary or permanent impairments that limit their ability to meet all of their communication needs. (For more information, please refer to the attached information sheet).

The project will consist of two phases: (1) an anonymous online survey, and (2) interviews with a small number of Specialist Teachers. Participants who elect to register their interest in Phase two, accept that their contact details will be linked to their survey results, hence negating the survey's anonymity.

I would appreciate your assistance in recruiting participants for this research project. Could you please distribute the attached information sheet to Specialist Teachers that work, or have within the past two years worked, with students who have complex communication needs.

Thank you for considering this request for assistance. If you require further information about the project, please contact me at Helen.Brunner.1@uni.massey.ac.nz or by telephone on 0204 586200.

Yours sincerely

Helen Brunner

Appendix B

Participant Information Sheet

MASSEY UNIVERSITY
INSTITUTE OF EDUCATION
TE KURA O TE MATĀURANGA

Teaching writing to learners with complex communication needs: A mixed methods study of New Zealand Specialist Teachers' experiences and perspectives.

Information Sheet

Invitation to Participate in a Survey and Interview.

Researcher Introduction
Kia ora, my name is Helen Brunner and I am completing a Master of Education through Massey University under the supervision of Dr. Sally Clendon and Dr. Elizabeth Doell. I am based in Invercargill, and am employed as an Additional Teacher (ORS) at Te Aho o te Kura Pounamu, and as a Teacher/Trainer at TalkLink Trust.

Project Description and Invitation
The aim of this project is to explore the experiences and perspectives of Specialist Teachers involved in teaching writing to learners who have complex communication needs (CCN), in inclusive school settings in New Zealand.

For the purposes of this project:

- a **Specialist Teacher** is a teacher, with or without specialist qualifications, employed, at least in part, to provide the additional teacher time allowance allocated to one or more learners funded under the Ongoing Resourcing Scheme (ORS); and
- **learners with CCN** are learners who have temporary or permanent impairments that limit their ability to meet all of their communication needs. These may impact on gestural, spoken and/or written communication, and may result from developmental conditions (such as intellectual disability, cerebral palsy, or autism spectrum disorder), or from acquired conditions (such as traumatic brain injury, or stroke) (Beukelman et al., 2013). Learners with CCN benefit from access to augmentative and alternative communication (AAC) to support language development and communication.

This project will consist of two phases. In the first phase, participants will complete an anonymous online survey. The second phase will involve interviews with a smaller number of Specialist Teachers.

I would be grateful if you would consider participating in this project.

Participant Identification and Recruitment
I am recruiting Specialist Teachers who are, or have within the past two years been, involved in teaching writing to learners with CCN in inclusive school settings in New Zealand.

Information about the research project, and a request for support in distributing this information sheet, has been sent to

- the co-ordinators of the Postgraduate Diploma Specialist Teaching (Massey University and University of Canterbury);
- Specialist Teacher Outreach Service provider schools;
- TalkLink Trust
- Te Aho o Te Kura Pounamu; and
- relevant social media sites

Project Procedures
Phase one of the project involves completing an anonymous online survey. It should take approximately 20 minutes to complete. Due to the anonymous nature of the survey, it is not possible to delete or amend your information once you have submitted your responses. Completion of the survey, and submission of your responses, implies that you consent to your responses being used in the research project.

Phase two involves individual interviews, lasting approximately 45 minutes. Interviews will be scheduled at a convenient time, and may be completed face-to-face, via telephone or Skype call, or through other appropriate means as agreed. Interviews will be digitally recorded for later transcription, and participants will be provided with a copy of their transcript to read for verification and to give an opportunity for clarification of meaning.

Interview participants will receive a $25 book voucher in acknowledgement of their participation in the interview phase.

Data Management
All documentation and digital recordings will be stored on password protected computers and will only be accessed by myself and my supervisors. Digital recordings will be permanently deleted once the transcriptions have been completed and verified. Once transcribed, all identifying information will be removed from the written transcriptions and the confidentiality of participants will be protected through the use of id numbers and/or pseudonyms.

All information will be kept for 5 years following the completion of the final publication. When disposed of, the University confidential waste service will be used for any printed materials.

Results of the research project may be published in journals or presented at conferences. However, the information shared will not include the names of any participant.

Participants' rights
You are under no obligation to accept this invitation and there are no direct benefits or identified risks to you participating.

If you do decide to participate in this project you have the right to

- ask any questions about the study at any time during participation;
- decline to answer any particular question(s); and
- request access to a summary of the project findings when it is concluded - email your request to the researcher at Helen.Brunner.1@uni.massey.ac.nz.

In addition, participants in Phase 2 (Interviews) also have the right to

- withdraw from the project at any stage prior to signing the transcript release form;
- ask for the recording device to be turned off at any time during the interview;
- review the transcript from their interview;
- ask for any part of the interview to be erased/excluded from the data set any time prior to signing the transcription release form; and
- provide information on the understanding that your name will not be used unless you give permission to the researcher.

Survey Link
If you are interested in being involved in this project, you can complete the anonymous online survey by following this link: https://massey.au1.qualtrics.com/jfe/form/SV_23ixGe1AgGC0jyJ

At the completion of the survey, you will have the opportunity to register your interest in participating in the interview phase. It is important to note that, should you elect to register for this second phase, the details you provide will be linked to your survey responses. However, all identifying information will be removed prior to data analysis.

Project Contacts
Thank you for taking the time to consider this request.

Should you have any questions, or require additional information about the project, please contact the researcher at Helen.Brunner.1@uni.massey.ac.nz or by telephone on 0204 586200.

If you have any concerns about this research that you would like to discuss with the researcher's supervisors, they can be contacted at:

Dr. Sally Clendon s.clendon@massey.ac.nz Ph: 09 414 0800 ext:43537	Dr. Elizabeth Doell E.H.Doell@massey.ac.nz Ph: 09 414 0800 ext: 43531

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

If you have any concerns about the conduct of this research that you wish to raise with someone other than the researcher(s), please contact Prof Craig Johnson, Director, Research Ethics, telephone 06 356 9099 x 85271, email humanethics@massey.ac.nz.

Appendix C

Copy of Online Survey

MASSEY UNIVERSITY
TE KUNENGA KI PŪREHUROA
UNIVERSITY OF NEW ZEALAND

1 - Introduction

Section 1: Introduction

Thank you for your interest in this project investigating the experiences and perspectives of Specialist Teachers involved in teaching writing to learners who have complex communication needs (CCN) in inclusive school settings in New Zealand.

For the purposes of this project

- *a **Specialist Teacher** is a teacher, with or without specialist qualifications, employed, at least in part, to provide the additional teacher time allowance allocated to one or more learners funded under the Ongoing Resourcing Scheme (ORS);*
- ***learners who have CCN** are learners who have temporary or permanent impairments that limit their ability to meet all of their communication needs. These may impact on gestural, spoken and/or written communication, and may result from developmental conditions (such as intellectual disability, cerebral palsy, or autism spectrum disorders), or from acquired conditions (such as traumatic brain injury, or stroke) (Beukelman et al., 2013); and*
- ***writing** is the act of composing text to communicate a meaningful message to an audience.*

This survey should take approximately 20 minutes to complete. The anonymous nature of this survey means that:

1. *individual submissions cannot be identified for removal from the data set. Submission of responses at the completion of the survey implies consent for the use of your data; and*
2. *the survey must be completed in one session. However, you have the right to decline to answer any particular question(s), or discontinue the survey at any point.*

At the completion of the survey, you will have the opportunity to register your interest in the second (interview) phase of the project. Please note that registering your interest for the interview phase means that your details will be linked to your responses. However, all identifying data will be removed prior to data analysis.

Further information is available on the Participant Information Sheet (available from the link below).

Project Participant Information Sheet

Please respond to the following two statements before continuing with the survey.

I have read and understood the information provided above and on the Participant Information Sheet for this project, and I voluntarily agree to participate in this research project.

○ Yes ○ No

I am a Specialist Teacher, working in one or more inclusive school settings in NZ, and I am currently, or have within the last two years been, involved in teaching writing to one or more learners who have complex communication needs.

○ Yes ○ No

2 - Context & Experience

Section 2: Context and Experience

This section of the survey will collect some information regarding your work context(s) and your level of experience.

In which type(s) of inclusive school setting(s) do/did you undertake your work with learners who have CCN? (Select all that apply)

- ☐ Primary School
- ☐ Intermediate School
- ☐ Secondary School
- ☐ Middle School
- ☐ Area School
- ☐ Other (please specify)

How many years of teaching experience (overall) do you have?

How many years of experience do you have working with learners who have CCN?

How many learners who have CCN have you worked with in your teaching career?

3 - Qualifications & Professional Learning and Development

Section 3: Qualifications & Professional Learning and Development

This section of the survey will collect some information regarding your qualifications and any professional learning and development that you have been involved in or would find useful.

Please list your teaching/education and related qualification(s).

Please indicate the type(s) of professional learning and development you have undertaken relevant to teaching writing to learners who have CCN. Check all that apply.

- [ ] Undergraduate coursework
- [ ] Postgraduate coursework
- [ ] Assistance from other teachers
- [ ] Assistance from other professionals
- [ ] In-service training
- [ ] Conferences/Seminars/Workshops
- [ ] Self-directed learning, such as reading books or journal articles
- [ ] Online learning, such as blogs, websites, participation in forums, webinars, online modules etc.
- [ ] Other (please specify)
- [ ] I have not undertaken any professional learning and development relevant to teaching writing to learners who have CCN.

Which professional learning and development opportunities that you have undertaken have you found most beneficial and worth recommending to other Specialist Teachers involved in teaching writing to learners who have CCN?

What areas of your practice related to teaching writing to learners who have CCN would you like further professional learning and development in?

4 - Beliefs

Section 4: Beliefs about writing and learners who have complex communication needs

This section of the survey seeks to find out about your beliefs about writing in relation to learners who have CCN.

As you complete this section, please remember:

- *In this project writing is the act of composing text to communicate a meaningful message to an audience.*
- *CCN = complex communication needs.*

When you think about the word 'writing' in relation to learners with CCN, what comes to mind?

For each of the following statements, indicate your level of agreement or disagreement using this rating scale

1 Strongly Disagree	2 Disagree	3 Somewhat Disagree	4 Somewhat Agree	5 Agree	6 Strongly Agree

Writing is an important skill for all learners.

① ② ③ ④ ⑤ ⑥

Writing takes on heightened importance for learners who have CCN.

① ② ③ ④ ⑤ ⑥

All learners who have CCN are capable of learning to write.

① ② ③ ④ ⑤ ⑥

Writing may help improve reading skills for learners who have CCN.

① ② ③ ④ ⑤ ⑥

Writing may help improve communication skills for learners who have CCN.

① ② ③ ④ ⑤ ⑥

Writing samples from learners who have CCN provide useful assessment information for teachers.

① ② ③ ④ ⑤ ⑥

Writing is an engaging and enjoyable experience for learners who have CCN.

① ② ③ ④ ⑤ ⑥

The cognitive processes underlying learning to write are different for learners who have CCN.

① ② ③ ④ ⑤ ⑥

Learners who have CCN benefit from daily opportunities to write.

① ② ③ ④ ⑤ ⑥

Writing is an important part of literacy instruction.

① ② ③ ④ ⑤ ⑥

Writing is a social activity.

① ② ③ ④ ⑤ ⑥

Writing skills are best taught as isolated tasks such as handwriting practice, worksheets, or grammar lessons.

① ② ③ ④ ⑤ ⑥

Learners who have CCN should always be provided with access to the full alphabet when engaged in the writing process.

① ② ③ ④ ⑤ ⑥

It is important to focus on form and structure of writing products from the beginning.

① ② ③ ④ ⑤ ⑥

Learners who have CCN should be asked to write for authentic, meaningful purposes.

① ② ③ ④ ⑤ ⑥

Phonological awareness is important for writing.

① ② ③ ④ ⑤ ⑥

Phonics is important for writing.

① ② ③ ④ ⑤ ⑥

Do you have any comments related to the above statements that you would like to share?

Are there any prerequisite skills that you believe a learner needs to have before commencing with writing instruction?

◯ Yes

○ No

Please indicate briefly what prerequisite skills you believe a learner needs before commencing with writing instruction.

5 - Confidence

Section 5: Confidence

This section of the survey seeks to find out about your level of confidence about tasks related to teaching writing to learners who have CCN, both in general, and in regards to particular skills or knowledge.

As you complete this section, please remember:

- *In this project writing is the act of composing text to communicate a meaningful message to an audience.*
- *CCN = complex communication needs.*

For each of the following statements, indicate your level of confidence using this rating scale

1	2	3	4	5
Not At All Confident	Somewhat Confident	Moderately Confident	Very Confident	Extremely Confident

I can help learners who have CCN develop as writers.

① ② ③ ④ ⑤

I can provide meaningful writing opportunities for learners who have CCN.

① ② ③ ④ ⑤

I can teach skills for writing a variety of text types (e.g., narrative, persuasive, explanation, poetry) to learners who have CCN.

① ② ③ ④ ⑤

I can teach spelling to learners who have CCN.

① ② ③ ④ ⑤

I can support learners who have CCN to select a topic to write about.

① ② ③ ④ ⑤

I can assess the writing level of learners who have CCN.

① ② ③ ④ ⑤

I can provide specific, targeted feedback to learners who have CCN about their writing at a level appropriate to each learner.

① ② ③ ④ ⑤

I can plan next steps to ensure learners who have CCN continue to progress in their writing skills.

① ② ③ ④ ⑤

I can model the writing process for learners who have CCN, at a level appropriate for each learner.

① ② ③ ④ ⑤

40. I can select an appropriate writing tool for learners who have CCN and physical or gross/fine motor impairments.

① ② ③ ④ ⑤

I can select appropriate assistive technology tools for writing to support learners who have CCN when required.

① ② ③ ④ ⑤

6 - Challenges and Facilitators

Section 6: Challenges and Facilitators

This section of the survey asks you to identify enablers/facilitators and challenges/barriers to teaching writing to learners who have CCN.

What do you consider to be enablers or facilitators to teaching writing to learners who have CCN?

What do you consider to be challenges or barriers to teaching writing to learners who have CCN?

7 - Time, Techniques & Tools

Section 7: Time, Techniques and Tools

This section of the survey seeks information about your practice related to teaching learners who have CCN to write. It asks about the time allocated to writing, the contexts in which instruction takes place, and team responsibilities, as well as about the types of activities you see as valuable for teaching writing to learners with CCN, and the tools you provide for learners with CCN to engage in writing tasks.

On average, on how many days per week is/was writing specifically targeted for your learners who have CCN?

- ○ Less than 1 day per week.
- ○ 1 day per week
- ○ 2 days per week
- ○ 3 days per week
- ○ 4 days per week
- ○ 5 days per week

Please indicate the frequency of use of different settings where writing instruction for your learners who have CCN takes/took place.

	Never	Sometimes	About half the time	Most of the time	Always
Incorporated into whole class activities	○	○	○	○	○
In a small group within an inclusive classroom	○	○	○	○	○
In a small group outside of an inclusive classroom	○	○	○	○	○

	Never	Sometimes	About half the time	Most of the time	Always
One on one within an inclusive classroom	○	○	○	○	○
One on one outside of an inclusive classroom	○	○	○	○	○

In your team, who takes/took primary responsibility for the development of the writing instruction programme for learners who have CCN. (Please identify one person only)

- ○ Classroom teacher
- ○ Specialist teacher
- ○ Teacher Aide(s)
- ○ Other (please specify) [ ]

In your team, who takes/took primary responsibility for the implementation of the writing instruction programme for learners who have CCN? (Please identify one person only)

- ○ Classroom teacher
- ○ Specialist teacher
- ○ Teacher Aide(s)
- ○ Other (please specify) [ ]

In your team, who takes/took primary responsibility for assessing or monitoring the writing development of learners who have CCN? (Please identify one person only)

- ○ Classroom teacher
- ○ Specialist teacher
- ○ Teacher Aide(s)
- ○ Other (please specify) [ ]

Please indicate which of the activities listed below you use, or have used, as part of a writing instruction programme for learners who have CCN. Select all that apply.

- ☐ Tracing
- ☐ Copying
- ☐ Writing with hand-over-hand support
- ☐ Writing with hand-under-hand support
- ☐ Writing with some other form of physical support
- ☐ Handwriting practice
- ☐ Writing using a word bank (e.g., in Clicker or similar software)
- ☐ Writing with the support of a word wall.
- ☐ Putting whole words in sentence order.
- ☐ Writing using symbols in the learner's communication system (if they have one)
- ☐ Writing with symbol-based software support (e.g., writing with pictures in the Clicker Connect app)
- ☐ Writing with access to all of the letters in the alphabet (using traditional writing implement, keyboard, or another alphabet-based writing tool).
- ☐ Opportunities for learners to experiment with a variety of writing tools.
- ☐ Opportunities for learners to experiment with writing on a variety of surfaces.
- ☐ Spelling activities
- ☐ Grammar activities
- ☐ Fill the gap activities
- ☐ Completing worksheets
- ☐ Writing in response to an adult provided prompt
- ☐ Writing about a self-selected topic
- ☐ Writing for meaningful purposes
- ☐ Opportunites to write drafts that are not marked or corrected
- ☐ Revising/Editing drafts
- ☐ Publishing work
- ☐ Sharing their writing with others
- ☐ Providing feedback to others about their writing
- ☐ Mini lessons related to components of the writing process.
- ☐ Other (Please specifiy) _____

Do you have any comments related to activities that may be used in a writing instruction programme for learners who have CCN that you would like to share?

List, or describe, the writing tools that you use/have used to support learners with CCN to engage in writing activities.

8 - Assessment and Feedback

Section 8 - Assessment and Feedback

This section seeks information on how you assess the progress that learners who have CCN make in their writing development, as well as how you provide feedback to your learners who have CCN that supports them to make progress.

What assessment tools/strategies do/did you use to monitor the writing progress of learners who have complex communication needs?

Briefly describe when, and how, you provide feedback to your learners who have CCN about their writing.

9 - Closing

Section 9: Closing

Do you have any additional thoughts, comments or information related to teaching writing to learners who have CCN that you would like to share?

Would you be interested in participating in an individual follow up interview, lasting approximately 45 minutes, to provide further information on your experiences and perspectives related to teaching writing to learners who have CCN?

○ Yes ○ No

10 - Interview registration

Registration of Interest in Interview Participation.

The second phase of this project involves individual interviews lasting approximately 45 minutes. These interviews may be undertaken face-to-face, via telephone or Skype, or through other appropriate means as agreed. If you wish to register your interest in participating in an interview, please provide your details below. Please note that your details will be linked to your survey responses, but all identifying information will be removed from the data prior to data analysis.


Name
Telephone number
Email address
Preferred mode of contact
Email
Telephone
Powered by Qualtrics

Appendix D

Codebook Sample

Codes related to: Challenges		
Top level code Second level code	Definition	Example Quotes
Lack of consistency	Related to inconsistency for the child both regarding staffing changes, and expectations between people/settings (eg. home and school).	• And to get that consistency in their schooling and also at home is really hard (ST1). • the problem is you just get a child, well a team trained up to know what they're doing, and then that child changes classes, has different teacher aides, a different teacher and you feel like you literally go back to square one with the whole process. And start all over again which is, for me it's really frustrating (ST4)
Lack of opportunity or exposure to writing	Related to the notion that children with CCN may be limited to their exposure to writing and personal opportunities to engage in writing.	• They don't get the same opportunity and exposure to writing as they should.
Lack of time	Related to notion of insufficient time in various areas: • within class environment making it difficult for learner to keep pace • for STs and other team members to really focus on their role and complete work etc. – for collaborative teamwork	• Lack of time • Well time's the obvious one isn't it, you know no one ever has enough time to do anything (ST3). • Just time I think, especially in my current role my outreach, the mainstream setting just moves so fast. That ... these students just need so much more time, on one activity and ... by the time they've got set up and they're ready to go, ... the class has moved onto the next thing. So yeah, just the time to focus on it (ST2)
Learner centred	Related directly related to the learner.	
Abilities or characteristics	Barriers focused on perceived abilities or characteristics inherent in the learner that create barriers: • physical / motor skills	• there are students whose health needs override the need for writing instruction • When the learner has profound learning difficulties that can come in the way of learning.

	• cognitive skills • anxiety • communication • challenging behaviour • medical/wellbeing/fatigue • positioning needs	• Some of my pupils have got quite challenging behaviour, so that can be a barrier. Some of it is medical needs, just getting them into the right space so that they're able too. Whether it's positioning or the timing, whether it's they need food, they need a break. It's extremely taxing, well you'll know it's extremely taxing for them (ST3). • a lot of my students actually the motor skill part whether it be not having the physical ability at all, or whether their motor skills are not, they don't have those fine motor skills to be able to hold their hand in the way that people want them to, or yeah, or whether it also be down to, it's almost like not having a memory for text or for being able to do that (ST1)
Lack of Desire, Motivation or Engagement	Related to learner's perceived lack of motivation or desire to write or lack of engagement with writing process/tasks	• Their own lack of motivation or lack of belief in themselves that they can do it. • Difficulty in engaging children with writing using alternative pencil • I think for some children it's the process just seems too hard and too much, and the rest of their peers, certainly in mainstream the rest of their peers are all moving on quite quickly. And they're getting left behind and therefore you can get to a point where they can become quite disillusioned with the whole process. And they can just, they will just give up on it
Lack of language knowledge (phonics etc)	Related to a learner's lack of knowledge of language concepts – phonics, morphology, syntax, semantics etc.	• He missed a great deal of Year 2 when they were doing things like phonics and blends, so therefore his spelling is really, really lacking. … They're not obviously learning blends and you know kind of CVC words and things like that. He's missed that opportunity … he doesn't have enough knowledge of spelling and kind of even blends and the initial word sounds, to really use a word bank really successfully because he can't get the thought, or

		not necessarily a word bank sorry a predictive spelling because he's not got enough of that word for it to work out what he's trying to say (ST4).
Lack of world or life experiences	Related to potential reduction in life/world experiences to draw on.	• Students that have a limited range of experience to draw on • they've just got all those barriers around you know world experience, and just access to all those language rich opportunities at times (ST2).
Over supported	Related to learners who are supported to an extent where they are doing little of the work/learning for themselves and begin to rely on that support.	• I'm finding that with a student that I'm working with at the moment, who has relied really heavily on telling his stories to a teacher aide, a teacher aide then scribes and writes the whole thing down for him. He's relied on somebody to write his work for him for so long, that now to kind of break that barrier to him actually writing himself, is just like a huge, a huge challenge now. We're just really struggling to find the right tool for him, in order for him to be able to write other than something that he's relied on for years, which is telling his stories to someone and that person writes them down really, really quickly (ST4)
Nature of ST role	Comments relating to : - itinerant nature of the ST role – instability of the ST role – isolating nature of the ST role – lack of training – the way the ST role may be allocated in some schools – just anyone who needs a timetable fill in.	• not being able to work with others in team (working in isolation) • Yeah, the thing is though, which I find really hard is, but it's part of our role is we just, we dip in and we dip out (ST1) • But it is very hard to stay working within the sector. When you know you're only ever going to be fixed term, and you're just relying on kids staying in your area and your school, so that you can still have your job (ST1). • sometimes you just ... feel like you're there on your own, especially outreach ... you go and do your session, you

		might not see anyone really. Unless you're lucky. And then yeah send your session notes and hope for the best (ST2) • as outreach teachers I find we're working very much in isolation, even from the rest of our team, we never see one another, we're just going into our mainstream schools, working one to one with our children, and kind of in our own little vacuum really, and I think a lot more collaboration would be, would be really, really good (ST4)
Resources & Materials	Related to access to materials/resources suitable for a given learner.	• Not having access to a wide range of materials for the learner. • Not using the right tools for that individual.
Tasks	Related to issues with tasks used during writing instruction.	• When what is being asked is unclear • too advanced to the level of the • convincing people that copying and tracing isn't writing • A topic which is meaningless to the learner • No purpose for writing apparent is a barrier • people understanding that copying isn't writing (ST1).
Team	Related to variety of issues related to all those involved in working with/supporting the learner.	
Knowledge, Experience & Confidence	Related to issues pertaining to knowledge, understanding, previous experience, and confidence levels related to teaching writing (and working more broadly) with learners who have CCN. This could be the ST, classroom teachers, Tas etc.	• lack of understanding of what writing is for learners with CNN by mainstream teachers and support staff • lack of support or knowledge of class teachers • getting mainstream teaching colleagues to understand challenges CCN learners face • And just the confidence in teachers because potentially or teacher aides even, potentially because they haven't had a student who has had these ways of learning before

		• I want to know what to do. … I can wing it to a certain extent, but then there's actually some things I would like to know. I think that that is sometimes really missing. Like yeah, who do you actually speak to about this side of things, and who do you actually, you know what manual do you go to or, because these complex students they're all so unique, you know they've all got such different things.
Lack of engagement	Engagement of wider team members (including peers) with: • the learner with CCN • the working being done/provided • ST	• Engagement of the wider learning team has made progress and support to develop writing hard • I've witnessed a lot of they're sat next to people rather than with people (ST1) • Out of you know my current lot, … I've got yeah half of them who really have no relationship whatsoever with their teachers, because they're quite excluded. They're not part of their class really and very isolated (ST1). • some teachers completely switched off from these complex kids, and don't take on that they're actually their student, and they just don't see that at all you know (ST1) • So if I've done like a book in my session I'll leave a plan with the school, with some like other things they can do with the book. And some you know things they could do with writing. … I don't think there's not many schools I can think of who do a lot of follow up though with it. So often, yeah, my sessions are pretty isolated (ST2). • there didn't seem to be an ownership of the child, they seemed to think that it was my job to do everything (ST3).
Lack of staff	Related to insufficient levels of staffing to cater effectively for level of needs of learners.	• Enough Staff to assist one on one for writing with students with high and complex needs

Negative Beliefs and attitudes	Related to beliefs and attitudes the demonstrate: - deficit thinking - lack of valuing of writing as a skill - lack of valuing of strategies/resources/tools suggested - lack of understanding about time scale - lack of acceptance of responsibility for the learner	• Many people do not see these kinds of learners as being capable of writing and therefore that can cause the biggest problem. • When teachers do not believe that CCN learners have a voice, ideas, thoughts that they wish to convey to others. • there's just that deficit thinking really of that 'they can't, so why should we bother?' Rather than looking at you know potential (ST1) • some people who are just like you know what's the point of keeping trying. You know if a student has got to a certain age, and they're still not writing you know, why are we still trying (ST2). • I think some people would see that they don't really have the same need to write as say a typically developing child would (ST4)
Parental Engagement	Related to level of support, follow through, engagement etc from parents/caregivers/family in support of learning.	• And some parents move heaven and earth and some parents, aren't interested and you just have to roll with it (ST3)
Training or PLD	Pertaining to issues with sourcing/attending relevant training. Related to actual teaching strategies, but also to use of provided technology.	• difficulty accessing training for the whole team • lack of good training
Technology	Related to issue with technology: • reliability • appropriateness • lack of use • lack of training	• Lack of access to a useful and appropriate device • do not use their AAC alongside their writing or Literacy • No access to appropriate tools, e.g. child with CP who has limited use of one hand and does not have assistive technology at school (was left at home • The child having the assistive tech but not encouraged to use it very often • Technology's so bloody unreliable excuse my language.

		So unreliable and you just get to that point that you know like that thing of like Tobii, that you can't take into a sunny place, you can't take them outside, you can't take them etc (ST1). • They're incredible what they can do yeah, but ... then you've got the process of learning yourself how to, how it works and how ..., how it can work best for the student and ... getting everyone on the same page, with ... what are doing, what's our focus. How it all works (ST2). • You know when I think of my student whose just got his Eye Gaze computer, ... there's all these people working with him, and they've had hardly any training with using the device. And ... if you think about the money that goes into it, and how important it's going to be for him (ST3). • I think the process of actually sometimes applying for the technology and getting the right thing it's quite a long process and it's quite time consuming. So, therefore, sometimes quite a long period of time can go by where they don't really have anything, and then you're waiting for that technology (ST4)
Wider classroom challenges	Related to challenges inherent in classroom situation - environment, behaviour of other students etc.	• When I think about the classroom situation you know, if you're dealing with a lot of behaviours or yeah other things, yeah so yeah just the usual around you know staffing, and welfare (ST2) • I think because of the MLE system, so she went here for reading, over here for writing, over there for maths but belonged to somebody else, it was a homeroom and there was nobody who actually had ownership if that's the right word, of her learning (ST3) • And also, being in different space, because you're like a bag lady. You've got the wheelchair, you've got the

		device, you've got your flipchart, you've got your slopes thing, you've got your slope board, you've got you're just like a pack horse by the time you've transported all your low tech, and all your high tech around the place.

Note: Quotes in black are from survey responses. Quotes in blue are from interviews.

Appendix E

Interview Schedule

Interview Schedule

Thank you for taking the time to talk to me today. This interview will last approximately 45 minutes. I will be asking you questions to find out more about your perceptions and experiences of teaching writing to students with complex communication needs.

I would like to remind you of some key points from the information sheet.

- This interview will be digitally recorded so that I can create a written transcript of what we talked about. You have consented to this recording being undertaken, but you have the right to ask me to turn the recording device off at any time during the interview.
- You have the right to decline to answer any questions that I ask, or to stop the interview at any point in time.
- I will send you a copy of the transcript of this interview for to you to check over so that you can clarify the meaning of what you have said if needed.
- You may ask for any part of the interview to be erased/excluded from the data set at any time prior to signing the transcript release form.
- You have the right to withdraw from the study at any point prior to signing the transcript release form.
- You have the right to ask any questions about the study, at any time.
- Your name will not be linked to the information you provide unless you give me explicit permission to do so.

Please use pseudonyms when you refer to any students, staff members, family/whānau or other people during the interview to protect their privacy.

Before we get started, do you have any questions about the study in general, or about this interview?

Interview questions

1. Please tell me about your experience teaching writing to learners who have complex communication needs.
   (Probes: length of time; number of students; settings)

2. What skills and understandings do you see as critical to the writing process for all learners?
   How is this similar or different for children with complex communication needs?

3. How important do you think writing is for learners who have complex communication needs?
   (Probes: Can you explain why you think that? How is, or might it be, useful to them?)

4. If one of your learners with complex communication needs has moved or was to move to a new school, what information did, or would, you pass on to the new Specialist Teacher about the learner, and about what writing instruction currently looks like for that learner.
   (Probes: what are the key characteristics of the student – communication, physical etc; how does that student participate in writing; what does a writing session look like for

that learner?; what activities, tools, strategies do you use with that learner; where is the learner at in his/her writing development? What do you think the next steps are?)

5. In general, what do you consider to be some of the key enablers/facilitators for teaching a learner who has complex communication needs to write?

6. Tell me about a success story from your work teaching learners who have complex communication needs to write.
(Probes: how do you define 'success"? What supported the success – student characteristics, PLD, strategies, tools, other people etc.)

7. In general, what do you consider to be some of the key challenges/barriers to teaching a learner who has complex communication needs to write?
(Probes: equipment and/or resources? Other people [school team, family, other professionals etc]? Knoweldge/training?)

8. Can you tell me about your experiences with a learner where you found teaching writing to be particularly difficult or challenging?
(Probe: what were the barriers/challenges; how did you (attempt) to over come them? Were you able to overcome them? If not, what did you do?)

9. Are there any specific strategies, tools, activities, that you would recommend to others who are involved with providing writing instruction to learners who have complex communication needs?
(Probes: why? What makes that so useful? Would it work for all/most learners?)

10. Are there any particular PLD opportunities that you would recommend to others who are involved with providing writing instruction to learners who have complex communication needs?
(Probes: Why? Who would benefit? Any PLD that you feel you personally would benefit from?)

11. What additional supports do you think you, other Specialist Teachers, or others involved in providing writing instruction to learners who have complex communication needs need, or would benefit from?

12. Is there anything else related to teaching learners who have complex communication needs to write that you would like to share?

13. Is there anything else you would like to bring up, or ask about, before we finish the interview?

Thank you for your time and your participation in this project.

Appendix F

Participant Consent Form

MASSEY UNIVERSITY
INSTITUTE OF EDUCATION
TE KURA O TE MATĀURANGA

Teaching writing to learners with complex communication needs: A mixed methods study of New Zealand Specialist Teachers' experiences and perspectives.

PARTICIPANT CONSENT FORM

I have read, or have had read to me in my first language, and I understand the Information Sheet attached. I have had the details of the study explained to me, any questions I had have been answered to my satisfaction, and I understand that I may ask further questions at any time. I have been given sufficient time to consider whether to participate in this study and I understand participation is voluntary and that I may withdraw from the study at any time.

1. I agree/do not agree to the interview being sound recorded.
2. I agree/do not agree to the interview being image recorded.
3. I wish/do not wish to have my recordings returned to me.
4. I agree to participate in this study under the conditions set out in the Information Sheet.

Declaration by Participant:

I, _____ [print full name], hereby consent to take part in this study.

Signature: _____ Date: _____

Appendix G

Transcriber Confidentiality Agreement

MASSEY UNIVERSITY
INSTITUTE OF EDUCATION
TE KURA O TE MATĀURANGA

Teaching writing to learners with complex communication needs: A mixed methods study of New Zealand Specialist Teachers' experiences and perspectives.

TRANSCRIBER'S CONFIDENTIALITY AGREEMENT

I ..... (Full Name - printed) agree to transcribe the recordings provided to me.

I agree to keep confidential all the information provided to me.

I will not make any copies of the transcripts or keep any record of them, other than those required for the project.

Signature: ..... **Date:** .....

Appendix H

Transcript Release Authority

MASSEY UNIVERSITY
INSTITUTE OF EDUCATION
TE KURA O TE MATĀURANGA

Teaching writing to learners with complex communication needs: A mixed methods study of New Zealand Specialist Teachers' experiences and perspectives.

AUTHORITY FOR THE RELEASE OF TRANSCRIPTS

I confirm that I have had the opportunity to read and amend the transcript of the interview(s) conducted with me.

I agree that the edited transcript and extracts from this may be used in reports and publications arising from the research.

Signature: ..... **Date:** .....

Full Name - printed .....

Appendix I

Ethics Notification

Date: 27 May 2019

Dear Helen Brunner

Re: Ethics Notification - **4000021131** - **Teaching writing to learners with complex communication needs: A mixed methods study of New Zealand Specialist Teachers' experiences and perspectives.**

Thank you for your notification which you have assessed as Low Risk.

Your project has been recorded in our system which is reported in the Annual Report of the Massey University Human Ethics Committee.

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

If situations subsequently occur which cause you to reconsider your ethical analysis, please contact a Research Ethics Administrator.

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

A reminder to include the following statement on all public documents:
"This project has been evaluated by peer review and judged to be low risk. Consequently, it has not been reviewed by one of the University's Human Ethics Committees. The researcher(s) named in this document are responsible for the ethical conduct of this research.

If you have any concerns about the conduct of this research that you want to raise with someone other than the researcher(s), please contact Professor Craig Johnson, Director - Ethics, telephone 06 3569099 ext 85271, email humanethics@massey.ac.nz."

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

Yours sincerely

Research Ethics Office, Research and Enterprise
Massey University, Private Bag 11 222, Palmerston North, 4442, New Zealand **T** 06 350 5573; 06 350 5575 **F** 06 355 7973
E humanethics@massey.ac.nz **W** http://humanethics.massey.ac.nz

Human Ethics Low Risk notification

Professor Craig Johnson
Chair. Human Ethics Chairs' Committee and Director (Research Ethics)

Research Ethics Office, Research and Enterprise
Massey University, Private Bag 11 222, Palmerston North, 4442, New Zealand **T** 06 350 5573; 06 350 5575 **F** 06 355 7973
E humanethics@massey.ac.nz **W** http://humanethics.massey.ac.nz

Appendix J

Survey Respondent Background Information

Survey ID	School type	Overall teaching experience (years)	Experience with learners who have CCN (years)	Number of learners who have CCN worked with	Education related qualifications	Interview ID
1	Primary School	6	4	20	Bachelor of Arts, Master of Teaching	
2	Primary School Specialist School	25	10	15+	Dip Teach, B.Ed	
3	Primary School Secondary School	28	10	2	Dip of Teaching 1990.	
4	Primary School	15	8	5	BA Psychology, PGCE Primary teaching, Masters in educational psychology	ST2
5	Primary School	19	4	4	GradCert TEAL, M.Ed, PGDipEd, BEd, dipTch	
6	Primary School	26	5	4	B'Ed hons UK, C.TEFLA UK, NPQH UK	ST3
7	Primary School	12	3	2 directly. More indirectly through our base school.	Graduate Diploma in Teaching (Primary), Currently studying Post Grad Dip in Specialist Teaching: Complex Educational Needs.	ST1
8	Special school	25	12	100	Diploma of Teaching Kindergarten Batchelor of Arts English/History	
9	Intermediate School Middle School	2.5	2.5	19	B.A. English Literature, M.A. Creative Writing, Graduate Diploma in Teaching (Primary)	
10	Primary School Special School	33	5 1/2	about 40+...can't remember, because this applies to every student I've taught in the last 5 1/2 years.	Teaching diploma, Bachelor of Teaching and Learning	

Survey ID	School type	Overall teaching experience (years)	Experience with learners who have CCN (years)	Number of learners who have CCN worked with	Education related qualifications	Interview ID
11	Primary School Intermediate School	25	5	15	Bachelor of Teaching	
12	Primary School	6	2	5	Postgraduate Diploma in Primary and Secondary, Bachelor Applied Science	
13	Primary School Intermediate School	25	23	over 100	Teaching degree, Post Grad in Learners with Barriers to Learning and Development	
14	Primary School	20	16	Approx 50 or more	PGCE Art and Design (Secondary) Diploma in Teaching Sstudents with Profound and Multiple Learning Difficulties	ST4
15	Primary School	37	3	15	Dip Teach	
16	Primary School Intermediate School Secondary School	23	23	dozens	Higher Diploma in Education (Honours degree equivalent), Post graduate Certificate in Learning Difficulties and Challenging Behaviour	
17	Primary School	15 +	10 +	very difficult to ascertain - 30+?	Bachelor of Teaching and Learning from Canterbury University	
18	Primary School	23	22	over 50?	BSC Hons Earth Science, PGCE Secondary, PGDipSpecial Education (Multi-Sensory Impairments), Masters in Specialist Teaching (Blind and Low Vision)	
19	Primary School Intermediate School	5	10	50+	Bachelor of Speech Language Therapy, Graduate Diploma Teaching and Learning (Primary)	
20	Primary School	10	3	2	Bachelor of Education	

Survey ID	School type	Overall teaching experience (years)	Experience with learners who have CCN (years)	Number of learners who have CCN worked with	Education related qualifications	Interview ID
21	Primary School Secondary School	20	10	Approx 30	Bachelor of Education (Teaching)	
22	Primary School Secondary School	25	10	10	Diploma of Teaching, Bachelor of Education	
23	Primary School	28	10	9	B.Comm - Accounting, Higher Education Diploma	
24	Primary School	27 years	2 years	7	Bachelor of science (hons) (UK), Post Graduate Certificate of Education (UK), Grad Diploma in TESSOL (NZ)	
25	Secondary School	10	1	2	Bachelor of Teaching Primary	
26	Primary School Intermediate School	20	8	5	Bachelor of Teaching & Learning	