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Students' Perspectives on Educational Acceleration

Lynn Dare, *The University of Western Ontario*

Supervisor: Nowicki, Elizabeth, *The University of Western Ontario*

A thesis submitted in partial fulfillment of the requirements for the Doctor of Philosophy degree in Education

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Abstract

This dissertation comprises three studies exploring Australian and Canadian students' perspectives on grade-based acceleration. The first study involved Australian high-ability students, ages 9 to 14, in a two-phase group concept mapping exercise. First, I interviewed participants to hear their beliefs about grade-based acceleration. From the interview transcripts, I synthesized a list of 60 student-generated factors to consider when deciding on acceleration. Next, participants who had accelerated sorted the list of factors into groups, and rated the importance of each. I applied multi-dimensional scaling (MDS) and hierarchical cluster analysis (HCA) to the sorted data, and identified six key concepts including (a) Academic Challenge, (b) Child's Thoughts About Moving Up, (c) Different Subjects, (d) New class, (e) Others' Thoughts, and (f) Social Aspects.

The second study reports another group concept mapping exploration of factors to consider when deciding on acceleration. This study involved students in inclusive grade 6, 7, and 8 classes in Ontario who participated in interviews and data structuring activities. In this two-phase study, students sorted and rated a list of 53 statements they had generated. Using MDS and HCA statistical analyses, I identified five key concepts among student-generated factors to consider when deciding on acceleration: (a) Better for the Fast Learner, (b), Concerns of Moving Up (c), Benefits for Others (d), Potential Barriers to Acceptance and (e) Uncomfortable Feelings.

In the third study, I thematically analyzed qualitative data from the interviews with Ontarian students. This study describes students' overall perspectives on grade-based acceleration, and reports student-generated strategies to support the inclusion of students who accelerate. Participants suggested a variety of strategies to encourage the

inclusion of students who accelerate and emphasized behaviours classmates could undertake to be inclusive. Findings suggest that fears about the potential for social exclusion of accelerated students may need critical, contextual re-examination.

Taken together, the findings from these studies suggest that students believe acceleration may provide benefits to students who accelerate, their classmates, and their teachers. Students emphasized individual and contextual considerations in the decision to accelerate, and generated various inclusive strategies to promote the social inclusion of students who accelerate.

Keywords: acceleration, student beliefs, student perspectives, group concept mapping, high-ability, gifted, inclusive education, inclusion strategies

Co-Authorship Statement

I, Lynn Dare, acknowledge that the three integrated manuscripts included within this thesis all resulted from collaboration with coauthors. In all three manuscripts, the primary intellectual contributions were made by the first author, who researched and designed the methodologies and methods, conducted literature reviews, sought appropriate ethical approvals, recruited all participants, collected and transcribed all data, led the analysis of all data, and led in the construction and writing of all manuscripts. The primary author was also the primary contact for the publication process.

The contribution of coauthor Dr. Elizabeth Nowicki (Chapters 2, 3, and 4) was primarily through her research supervision of the primary author, theoretical guidance, and support in the intellectual and editorial process of creating the work and preparing it for publication.

The contribution of coauthor Dr. Susen Smith (Chapter 2) was primarily through her host supervision of the primary author's research in Australia and her support in the intellectual and editorial process of preparing the manuscript for publication.

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Research participation. I'd like to extend warmest thanks to all who participated in my doctoral studies. I deeply appreciate the efforts of those who spread the word about my research, and I especially appreciate the willingness of parents of students who participated. Without parents' consent and implied trust in the research process, students' voices would remain unheard. What's more, many parents contributed their own time and efforts by participating in my studies on parents' perspectives. Due to space and scheduling constraints, parents' contributions are not included in this dissertation, but have been, or will be, added to the literature through further articles. In total, I owe a debt of gratitude to over 250 individuals (students, parents, and teachers) who participated in surveys, and interviews, and data structuring activities. Thank you.

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1. Introduction

“People learn at different rates. Some people learn like bullets!” (Mia¹, age 9)

Developing the potential of all students requires flexible approaches to learning. For students who possess exceptionally high ability and “learn like bullets” (participant Mia, age 9), accelerative interventions may help meet their educational needs.

Accelerative interventions allow students to progress through educational material at a faster rate or younger age than conventional (Pressey, 1949), and research shows positive outcomes for high-ability students who accelerate (e.g., Assouline, Colangelo, & VanTassel-Baska, 2015; Gross, 2010; Steenbergen-Hu, Makel, & Olszewski-Kubilius, 2016; Steenbergen-Hu & Moon, 2011). Students who accelerate tend to express greater engagement in school (Dare, Smith, & Nowicki, 2016; Gross, 2010; Gross, Urquhart, Doyle, Juratowitch, & Matheson, 2011), attain higher academic achievement than ability-matched non-accelerated peers (McClarty, 2015b; Steenbergen-Hu et al., 2016), and feel greater social connectivity among older classmates (Gronostaj, Werner, Bochow, & Vock, 2016; Gross et al., 2011).

Despite the research showing positive outcomes for students who accelerate, accelerative interventions are rarely used in Canada (Kanevsky, 2011). Examining this gap between evidence and practice, research suggests that educators’ beliefs about acceleration often include concerns about socio-emotional outcomes, and these concerns may act as barriers to accelerative interventions (Gallagher & Smith, 2013; Rambo & McCoach, 2012; Siegle, Wilson, & Little, 2013; Southern, Jones, & Fiscus, 1989; Wood, Portman, Cigrand, & Colangelo, 2010). However, relatively little is known about

¹Participant names have been changed

students' beliefs about acceleration, and their beliefs are particularly germane to the social aspects of acceleration. My doctoral research explores what students ages 9 to 14 believe about acceleration. Findings from this research have practical implications for decision-making about grade-based acceleration, especially in the context of inclusive education.

1.1 Research Questions

The overarching research question guiding this dissertation is, "What do students ages 9 to 14 think about grade-based acceleration?" In response, I present this dissertation in an integrated article format. The chapters are written as independent manuscripts, formatted for publication, and are presented according to the chronological sequence of events in the process of acceleration. Chapters Two and Three relate to the decision to accelerate, and Chapter Four relates to inclusion following acceleration. The following questions focus the three manuscripts more directly:

1. "What do high-ability students ages 9 to 14 think about grade-based acceleration?" and the sub-question, "What do students ages 9 to 14 who accelerated think are the most important factors to consider when deciding whether to place a high-ability student in a class with older classmates?"
2. "What do students in Grades 6, 7, and 8 think are the most important factors for parents and teachers to consider when deciding whether to place a high-ability student in a class with older classmates?" and
3. "What do students in Grade 6, 7, and 8 inclusive classes think about grade-based acceleration for high-ability students?" I also considered the following three sub-questions: "Do these students perceive differences in how quickly students

learn?” “What are these students’ perspectives on placing high-ability learners with older students?” and “What strategies generated by students in Grades 6, 7, and 8 might support the inclusion of accelerated students in inclusive classes?”

1.2 Background on Acceleration

Before describing educational acceleration, I would like to emphasize that acceleration alone may not be sufficient to meet the special educational needs of high-ability students (Gross et al., 2011). Other appropriate educational practices include differentiation (including content-based acceleration), enrichment, and ability grouping (Bennett, Dworet, & Weber, 2008). In Ontario, some school boards offer a variety of programming for high-ability students “on the quite reasonable premise that variety of program is necessary to satisfy a variety of superior abilities” (Bennett et al., 2008, p. 139). Nonetheless, the National Association for Gifted Children states that “educational acceleration is one of the cornerstones of exemplary gifted education practices, with more research supporting this intervention than any other in the literature on gifted individuals” (National Association for Gifted Children, 2004).

Each manuscript in this dissertation contains some background on acceleration, and given the integrated format, some repetition is unavoidable (My apologies to the reader!). Below I provide a brief introduction to acceleration, beginning with some key terms.

1.2.1 Context for terms. The National Association for Gifted Children (2004) defines educational *acceleration* as “allowing a student to move through traditional educational organizations more rapidly, based on readiness and motivation” (para. 2). This description builds on Pressey’s (1949) earlier definition by highlighting the needs of

individuals, taking into account “whether acceleration is a good fit for an individual student and whether that student is motivated to learn at a faster pace” (Dare & Nowicki, 2015a, p. 249).

Throughout this dissertation, I use the term *high-ability* to describe students who have the potential for high academic achievement. Rather than categorizing exceptionalism, this term focusses on academic potential (Dare & Nowicki, 2015), and is in keeping with a paradigm shift within the field of education research towards “creating and sustaining appropriate developmental niches for all individuals” (Lo & Porath, 2017, p. 343). Lo and Porath (2017) explain that the terms *more able* and *advanced* reflect current shifts in an area of research that has historically centered on “people who possess outstanding abilities” (p. 345); earlier terms included *genius* and *prodigious*, as well as the more recent (and still often heard) term *gifted*. When describing research articles, I use the term *gifted* to retain clarity when referring to the authors’ original expressions. In conversations with student participants, I used the term *fast learner* to refer to high-ability students. This wording was drawn from earlier research with Canadian students in grades 4 and 5, which reported students’ perspectives that “some people learn faster than others” (Nowicki, Brown, & Stepien, 2014, p. 77).

In the section below on potential candidates for acceleration, I use the word *gifted* to highlight different views. Although the term is associated with an earlier paradigm of identification (Lo & Porath, 2017), labels such as *gifted* are still sometimes used to describe categories of exceptionalism (Bees, 2009). In Ontario, the term *gifted* is used to indicate students who have an “unusually advanced degree of general intellectual ability that

requires differentiated learning experiences of a depth and breadth beyond those normally provided” (Ontario Ministry of Education, 2001, p. 20).

1.2.2 Potential candidates for acceleration. Although acceleration may be appropriate for students formally identified as gifted, consideration for acceleration should be independent from gifted identification (Colangelo et al., 2010). For example, a student who has demonstrated ability in one subject may be a suitable candidate for acceleration in his or her area of strength even if s/he does not meet overall criteria for formal identification as gifted. Similarly, twice-exceptional students, that is students who have co-existing high-ability and learning difficulties (Dare & Nowicki, 2015b), may be ideal candidates for, accelerative interventions in their areas of strength (Bees, 2009; Colangelo et al., 2010). Given the diversity among students who may be suitable candidates for, and could benefit from acceleration, I situate my interests within research on acceleration as an option for all high-ability students.

1.2.3 Rationale for acceleration. In general, high-ability students learn new material faster than their typically developing peers (Feldhusen, 1982; Kanevsky & Clelland, 2013; Winzer, 2002). They often have a pre-existing grasp of age-based curricula (Peters, Rambo-Hernandez, Makel, Matthews, & Plucker, 2017) and may be bored in same-age classes (Stanley, 2000). Picture five-year-old Sidney, a high-ability student who taught himself to read in kindergarten. By Grade 1 he was reading at a Grade 5 level. Now imagine the reading materials that are in a typical Grade 1 classroom. You will have a sense of the challenges that Sidney and his teachers faced throughout elementary school as they tried to meet Sidney’s needs.

Researchers have framed meeting the needs of high-ability students' through accelerative interventions in different ways. For example, Lubinski and Benbow (2000) described acceleration as appropriate developmental placement, and McConnaha (1997) argued that acceleration is developmentally appropriate teaching practice. Other researchers have referred to Vygotsky's (1978) zone of proximal development to illustrate the need for accelerative interventions (e.g., Gallagher & Smith, 2013; Gronostaj et al., 2016; Kanevsky & Geake, 2004). Ultimately, if there is a good fit between a student and their progress through educational materials, that student is more likely to experience positive outcomes. Kanevsky and Clelland (2013) paint this picture of what can happen when the fit is not good: "The child who finishes early the assignment he or she could have done several years ago, who finds the teacher's careful presentations obvious and elementary, is forced to waste precious time and to find some means to adapt to the classroom scene. Such adaptations are not likely to be positive ones" (p. 233).

1.2.4 Categories of accelerative interventions. Many different types of acceleration allow students to move through curriculum based on readiness and motivation (see Southern & Jones, 2015 for a complete list). These interventions tend to fall into two over-arching categories: (a) *grade-based acceleration*, when a student moves into a class with older classmates, and (b) *content-based acceleration*, when a student receives educational materials at a faster pace while remaining in class with classmates of the same chronological age (Kanevsky, 2011). In my dissertation, I focussed on students' perspectives on grade-based acceleration. Depending on how it is implemented, grade-based acceleration may be more salient, or readily noticeable to

others, than content-based, and this salience may raise concerns among educators about possible social issues (Southern & Jones, 2015). Across Canada, grade-based forms of acceleration are less often practiced or permitted than content-based based forms, possibly because of the perceived relative salience (Kanevsky, 2011).

1.2.5 Effects of acceleration. Researchers have gathered evidence on the effects of educational acceleration for over a century (Steenbergen-Hu, Makel, & Olszewski-Kubilius, 2016). In their position paper, the Association for Bright Children of Ontario (2015) describe the research on acceleration as “substantial and compelling,” and report that “empirical evidence demonstrates that accelerated high-ability students make significant academic gains and may also experience a better match to their personal social and emotional maturity” (para. 1).

In a comprehensive review of the research on acceleration, Kulik (2004) examined 25 separate studies with quantitative data comparing accelerated and non-accelerated students of similar ability. Eleven of these studies had same age comparison groups, fourteen had older comparison groups. In studies with same-age comparison groups, the accelerated group consistently out-performed the comparison group (similar ability, non-accelerated) in measures of achievement. In studies with older control groups, there was a mix of positive and negative effects for academic achievement, although most of the effect sizes were small.

In addition to generally positive influences on academic achievement, acceleration has been show to have generally small positive or no effect on social-emotional measures (Hoogeveen, van Hell, & Verhoeven, 2009; Kulik, 2004; Neihart, 2007; Rogers, 2007, 2015; Steenbergen-Hu and Moon, 2011). For example, in their meta-

analysis of 38 studies on acceleration conducted between 1984 and 2008, Steenbergen-Hu and Moon (2011) compared accelerated to non-accelerated same-age peers and found a statistically significant positive effect on measures of academic achievement ($g = 0.396$) and a small, positive effect on social-emotional measures (combined effect size $g = 0.141$). Some researchers contend that even when social and emotional measures demonstrate small positive or no effects following acceleration, such findings contradict beliefs that socio-emotional outcomes may be negative (Assouline et al., 2015).

On the other hand, some students who accelerate do not experience positive outcomes overall, and such cases emphasize the importance of careful decision-making. In a review of the socio-affective impact of acceleration, Neihart (2007) identified benefits of acceleration which included satisfying social relationships, positive self-esteem and self-concept, satisfaction with the choice to accelerate, and higher educational aspirations. However, Neihart (2007) cautions that in a few cases acceleration may not work out and “there are documented cases of individual accelerated students having significant adjustment problems” (p. 333). Moreover, for some populations of high-ability students, including high-ability students who attend schools as minority students or who are from economically vulnerable backgrounds, there is insufficient evidence on the outcomes of accelerative interventions to draw overall conclusions (Cross, Andersen, & Mammadov, 2015).

1.2.6 Barriers to acceleration. Despite research showing that students who accelerate experience measurable benefits, the practice of educational acceleration is often misunderstood and underutilised (Kanevsky, 2010). In practice, the implementation of acceleration is largely dependent on educators and their attitudes

towards accelerative interventions (Dare, Dare, & Nowicki, 2017); educators identify candidates for acceleration, contribute to placement decisions, and are responsible for delivering differentiated programming within inclusive settings. What's more, students who accelerate need teachers who understand their unique learning needs (Culross, Jolly, & Winkler, 2013; Dare et al., 2016; Gross et al., 2011). Due to the central role that educators play, some researchers have examined educators' attitudes towards acceleration, often using survey methodology (Bain, Bliss, Choate, & Brown, 2007; McCoach & Siegle, 2007; Rambo & McCoach, 2012; Southern et al., 1989; Wood et al., 2010). For example, Southern et al. (1989) surveyed 554 teachers, principals, school psychologists, and coordinators of gifted education about their attitudes towards early entrance and grade skipping. More than three-quarters of respondents (78%) rated the statement "accelerants will miss important social interactions" as their greatest concern (Southern et al., 1989, p. 33). Bain et al. (2007) found similar results in a survey of 285 pre-service teachers; more than four out of five pre-service teachers (82%) agreed that skipping grades would "most likely have a negative effect on [students'] socialization skills" (p. 465). And in a survey of 262 teachers, McCoach and Seigle (2007) found 24% of respondents had negative attitudes towards grade-skipping, 67% were "ambivalent," and only 10% had positive attitudes towards grade-skipping (p. 251).

Overall, the research suggests such negative beliefs may restrict access to accelerative interventions (Bennett et al., 2008). That is, opportunities to accelerate may be blocked by misconceptions about acceleration and overly cautious approaches to decision-making about accelerative placements, particularly if educators have concerns about social adjustment. Nonetheless, some educators do support and implement

accelerative interventions, recognising that high-ability students may struggle to fit in with same-age classmates (Gross et al., 2011). Remember Sidney? After about six weeks in Grade 1, his teacher called home to tell his mom, “I don’t know what to do with Sidney, he really should be in the Grade 2 class.”

1.4 The Importance of Student Voice

In addition to examining educators’ beliefs about acceleration, some research reports students’ experiences following acceleration (e.g., Gronostaj et al., 2016; Gross et al., 2011; Gross, 2006; Hoogeveen et al., 2009; Muratori, Colangelo, & Assouline, 2003). In general, these studies report positive experiences, adding support to the literature recommending acceleration for high-ability students. However, at the time of writing, I am not aware of any research that has sought students’ views on factors to consider in the decision to accelerate. Sutherland and Katz (2005) noted that “while it is not unusual for the experiences and views of teachers to be represented in scholarly research ... less evident are studies in which the views of students are solicited” (p. 258). Yet, students’ views are critical in educational planning and programming where “the central area of focus is the quality of the students’ experience” (Prior, 2011, p. 121). Indeed, Gordon (2010) argued that hearing and integrating students’ perspectives is “a valuable way of moving Canadian inclusive education practices forward” (p. 1). In other words, to really understand acceleration in school environments, we need to know students’ perspectives as well as educators’. My doctoral research adds to our understanding of students’ perspectives on grade-based acceleration and adds the voices of students who have not been heard before to the literature.

1.5 Theoretical Perspective

This research is informed by two theoretical perspectives: Vygotsky's (1978) concept of optimal learning in the zone of proximal development (ZPD) and Ajzen's (1985) theory of planned behaviour.

1.5.1 Vygotsky's perspective and the Zone of Proximal Development. Russian psychologist Lev Vygotsky (1896-1934) wrote extensively about development, learning, and special education (Woolfolk, Winne, & Perry, 2006). His theorising on optimal learning in the zone of proximal development (ZPD) is particularly germane to using accelerative interventions to support the special learning needs of high-ability students (Kanevsky & Geake, 2004). In fact, his view that "learning should be matched in some manner with the child's developmental level" (Vygotsky, 1978, p. 85) is an underlying principle in the rationale for accelerative interventions for high-ability students.

Vygotsky's perspective was excluded from Western conceptions of developmental psychology until the last quarter of the twentieth century, in part because his writings were banned for many years in his homeland (Woolfolk et al., 2006). However, his theories on learning and development have become increasingly influential in recent years (Peters et al., 2017). Vygotsky embraced a socio-cultural view, considering individual learning and development in relation to social interactions and cultural contexts. His interest in "good learning" (Vygotsky, 1978, p. 89) centred on cognitive functions that "are on the verge of developing, but need support or scaffolding before the child will be able to use them independently" (Kanevsky & Geake, 2004, p. 183). The term *scaffolding*, introduced by Wood, Bruner, and Ross (1976), describes a

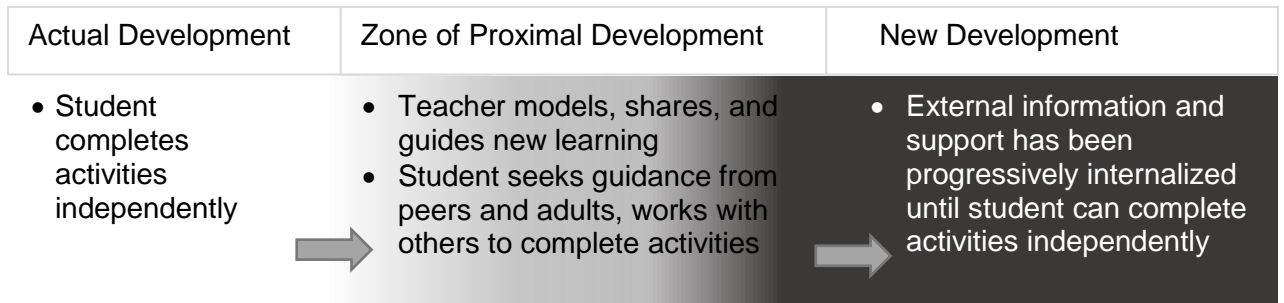
process of tutoring learners through the acquisition of new skills by controlling and directing the learners' problem-solving efforts.

To help understand the complex, interconnected relationships involved in individual learning, Vygotsky proposed a construct called the *zone of proximal development* (Vygotsky, 1978). The zone of proximal development provides a framework for understanding interactions between individual development, optimal learning, and the learning environment. Vygotsky theorized that students need to work beyond what they already know (actual development) to experience new learning. Learning is optimized in the zone of proximal development—where students work on activities they can complete with assistance or support from adults or more capable peers. Learning and development progress as the student increasingly internalizes the external assistance, until the student can complete the newly learned activity independently. In a Vygotskian view, when a student achieves independent mastery of an activity, the student has transitioned from one level of actual development through the zone of proximal development, to another, new level of actual development. Figure 1 summarises Vygotsky's perspective on learning in the zone of proximal development.

In addition to describing individual learning in the optimal zone, Vygotsky emphasized that individual learning happens through social interaction with others (adults and more capable peers) who scaffold students' learning within the optimal zone (Kanevsky & Geake, 2004). Because learning happens in social contexts, a critical factor in Vygotsky's socio-cultural perspective is that learning and development "cannot be understood apart from the settings" (Woolfolk et al., 2006, p. 43). Indeed, Vygotsky (1978) theorised that "human learning presupposes a specific social nature and a process

by which children grow into the intellectual life of those around them” (p. 88). Through social interactions, individuals construct their understanding of the world and develop their thought processes (Woolfolk et al., 2006). In the zone of proximal development, the “reciprocity of contributions” by the student and adults or more capable peers is critical to learning and development (Kanevsky, 1995, p. 187). This recognition of contextual social interactions is particularly relevant to my study of students’ beliefs about acceleration. We need to hear students’ perspectives on acceleration to understand whether students who accelerate would be accepted in the social interactions, and co-constructed learning, of older classmates.

Applied to this dissertation, Vygotsky’s socio-cultural perspective provides both a rationale for acceleration, and a frame of reference for understanding the importance of students’ beliefs about grade-based acceleration. In chapter two, Vygotsky’s perspective aided in my interpretation of high-ability students’ advice on making decisions about acceleration. Applied to chapters three and four, Vygotsky’s socio-cultural perspective reinforces the importance of examining other students’ beliefs about grade-based acceleration, as those beliefs may influence the learning environment, and social inclusion, of students’ who accelerate. To illustrate the importance of understanding students’ beliefs as they relate to intended behaviours, I rely on Ajzen’s (1985) theory of planned behaviour, described below.



*Figure 1-1:*Diagram showing how students progress through the Zone of Proximal Development.

1.5.2 Ajzen's theory of planned behaviour. Ajzen's (1985) theory illustrates the links between beliefs, attitudes, and behaviours, and can help explain human behaviour in particular contexts. According to theory of planned behaviour, three types of beliefs—behavioural, normative, and control—influence intentions which in turn influence behaviours (see Figure 2). The following three factors influence an individual's intentions: (a) the individual's attitude towards the behaviour, (b) the subjective norm, and (c) the individual's perceived behavioural control (Ajzen, 1985, 1991). In turn, each factor is influenced by the individual's beliefs as outlined below (see also Figure 2):

- *Behavioural beliefs* are based on the subjective probability that an outcome will occur as a result of the behaviour. Behavioural beliefs influence a person's attitudes towards the behaviour.
- *Normative beliefs* are the individual's beliefs about whether others think the behaviour should or should not be performed. Normative beliefs influence the perceived degree of social pressure to engage or not engage in a behaviour.
- *Control beliefs* reflect the individual's perceptions of factors that help or hinder specific behaviour. Control beliefs influence a person's perceived ability to perform an action.

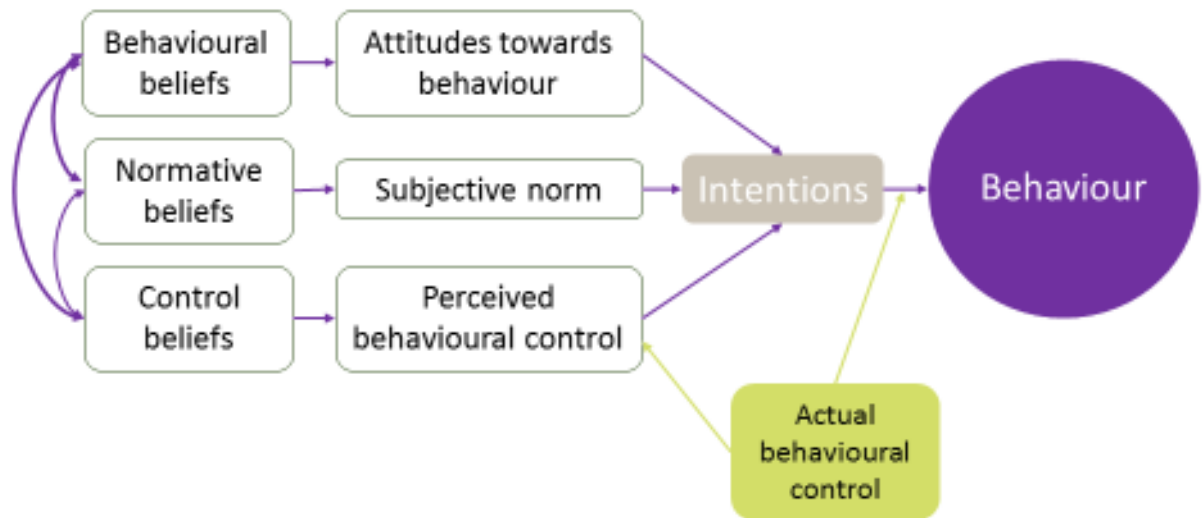


Figure 1-2: Diagram illustrating the theory of planned behaviour (Ajzen, 1985).

Many researchers have used the theory of planned behaviour to explain attitudes and actions across various disciplines, including education (see Armitage & Conner, 2001). For example, researchers have used this theory to investigate teachers' attitudes towards the inclusion of students with social, emotional, and behavioural difficulties (MacFarlane & Woolfson, 2013); to assess student teachers' attitudes towards students with dyslexia (Gwernan-Jones & Burden, 2010); to predict teachers' intentions to implement school-based assessment (Yan, 2014); to predict educators' teaching practices from their attitudes and knowledge of inclusive education (Kuyini & Desai, 2007); and to investigate students' attitudes towards peers with Autism Spectrum Disorder (Freitag & Dunsmuir, 2015). In a meta-analytic review of 185 studies, Armitage and Conner (2001) found support for the theory's efficacy; theory of planned behaviour accounted for 39% of variance in intention and 27% of variance in behaviour.

As the examples above indicate, theory of planned behaviour is well-established in the field of education and has been used as a framework for understanding educators' attitudes, intentions, and behaviours. Sidney's story illustrates how theory of planned behaviour might apply at an individual level. Throughout elementary school, Sidney's academic achievement exceeded that of his same-age classmates. He experienced a variety of placements in the search for a good fit. He began his school career a regular class with enrichment; in the middle years (grades 4-6) he was placed in a segregated class with enrichment; in the middle years (grades 4-6) he was placed in a segregated class for gifted students. In grade 7, he engaged in single subject acceleration by completing an online grade 9 math credit. While he was in grade 7, his parents asked if Sidney could grade-skip to grade 8. The elementary school principal said no. In September of Sidney's grade 8 year, the local high school principal contacted the family

and offered Sidney early entrance to high school. Two different principals made two different decisions about acceleration. In the absence of guiding policies—few district school boards in Canada have acceleration policies or guidelines (Kanevsky & Clelland, 2013)—Sidney's example illustrates how educators (including principals and teachers) may rely solely on their attitudes, beliefs, and perceived control when making decisions about accelerative interventions.

In this dissertation, Ajzen's (1985) model helps justify my examination of students' beliefs about grade-based acceleration. Theory of planned behaviour illustrates the links between beliefs and behaviours; I suggest that understanding students' beliefs about grade-based acceleration lends some insight into how students in inclusive classes might behave towards a younger classmate who accelerates.

1.6 Data Collection Journey

The reader will note that the manuscripts in this dissertation describe research involving students on opposite sides of the world. An exciting part of my data collection journey was the opportunity to conduct some research in Australia. With the support of my supervisor, funding through an Australian Endeavour Research Fellowship, and sponsorship from my Australian host at the Gifted Education Research, Resource, and Information Centre at the University of New South Wales, I gathered data in Australia for four months during my second year of doctoral studies. In the first manuscript in this dissertation, I report on data gathered from Australian high-ability students, many of whom had experienced acceleration. From this population, I heard advice on making decisions about grade-based acceleration from students who had direct experience in acceleration (see Chapter Two). Upon returning to Canada, with the support of a local

district school board, school principal, teachers, and parents, Canadian students in inclusive classes in Ontario shared their thoughts on what it might be like to have younger students move into classes with older classmates. From this group of participants, I heard advice on making decisions about acceleration from the perspective of potential classmates in inclusive classes (see Chapter Three). I also heard their ideas on strategies that might be useful in fostering an inclusive environment for students who accelerate (see Chapter Four).

1.7 Summary

Taken together, the articles presented in this dissertation add students' voice to the literature on making decisions about grade-based acceleration. In the first article, *On Deciding to Accelerate: Conceptualized by Students Who Accelerated*, I explored Australian high-ability students' beliefs about important considerations in grade-based acceleration using group concept mapping methodology. In the second article, *On Deciding to Accelerate: Conceptualized by Students in Inclusive Classes*, I applied group concept mapping to investigate Canadian students' beliefs about acceleration in inclusive education. In the third article, *Strategies for Inclusion: Learning from Students' Perspectives on Acceleration in Inclusive Education*, I describe a thematic analysis of Canadian elementary school students' perspectives on grade-based acceleration and strategies to promote the inclusion of students who accelerate. Setting aside your own beliefs about acceleration, read on to learn what 26 Australian and 26 Canadian students had to say...

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2. On Deciding to Accelerate: Conceptualized by Students Who Accelerated

To nurture a love of learning among their students, educators aim to challenge and engage every student, across all abilities and needs. For some high-ability students, this nurturing may require teaching to a higher level than specified by age-based curriculum. Known as *acceleration*, the practice of teaching to a higher than age-based level has been shown to support positive academic, emotional, and social outcomes for high-ability students (e.g., Assouline et al., 2015; Dare et al., 2016; Steenbergen-Hu et al., 2016; Steenbergen-Hu & Moon, 2011). Despite this evidence, some educators express hesitancy towards accelerative interventions, often citing concerns about social implications. Such concerns may create barriers to the practice of acceleration (Colangelo et al., 2004b; Gallagher & Smith, 2013).

To better understand whether educators' concerns about acceleration are relevant in today's classrooms, we asked high-ability students to share their thoughts on the topic. Then, we engaged high-ability students who had accelerated in structuring the data through group concept mapping activities (Trochim, 1989). Our research was guided by the question, "What do high-ability students think about grade-based acceleration?" We also posed the following sub-question: "What do students who accelerated think are the most important factors to consider when deciding whether to place a high-ability student in a class with older classmates?" That is, we asked students who had experienced grade-based acceleration for their advice on deciding to accelerate.

2.1 Terminology

We use the term *high-ability* to refer to students who have the ability to reach the highest levels of academic achievement in school. In the context of acceleration, this term

focuses on students' potential (Dare & Nowicki, 2015) and deemphasizes definitions such as gifted or talented which rely on discrete categories of exceptionality (Katz et al., 2012). When speaking with students in our study, we used the child-friendly term "fast learner" to refer to high-ability students. Some students used the term "gifted", and in those instances, we mirrored the term they used during interviews. With respect to person-first and identity-first terminology, we acknowledge some readers prefer person-first language (e.g., student who accelerated), while others identify more with identity-first language (e.g., high-ability student). Out of respect for both perspectives, and in keeping with Collier (2012) who opined, "the sentiment expressed in communication is far more important than the linguistic circumlocutions" (p. 1978), we use person- and identity-first terms interchangeably throughout.

There are many types of accelerative interventions (see Southern & Jones, 2015, for a complete description). In general, different forms of acceleration fall into two overarching categories: content- and grade-based. *Content-based acceleration* involves giving a student higher level materials while they remain with same-age classmates. *Grade-based acceleration* involves moving a younger student into classes with older classmates. In the current study, we focused on grade-based acceleration as it is more likely to raise concerns about social adjustment (Southern & Jones, 2015).

2.2 Background

2.2.1 Acceleration. Pressey's (1949) classic definition described acceleration as "progress through educational programs either at rates faster than, or at ages younger than conventional" (p. 2). The National Association for Gifted Children (2004) introduced a refined definition, taking individual fit and motivation into account, describing

acceleration as “allowing a student to move through traditional educational organizations more rapidly, based on readiness and motivation” (para. 2). In other words, acceleration comprises student-centered interventions which seek an optimal match between existing knowledge, learning potential, and educational environment.

Research has shown that many high-ability students have a pre-existing knowledge of age-based curricula at the beginning of the school year (Peters, Rambo-Hernandez, Makel, Matthews, & Plucker, 2017). Consequently, some students may need to reach beyond age-based curricula to experience new learning (Stanley, 2000). To describe how new learning happens, developmental psychologist Lev Vygotsky (1978) proposed a construct called the zone of proximal development (ZPD). This zone defines an individual's optimal learning space as the distance between what the student already knows, as demonstrated through independent problem-solving, and what they can achieve with support from adults or more capable peers. We can gauge what a high-ability student already knows by examining scores on standardized achievement tests. Such tests are completed independently, and therefore reveal students' existing level of knowledge and skills, at the base of their ZPD (Kanevsky & Geake, 2004). In a Vygotskian view, new learning happens beyond this level.

In addition to describing how new learning builds on existing knowledge and skills, Vygotsky emphasized connections between thinking and feeling in new learning. He regarded intellect and affect as closely connected to relationships in the optimal learning zone (Kanevsky, 2011; Kanevsky & Geake, 2004). This interdependence suggests that new learning relies on relationships in the learning environment as well as the material presented. Students learn best in an environment where adults and more

competent peers support and scaffold their learning (Lo & Porath, 2017). Applying Vygotsky's theory to acceleration, accelerative interventions allow high-ability students to learn new material, through adult and peer interaction, in their zones of proximal development.

2.2.2 Deciding to accelerate. The decision to accelerate must take into account a complex interplay of factors. Although a large body of research shows that acceleration most often results in positive outcomes, some individuals have perceived challenging socio-emotional consequences following whole-grade acceleration (Neihart, 2007). To identify those students most likely to benefit from accelerative interventions, educators and parents must take an evidence-based, well-informed approach to decision-making. Recommendations in Feldhusen, Proctor, and Black's (1986) guidelines for grade advancement, and more recently, the Iowa Acceleration Scale (Assouline, Colangelo, Lupkowski-Shoplik, Lipscomb, & Forstadt, 2009), can guide decisions about acceleration on a case-by-case basis.

Feldhusen et al. (1986) set out 12 guidelines to encourage a systematic approach to making decisions about acceleration. Their guidelines cover three general areas: (a) screening candidates for acceleration, (b) engaging with adults involved in the process, and (c) supporting students (Culross et al., 2013). Similarly, the Iowa Acceleration Scale facilitates collaborative discussion about whole-grade acceleration for candidates in grades K-8. The scale comprises scored items based on the research and clinical experiences of staff at the Connie Belin & Jacqueline N. Blank International Center for Gifted Education and Talent Development, in Iowa. Combining information from a variety of sources, the scale includes assessments of ability, aptitude, achievement,

readiness, and other potentially influencing factors. A child study team, including educators and parents, completes the form together, resulting in a scaled score indicating whether whole-grade acceleration is recommended and whether other interventions should be considered.

To further refine and inform discussions about grade-based acceleration, our study adds high-ability students' voice to the literature on the decision to accelerate, and identifies factors that students who accelerated believed to be most important.

2.2.3 Group concept mapping methodology. We used a unique methodology, group concept mapping, to investigate high-ability students' beliefs about grade-based acceleration. Group concept mapping is a participatory approach to collecting qualitative data which relies on participants' interpretations to structure the data (Kane & Trochim, 2007). This approach applies rigorous statistical analyses to qualitative data and has been widely used in exploratory studies (e.g. Dare & Nowicki, 2015; Daughtry & Kunkel, 1993) and education research (e.g., Kunkel, Pittman, Hildebrand, & Walling, 1994; Nowicki, Brown, & Stepien, 2014a).

Group concept mapping is a multi-step process in which participants provide responses to an open-ended focus question, then organize the responses by sorting them into groups and rating them on a dimension of interest. A strength of this approach is that the researcher does not rely upon his or her own interpretation of the data (Nowicki, Brown, & Stepien, 2014b). The researcher facilitates data generation and then prepares the generated data by removing repetitions and editing for clarity. Participants interpret and structure the data through sorting and rating activities. Finally, the researcher applies statistical analyses to the sorted data to produce charts showing how the group as a whole

structured the data (Trochim, 1989). Through these steps, group concept mapping yields a structured conceptualization represented through statistically-derived maps and charts.

2.3 Method

2.3.1 Participants. Our study included a total of 26 high-ability children from across Australia. In phase one data generation, our study involved high-ability students ages 9 to 14 years (M age = 10.2, SD = 1.42), 13 males and 13 females. The sample included 17 students who accelerated and nine high-ability students who had not accelerated. Participants resided in five of the eight Australian states and territories, namely New South Wales (n = 17), Queensland (n = 4), South Australia (n = 3), Victoria (n = 1) and Australian Capital Territory (n = 1).

In phase two, the 17 students who accelerated completed data structuring activities, sorting and rating student-generated considerations in the decision to accelerate. By involving this sub-sample of students in phase two, we relied upon the expertise of students who had experienced grade-based acceleration to sort and rate the data. The phase two sample included 7 males and 10 females (M age = 10.2 years, SD = 1.59).

2.3.2 Measures. In phase one, we conducted interviews to collect data in response to the focus question, "What are some things for parents and teachers to think about when deciding whether a fast learner goes into a class with older students?"

In phase two, participants structured the data, by sorting the generated items into meaningful groups. In addition, participants rated the items according to the importance of each item when deciding whether a fast learner moves up into a class with older students, using the following five-point rating scale: (1) not at all important, (2) a little bit

important, (3) quite a bit important, (4) very important, and (5) extremely important. We used a unipolar rating scale to reflect degree of importance, and gave qualitative labels to each of the points to help clarify the meaning attached to each numerical value (Krosnick & Fabrigar, 1997).

2.3.3 Ethics approval and consent. Ethics approval for this study was obtained from the researchers' university ethics review boards. During recruitment for the study, parents who contacted the first author to express interest in the study received a letter of information about the study by email. Parental consent was required for all participants. At the beginning of the interviews, all participants were briefed on informed consent and gave their verbal consent to participate.

2.3.4 Recruitment procedure. Our recruitment began with e-News notifications across multiple organizations to reach a broad range of potential participants. We contacted various community organizations connected with the Australian Association for the Education of the Gifted and Talented (AAEGT) to let them know about the study. Subsequently, notices about the study were distributed by the Gifted Education Resource, Research and Information Centre, Australian Mensa, Gifted Families Support Group (GFSG), Gifted & Talented Children's Association of South Australia (GTCASA), Queensland Association for Gifted and Talented Children (QAGTC), and GLD Australia. Interested parents were asked to contact the first author by email for detailed information about the study. Through this recruitment procedure, 31 parents of potential participants contacted the first author and a total of 26 high-ability students agreed to participate.

2.4 Data Preparation

2.4.1 Item generation. In the first study phase, participants took part in face-to-face ($n = 7$) and virtual ($n = 19$) interviews. Interviews were conducted by the first author. She began with a few warm up questions, then asked participants to describe some things that teachers and parents should think about when deciding whether fast learners be grouped in classes with older students. All interviews were recorded and transcribed.

2.4.2 Item preparation. To prepare the data for participants to structure in the second phase of the study, we followed data preparation procedures detailed by Kane and Trochim (2007). The first author read and re-read the transcripts to identify responses to the focus question, and extracted a list of 99 raw responses. Next, the authors independently reviewed the list of extracted responses to remove repetitions. We compared the independently reviewed lists to reach consensus on a list of unique items which were subsequently edited for clarity. Through this process, we prepared a set of 60 items for participants to structure in phase two.

2.4.3 Item structuring. In phase two, we asked participants to structure the data by sorting and rating the prepared list of items. We provided packages containing instructions and prepared materials to each participant, by mail for those participating through virtual interviews ($n = 14$), and in person for those participating in face-to-face interviews ($n = 3$). The prepared materials included a set of cards with one generated item printed on each, and a printed list of the items for participants to indicate importance ratings.

In the phase two interviews, participants were instructed to sort the items into groups in a way that made sense to them, making as many groups as they liked, but without creating a group of leftover, or miscellaneous, items. Participants also thought of a name for each of the groups they made. We provided sticky notes and a pen so they could jot down their thoughts. Finally, participants rated each of the items according to importance. In three instances, interviewees did not complete the rating activity within the time we had scheduled for the interview; we gave them the option of completing the rating sheets later and mailing their responses to us. In total, 15 participants completed the item ratings. One participant, who received the materials by mail, completed the sorting and rating exercises independently online, by logging into an online website and following the same instructions as provided in the interviews.

2.5 Results

2.5.1 Multi-dimensional scaling. We used Concept System® Global software to conduct the analyses and create charts of the structured data (Concept Systems Inc., 2014). In the first analysis step, we used two-dimensional Multi-Dimensional Scaling (MDS) to create a data point map illustrating the relationships among sorted items. In the data point map, each data point represents one item. The distance between points indicates how often items were sorted together. Points that are plotted closer together were more often sorted together; points that are further apart were less often sorted together. To give an example, item number 3 (“What the school feels about moving the child up a class”) and item number 5 (“Whether the teacher is OK with the child moving up”) were sorted together by 16 out of 17 participants. Accordingly, MDS analysis placed these two items in close proximity on the data point map.

We examined a statistic called Kruskal's stress value to verify how well the data point map fitted the way the data was sorted by participants (Petrucci & Quinlan, 2007). In group concept mapping studies, a Kruskal's stress value under 0.365 is considered within the normal range (Kane & Trochim, 2007). Our data point map had a Kruskal's stress value of 0.2479, indicating the map was a good fit to the sorted data.

2.5.2 Hierarchical cluster analysis. To make sense of the key concepts within the sorted data, we analyzed the data point map using hierarchical cluster analysis (HCA). HCA examines geometrical distances between data points and produces a range of possible cluster solutions. In HCA, data points plotted closer together form statistically derived clusters. To find the best-fitting cluster model from the range of possible solutions, we examined statistical bridging values along with the conceptual fit of items within clusters. Bridging values range from 0 to 1, where 0 indicates an item that best represents nearby content in the map and can be considered an *anchor* in that area; statements that are difficult to sort will have bridging values nearer to 1 and will bridge different concepts across the map (Jackson & Trochim, 2002). We examined a range of three to ten cluster solutions and determined a six-cluster model provided the best illustration of the way participants sorted the data. Figure 1 shows the six-cluster concept map. Clusters ranged in size from 6 to 18 items and had average bridging values from 0.08 to 0.68. Next, we assigned cluster labels. Algorithms in the Concept Systems® software assist in the labelling process by providing lists of 10 best-matching labels for each cluster, based on centroid computations of participants' labels. We selected cluster labels by closely examining the list of best-matching participants labels and the contents of the clusters.

The six-cluster concept map shows how participants who had accelerated conceptualized beliefs about grade-based acceleration (see Figure 1). The key concepts included (a) Academic Challenge (M bridging value = 0.12, SD = 0.06), (b) Child's Thoughts About Moving Up (M bridging value = 0.35, SD = 0.07), (c) Different Subjects (M bridging value = 0.45, SD = 0.12), (d) New Class (M bridging value = 0.31, SD = 0.04), (e) Others' Thoughts (M bridging value = 0.68, SD = 0.17), and (f) Social Aspects (M bridging value = 0.08, SD = 0.08).

2.5.3 Importance ratings. We calculated mean importance ratings for each item and cluster. Overall, mean importance ratings for the clusters range from a low of 3.60 to a high of 4.11, suggesting that all clusters held a high degree of importance. Table 1 shows the clusters, items, bridging values, and importance ratings. Below we report the results for each cluster, presented from most to least important.

Cluster One: Academic Challenge. The cluster, *Academic Challenge*, contains 15 items that were sorted together with a degree of consistency reflected in the cluster bridging value of 0.12. *Academic Challenge* received an importance rating of 4.11 (SD = 0.45), with item ratings ranging from 3.07 to 4.73. This concept comprised students' beliefs about considering the need for academic challenge in their schooling, and included the item rated as most important in the entire data set: "Is the child academically capable?" Examples of other items in this concept include "Where the child can actually reach their full potential" and "Which class is the best for learning, and for the child to learn the best and as fast as possible."

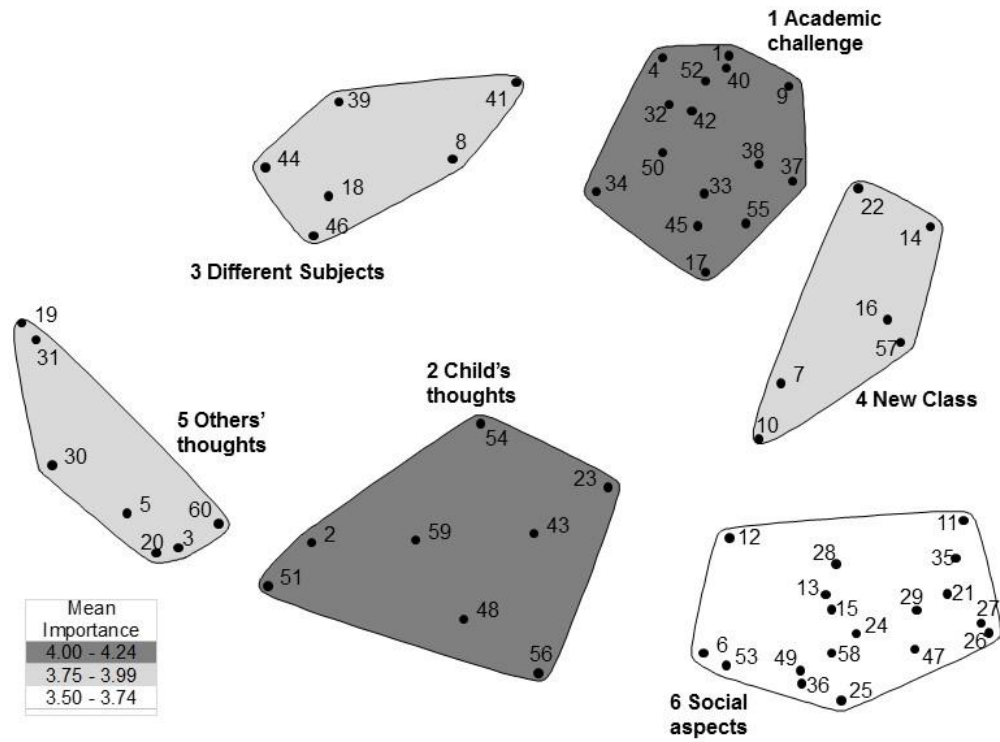


Figure 2-1: Six cluster map of high-ability students' beliefs about grade-based acceleration.

Table 2-1
Statements in Each Cluster, Statement Bridging Values, and Importance Ratings

Cluster	Bridging	<i>M</i>
Academic Challenge	0.12	4.11
1 Is the child academically capable?	0.02	4.73
52 Where the child can actually reach their full potential.	0.09	4.57
37 Which class is the best for learning, and for the child to learn the best and as fast as possible.	0.19	4.53
33 How easy or hard the child finds their current work.	0.12	4.47
38 Whether a fast learner who's not getting completely top marks might be more engaged and really do better at a higher level.	0.16	4.47
45 If the child needs a challenge.	0.17	4.33
50 Making sure that the child really needs to go up a class, rather than just wanting too.	0.14	4.27
4 Is this child going to find the work too hard in the higher class?	0.09	4.20
42 If the child actually can learn new things in the higher class because it will be harder and they might not get everything right.	0.05	4.20
9 The academic content in the higher class, because the child might need that extra content.	0.08	4.00
55 See what the curriculum in the different years are and which is most suited to the child.	0.18	4.00
40 What sort of grades (marks) is the child getting?	0.04	3.73
32 Whether the child will be missing anything important in that year.	0.10	3.67
17 Whether to give the child harder work so they don't have to go into a different year with different people.	0.22	3.43
34 If the child gets a very good education at a very young age, they get more time to spend that education helping others.	0.22	3.07
Child's Thoughts About Moving Up	0.35	4.06
23 Would the accelerated child be happier in the higher class?	0.26	4.27
54 Is the child wanting harder work?	0.32	4.27
2 Whether the child wants to move up.	0.36	4.20
59 What the child feels from an academic standpoint and a social standpoint.	0.34	4.20
51 If the parents and teachers think it's OK, the child should make the decision.	0.45	4.13
43 The child might get excited about school again.	0.26	3.93
48 The child might enjoy coming to school, because when you are bored you don't want to come.	0.45	3.73
56 Consider if you were that child, would you want to be in that class with older students?	0.35	3.73

(Table 2.1 continues)

(Table 2.1 continued)

Cluster		Bridging	<i>M</i>
Different Subjects		0.45	3.96
41	Is the child good at all topics and the current class is really not challenging for them at all?	0.25	4.53
18	If the child moves up for one subject and not another, and they also find the subject they are not moving up in easy as well, then they should be moved up in both subjects.	0.49	4.07
44	Whether the child moves across years for some things, but not everything.	0.60	4.00
8	The long-term outcomes.	0.35	3.87
46	What type of fast learner is the child? Are they a quick learner, or are they a quick learner with one good ability?	0.56	3.80
39	All subjects, because if the child is doing well in most subjects but one subject is falling behind, the child may need some coaching.	0.45	3.47
New Class		0.31	3.87
57	The child wouldn't be bored in class.	0.34	4.40
16	The child shouldn't HAVE to be bored in class because they are getting too easy work.	0.34	3.93
22	Is the child the same mental level as the children in the older class?	0.28	3.80
10	Consider the child's confidence.	0.26	3.73
14	Is the child going into a class that has children at about the same ability?	0.36	3.73
7	Whether it might be good for the child to have a little trial and see what it's like in the higher class.	0.27	3.60
Others' Thoughts		0.68	3.86
19	You need a teacher who understands the needs of fast learners.	0.82	4.53
60	Trust your feelings, not letting them be overridden by other people and their opinions.	0.54	4.27
20	What the child thinks about moving up a class, and then what the parents think, and then what the teachers think.	0.57	4.20
30	Research the expert opinion, but don't let that expert opinion become more powerful than your own.	0.77	3.87
5	Whether the teacher is OK with the child moving up.	0.57	3.60
3	What the school feels about moving the child up a class.	0.50	3.33
31	Which teacher will teach the higher level class?	1.00	3.20

(Table 2.1 continues)

(Table 2.1 continued)

Cluster	Bridging	<i>M</i>
Social Aspects	0.08	3.60
15 How the child would cope with the older children.	0.04	4.15
13 The younger child has to be OK with the fact that they'd be in with older students.	0.01	4.13
49 Whether the child is socially prepared for moving up a year.	0.02	4.13
27 If the older children would treat the younger child as one of that class, and not just as a child from the year below just working in their class.	0.09	4.00
47 Is the child going to work well with the older children?	0.03	3.87
24 If the child would be comfortable with children who may be bigger than them.	0.00	3.80
25 Each child should have at least one friend in their class.	0.05	3.80
36 If the older children aren't very nice, the younger child is probably going to be teased, but if there's some nice older children, moving to a higher class is probably a good idea.	0.01	3.80
6 Will the child be frightened of the older children?	0.14	3.73
21 If the child is being bullied in the same year or maybe they might be having friendship problems, consider whether they could start again if they move up a class.	0.06	3.73
58 The year group the child is moving into; some year groups are a lot more accepting than others.	0.05	3.67
26 The school's social system - whether the year group they are moving into is friendly.	0.10	3.53
12 If the child just wants to stay down with their friends, and keep doing the easy work, that should come into account too.	0.19	3.47
29 Whether the child would still be able to be with their friends.	0.01	3.47
35 How good the child is at making friends.	0.12	3.40
28 You don't want same-age children to feel like the fast learner is more important than them, so you don't want to give higher level work in the same class.	0.16	3.00
53 Is there a big age difference, maybe one or two years, or is it a small difference, maybe a few months that tips it over a year?	0.13	2.67
11 Making sure the child also belongs to the higher class physically.	0.29	2.60

Cluster Two: Child's Thoughts About Moving Up. The cluster, *Child's Thoughts About Moving Up* had a mean importance rating of 4.06 ($SD = 0.21$). The cluster contains eight items, with importance ratings ranging from 3.73 to 4.27 and a cluster bridging value of 0.48. Items in this cluster reflected the child's placement preferences, motivation to accelerate, and overall emotional well-being. The items "Whether the child wants to move up" and "What the child feels from an academic standpoint and a social standpoint" reflected the child's preferences and motivation. Items such as "Would the accelerated child be happier in the higher class?" "The child might enjoy coming to school, because when you are bored you don't want to come," and "The child might get excited about school again" reflected beliefs about considering the child's emotional well-being.

Cluster Three: Different Subjects. The cluster *Different Subjects* ($M = 3.96$, $SD = 0.32$) contains six items ranging in importance from 3.47 to 4.53 and a cluster bridging value of 0.37. Items in this concept reflected beliefs about considering, on a case-by-case basis, a student's achievement and aptitude in different subjects. Comments included "Is the child good at all topics and the current class is really not challenging for them at all?", "Whether the child moves across years for some things, but not everything," and "If the child moves up for one subject and not another, and they also find the subject they are not moving up in easy as well, then they should be moved up in both subjects." The possibility that a student who accelerates might require additional support in areas of comparative weakness was expressed in the belief that parents and teachers consider "all subjects, because if the child is doing well in most subjects but one subject is falling

behind, the child may need some coaching.” The item “long-term outcomes” was clustered into this concept, and related to considering the contextual, bigger picture.

Cluster Four: New Class. This six-item cluster, *New Class*, had a cluster bridging value of 0.31. The mean importance rating for this cluster was 3.87 ($SD = 0.26$), with individual items ranging in importance from 3.60 to 4.40. This concept contained items that reflected participants' beliefs about considering the environment in the new class and matching an individual's ability to his or her learning environment. Two items in this cluster suggested that acceleration might alleviate boredom: “The child shouldn't HAVE to be bored in class because they are getting too easy work” and “The child wouldn't be bored in class.” A couple of other items were framed as questions to consider in the placement decision: “Is the child going into a class that has children at about the same ability?” and “Is the child the same mental level as the children in the older class?”

Cluster Five: Others' Thoughts. Seven items clustered together into the concept, *Others' Thoughts*, with a bridging value of 0.68. Items in this cluster range in importance from 3.20 to 4.53, with a mean rating of 3.86 ($SD = 0.47$). This concept included items which related to educators' opinions, including “What the school feels about moving the child up a class” and “Whether the teacher is OK with the child moving up.” Other items in this cluster reflected beliefs about weighing the relative importance of others' opinions: “If the parents and teachers think it's OK, the child should make the decision” and “Trust your feelings, not letting them be overridden by other people and their opinions.” This concept also contained the following items that referred to considering which teacher would receive the student following acceleration: “You need a teacher who

understand the needs of fast learners” and “Which teacher will teach the higher level class?”

Cluster Six: Social Aspects. Cluster six is the largest cluster and contains twelve items relating to *Social Aspects* that were sorted together with a degree of consistency reflected in the bridging value of 0.08. The mean importance rating for this cluster was 3.60 ($SD = 0.45$), with individual items ranging in importance from 2.60 to 4.15. This cluster included items relating to intrapersonal factors in social settings, e.g., “How the child would cope with the older children.” Other items referred to environmental factors in social settings, e.g., “If the older children aren't very nice, the younger child is probably going to be teased, but if there's some nice older children, moving to a higher class is probably a good idea.” This concept also included the item “Making sure the child also belongs to the higher class physically,” which received the lowest importance rating in the data set.

Some items in this cluster reflected beliefs about friendships at school. Examples included “Whether the child would still be able to be with their friends,” “Each child should have at least one friend in their class,” and “How good the child is at making friends.” The following belief noted the possibility of forming new friendships following acceleration: “If the child is being bullied in the same year or maybe they might be having friendship problems, consider whether they could start again if they move up a class.”

2.5.4 Cluster map summary. Our analyses revealed that participants who had accelerated conceptualized six key concepts among high-ability students' beliefs about grade-based acceleration (See Figure 1). The upper half of the map shows items relating

to academic challenge and considering different academic subjects. The lower half of the map shows beliefs about thoughts, feelings, and social considerations. The two clusters in the top right corner, *Academic Challenge* and *New Class* were positioned close together, illustrating closely related, albeit distinct, concepts. The concept *Social Aspects* contained the most items, but was rated as relatively less important than other concepts.

2.6 Discussion

High-ability students shared their beliefs about grade-based acceleration, and those who had accelerated sorted the beliefs into groups and rated the importance of each. Our analyses revealed six key concepts in the structured data. Each concept is discussed below.

2.6.1 Concept One: Academic Challenge. The concept, *Academic Challenge*, included beliefs about considering the optimal learning environment where candidates for acceleration can be challenged to develop their full academic potential. These beliefs are in keeping with Vygotsky's ZPD, which theorizes that learning happens in the zone beyond current knowledge, in the company of adults and more capable peers. Grade-based acceleration may place high-ability students in this optimal zone.

This concept reflected students' beliefs about high academic ability and a corresponding need for educational materials and environment that offer more challenge than aged-based curricula and classes. Higher level work may be considered a special education need for high-ability students (Kanevsky, 2011) and an item in this concept signaled a needs-based approach to deciding on acceleration: "Making sure that the child really needs to go up a class, rather than just wanting too." Another item in this cluster, "Whether a fast learner who's not getting completely top marks might be more engaged

and really do better at a higher level,” reflected the view that learning new material through acceleration may lead to becoming more engaged in school. Comparably, qualitative research found students who accelerated believed “they would have been bored and disengaged if they had progressed through school a year later” (Gross et al., 2011).

2.6.2 Concept Two: Child’s Thoughts About Moving Up. The second concept included beliefs about the child’s thoughts on acceleration. Some items in this concept reflected the motivation that is essential for successful acceleration (National Association for Gifted Children, 2004). These beliefs are in line with acceleration guidelines which recommend that the student must agree with the decision to accelerate. In fact, the Iowa Acceleration Scale lists students’ thoughts on acceleration as a critical item for discussion; whole-grade acceleration is not recommended if a student does not want to move up a grade (Assouline et al., 2009).

Other items in this concept reflected a need to consider the student’s emotional well-being when making decisions on grade-based acceleration. Participants’ voiced beliefs about considering happiness, enjoyment and excitement about school. These items reflected participants’ beliefs that high-ability students may develop negative feelings towards school if their intellectual needs are not met.

2.6.3 Concept Three: Different Subjects. As mentioned, there are many types of accelerative interventions (Southern & Jones, 2015), and some students in our study had experienced different types of acceleration at different times. Items in this concept reflect students’ advice about the importance of considering different options. Acceleration

guidelines (Assouline et al., 2009; Feldhusen et al., 1986) also recommend exploring alternative options if whole-grade acceleration is not implemented.

2.6.4 Concept Four: New Class. Items in this concept voiced high-ability students' beliefs about considering the ability of peers in the new class and the potential for acceleration to alleviate boredom. Taken together, these beliefs suggest that finding a good fit among intellectual peers could engage high-ability students who might otherwise be bored in school.

An item in this cluster, "Whether it might be good for the child to have a little trial and see what it's like in the higher class," suggested that an initial evaluation period in the higher class might be appropriate. This advice echoes acceleration guidelines, which recommend that "no educational placement decision is irrevocable" (Assouline et al., 2009, p. 29) and "the child should be aware that if it does not go well he or she may request to be returned to the original grade" (Culross et al., 2013, p. 42).

Overall, the position of this concept was closely related to the concept of *Academic Challenge*, but was distinguished by considering whether the child experienced boredom and if the higher-level class might be a better fit. The notion of fit in the new class corresponds with Vygotsky's emphasis on the learning environment (Kanevsky, 2011). And research suggests that finding a fit with intellectual peers can benefit students who accelerate (Assouline et al., 2015). For example, in a longitudinal, 20-year study of 60 highly able students, Gross (2006) examined the experiences of students who accelerated one or more grades as well as those of students who were not permitted to accelerate. Comparing the two groups, they found that highly able students who were

educated with same-age peers (i.e., did not accelerate) experienced feelings of inadequacy and social isolation, and many dropped out of high school or university.

2.6.5 Concept Five: Others' Thoughts. In addition to respecting the child's thoughts and feelings, participants in our study believed *Others' Thoughts* should be considered in the decision to accelerate. The concept, *Others' Thoughts*, contained a couple of items relating to teachers' understanding of the special needs of students' who accelerate. Acceleration guidelines recommend that students who move up a grade be placed with teachers "who are receptive to the grade acceleration process" (Culross et al., 2013, p. 41). Similarly, the Iowa Acceleration Scale indicates that "the receiving teacher's attitudes and support are critical in creating a supporting and welcoming environment" (Assouline et al., 2009, p. 21). Participants in our study recognized the critical role that teachers play in successful accelerative interventions.

2.6.6 Concept Six: Social Aspects. High-ability students in our study expressed many beliefs about how acceleration might interact with social aspects of schooling which clustered together in the concept *Social Aspects*. Social aspects of acceleration are well-documented as concerns for educators, and these concerns may be most evident when acceleration is most salient (Southern & Jones, 2015). Salience refers to how noticeable acceleration is to others. For example, grade-skipping can be a somewhat public event, especially when it occurs within a school where students already know each other (Assouline et al., 2009). Participants in our study voiced beliefs that factors influencing social aspects of acceleration vary among schools and individuals. Students who had accelerated acknowledged the importance of social considerations; however,

they rated social aspects as relatively less important than other factors in the decision to accelerate.

2.6.7 Summary. Overall, participants conceptualised six key concepts in the decision to accelerate. Academic challenge was a key concept, which was closely related to considerations about the new class environment and students' abilities in different subjects. Many beliefs clustered into the concept *Social Aspects*; however, on average, these aspects were rated as less important overall. Some items resonated with Vygotskian theory on learning in the zone of proximal development and many items reinforced considerations that have been described in existing acceleration guidelines (Assouline et al., 2009; Feldhusen et al., 1986).

2.7 Limitations

This study involved high-ability students from across Australia, and the views of high-ability students in other areas may differ. As with all qualitative research, study results may not be generalizable. We also acknowledge that only those students with parental consent and support could participate, and their views may differ from students who did not participate.

Despite these limitations, our study has significant implications for educational practice. Our choice of methodology gave voice to high-ability students who expressed their beliefs about acceleration, and relied upon the expertise of students who experienced grade-based acceleration to structure those beliefs into meaningful concepts, rated according to importance. Through this approach, we sought advice on the decision to accelerate from those with direct experience being in classes with older classmates.

2.8 Implications

Some educators have been hesitant to implement accelerative practices, often due to concerns about socio-emotional outcomes and social acceptance (Dare et al., 2016; Gallagher & Smith, 2013; Gross et al., 2011; Rambo & McCoach, 2012; Siegle et al., 2013). Findings from this study suggest that high-ability students may have similar concerns; however, students who accelerated rated social aspects as relatively less important in deciding to accelerate. Research indicates that educators' fears about the potential for negative socio-emotional outcomes are often misplaced (Gross et al., 2011), and in practice, academic, social, and emotional outcomes of accelerative interventions are intertwined (Dare et al., 2016; Gronostaj et al., 2016; Gross, 2006). Our findings imply that academic challenge is a key consideration for students who accelerate, and that considering the child's emotional well-being and willingness to engage in school are also important.

Ideally, decisions about interventions for children with special needs evaluate evidence about best practices against the needs of the individual child. Findings from our study support many of the guidelines suggested for evaluating accelerative interventions for high-ability children. For example, a key concept in our study, *Child's Thoughts About Moving Up*, reiterates the need for the child to be involved in the process and to express a desire to accelerate. Our findings also serve as a reminder that grade-skipping is only one form of acceleration, and that some high-ability students may benefit from other accelerative interventions, such as single-subject acceleration.

In this study, we gathered unique insights into high-ability students' beliefs about grade-based acceleration, and relied on the expertise of students who had experienced

acceleration to structure the data. Participants placed academic challenge at the top of the list of considerations in the decision to accelerate. Taken together, the advice from students in our study suggests that acceleration could help high-ability students to “get excited about school” and be “happier in the higher class.” Overall, our findings echoed existing research; when thoughtfully practiced and well-supported, acceleration may be a useful intervention for some high-ability students.

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3. On Deciding to Accelerate: Conceptualized by Students in Inclusive Classes

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Inclusive education aims to foster respect for diversity, and promote acceptance and understanding of individual differences (Ainscow & Miles, 2008; Nowicki, 2007). At the same time, exemplary education aims to ensure every student develops their potential (Ontario Ministry of Education, 2014). For high-ability students to develop their potential, most require individualized programs that challenge their advanced cognitive abilities, and some will require interventions that adjust the pace at which they move through educational materials (Gross, 2010). These interventions, often referred to as acceleration, may result in high-ability students being grouped in classes with older students. However, educators have expressed concerns about the social aspects of acceleration, and these concerns may act as a barrier to accessing accelerative interventions (Assouline, Colangelo, & VanTassel-Baska, 2015; Gross, 2010).

Inclusive educational philosophies have focussed on the inclusion of students with learning difficulties (Florian, 2014), aiming to “to make social exclusion a thing of the past by modelling and encouraging social acceptance and inclusive behaviours in schools” (Dare, Nowicki, & Felimban, 2017, p. 532). However, to foster academic and social inclusion across full learner diversity, we must consider evidence-based approaches that can help address the exceptional needs of high-ability students as well. Accelerative interventions offer potential in this regard, yet, acceleration has rarely been studied from the perspective of students in inclusive classes, and little is known about

students' thoughts on what it might be like to have a younger, high-ability student in their midst. To tackle this gap in the literature, we investigated students' beliefs about acceleration. We posed the following research question: "What do students in Grades 6, 7, and 8 think are the most important factors for parents and teachers to consider when deciding whether to place a high-ability student in a class with older classmates?"

3.1 Terminology

Throughout this article, we use the term *high-ability* to refer to students with the potential for high academic achievement. This term reflects a continuum of academic ability, emphasizes "the potential of academically able students" (Dare & Nowicki, 2015, p. 250), and avoids "an absolutist conception of giftedness...to which an individual does or does not belong" (Porath, 2004, p. 154). In conversations with students, we used the child-friendly term *fast learner* to refer to high-ability students.

Florian (2014) contends that "a clear working definition of inclusion has thus far proved elusive" (p. 286). To clarify our use of the term in this article, we use *inclusion* to embrace both academic and social inclusion, where *academic inclusion* refers to strategies which promote access to and engagement with core curricula, and *social inclusion* refers to social acceptance in and engagement with the school community (Dare, Nowicki, & Felimban, 2017).

3.2 Background

3.2.1 Acceleration. Educational *acceleration* is defined as allowing students "to move through traditional educational organizations more rapidly, based on readiness and motivation" (National Association for Gifted Children, 2004, para. 2). Readiness and motivation are necessary ingredients when deciding on accelerative interventions.

Acceleration allows students to progress through educational materials in response to their abilities, rather than advancing through grade-levels as prescribed by age-based curricula. Acceleration can be practiced in a variety of forms including grade-skipping, early entrance to school (primary, middle, high, or college), single subject acceleration, curriculum compacting, and concurrent enrollment, among others (Southern & Jones, 2015). Students may engage in accelerative interventions as individuals (e.g., skipping a grade or starting school early) or in groups (e.g., Advanced Placement, International Baccalaureate).

The various forms of acceleration generally fall into two overarching categories: (a) content-based acceleration, where students receive materials at an accelerated pace in a same-age class placement, and (b) grade-based acceleration, where students are placed in classes with older students (Rogers, 2015). Some forms are more salient than others, where salience is “the degree to which [accelerative interventions] are noticeable to others, particularly to peers” (Southern & Jones, 2015, p. 12). The greater the salience of accelerative interventions, the greater the tendency for concerns about social adjustment and acceptance to be raised. Our study focused on grade-based acceleration, which tends to be more salient than content-based. We felt it was important to hear from students in inclusive classes, to better understand how the social milieu might unfold in the context of inclusive education, where acceptance of difference is valued.

Accelerative interventions aim to support good learning by matching individual students' abilities to the educational materials that are presented. Many high-ability students are already familiar with age-based content (Stanley, 2000) and score one or more years higher than grade-level in math and English (Peters, Rambo-Hernandez,

Makel, Matthews, & Plucker, 2017). In addition, a hallmark of high ability is the capacity to absorb new material faster than typically developing peers (Kanevsky & Clelland, 2013; Winzer, 2002). As a result, high-ability students in age-based classes are often repeating what they already know. These students risk experiencing boredom or disengagement, or even damage to their motivation and achievement, if their educational programming is not suitably differentiated (Stanley, 2000). One way to better match educational programming to the needs of high-ability students is through the implementation of accelerative interventions (Assouline et al., 2015).

A great deal of empirical evidence has demonstrated positive outcomes for high-ability students who accelerate (Assouline et al., 2015; Gross & Van Vliet, 2005; McClarty, 2015; Steenbergen-Hu, Makel, & Olszewski-Kubilius, 2016; Steenbergen-Hu & Moon, 2011). Positive academic outcomes are well-documented across multiple quantitative studies. In a recent second-order meta-analysis (a meta-analysis of six acceleration meta-analyses), Steenbergen-Hu et al. (2016) reviewed 125 studies involving over 75,000 participants and found “acceleration had a positive, near moderate, and statistically significant impact on students’ academic achievement” (p. 889). Research also shows that positive academic outcomes persist in the long-term. Through an analysis of longitudinal data, McClarty (2015) found grade-skippers earned better grades right through high school and college than non-accelerated peers.

Existing studies also provide quantitative and qualitative evidence of the social-emotional effects of acceleration. In a meta-analysis of 38 studies on acceleration between 1984 and 2008, Steenbergen-Hu and Moon (2011) found a statistically significant, small positive effect on social-emotional measures comparing accelerated to

non-accelerated same-age peers. More recently, Rogers (2015) reviewed studies published between 1990 and 2013 examining various forms of acceleration and concluded that grade-based acceleration has “positive socialization and psychological effects at all three school levels” (p. 25). However, in Neihart’s (2007) earlier review of the socio-affective impact of acceleration, she reported that “although the research consistently finds no ill group effects, some accelerated gifted children do have adjustment difficulties” (p. 338). More recently, findings from a qualitative study of 56 parents who had children who accelerated showed adjustment difficulties are usually short-lived (Dare, Smith, & Nowicki, 2016). Although a few parents said their children were teased in the period immediately following acceleration, initial social difficulties tended to lessen over time and “age differences may be forgotten as the student is accepted in the receiving class” (Dare et al., 2016, p. 16). The acceptance of differences is fundamental in inclusive education, and such acceptance is encouraging to note in recent research.

Despite research showing positive outcomes, access to acceleration is limited for many high-ability students, particularly so in Canada (Kanevsky & Clelland, 2013), where this study was conducted. A survey of acceleration policies and practices across 163 school districts in Canada showed that only 29% of school districts practiced grade-skipping, and an even higher proportion (34%) did not allow this form of acceleration (Kanevsky, 2011a). Because of the gap between research and practice, some researchers have questioned why acceleration doesn’t happen more often. Their research has shown that some educators hold negative attitudes towards acceleration, often citing beliefs about the potential for social adjustment difficulties (Siegle, Wilson, & Little, 2013;

Wood, Portman, Cigrand, & Colangelo, 2010). In particular, some educators fear social adjustment difficulties for accelerated students (Gallagher, Smith, & Merrotsy, 2011; Southern, Jones, & Fiscus, 1989) and express concerns that acceleration for some may “upset the other kids” (Colangelo, Assouline, & Gross, 2004, p. 9). Negative attitudes towards acceleration may influence the way teachers, principals, and parents approach the decision to accelerate (or not accelerate) students.

3.2.2 Inclusion. Although experts have not yet reached consensus on a clear definition of inclusive education (Florian, 2014), we frame our understanding of inclusion within the overarching goal of inclusive education—to promote acceptance of all children regardless of difference. Inclusive education practices originated in response to concerns about segregated special education classes. Leaders in the movement towards inclusion questioned whether segregated education provided the best learning environment for students with learning difficulties, and more fundamentally, whether segregated education violated civil rights (Florian, 2014). Since inception in the 1960s, inclusive practices have developed and evolved within different cultural contexts, and, as a result, inclusive education varies across different education settings.

In Canada, where our study was conducted, fundamental civil rights are protected under the Canadian Charter of Human Rights, which protects individuals against discrimination based on race, national or ethnic origin, colour, religion, sex, *age* [emphasis added], or mental or physical disability. Across the country, the philosophy of inclusion is championed, and advocates for inclusion have often focussed on grouping students with disabilities with same-age classmates (Specht, 2013). Yet, for some high-ability students, the least restrictive learning environment may be with older classmates

with access to core curricula at a higher-grade level. While educators' beliefs about acceleration may block or assist the implementation of accelerative interventions (Gross Urquhart, Doyle, Juratowitch, & Matheson, 2011), inclusive policies which focus on same-age grouping may also impede access to accelerative interventions.

Inclusionary practice seeks to meet students' educational needs while ensuring students are not isolated from their peers. To meet these demands, inclusionary leadership requires flexible thinking (Capper & Fraturra, 2009). Yet relatively little attention has been paid to whether same-age grouping promotes acceptance of high-ability students. Existing research does indicate that high-ability students can be acutely aware of being different from their typically-developing peers (Gross, 2010), and some experience an inherent tension between developing their academic potential and being socially accepted (Jung, Barnett, Gross, & McCormick, 2011). As with students of all abilities, for high-ability students to develop their potential they need an educational environment that is both academically and socially engaging.

Various educational practices have proven effective in supporting high-ability learners to develop their potential, including ability grouping, pull-out programming, and specialised programs (Peters et al., 2017). As described above, research also demonstrates the effectiveness of acceleration in supporting positive academic, social, and emotional outcomes for high-ability students (Assouline et al., 2015; Gross, 2011; McClarty, 2015; Steenbergen-Hu et al., 2016; Steenbergen-Hu & Moon, 2011). Indeed, the National Association for Gifted Children (2004) describes educational acceleration as exemplary practice, "with more research supporting this intervention than any other in the literature on gifted individuals" (para. 1). Yet accelerative interventions may involve

students being among older classmates, a notion which contradicts same-age views of inclusion. Therefore, adding age diversity to the range of characteristics of learners in inclusive learning environments is an important topic to explore.

The literature on inclusion suggests that focussing on difference may contribute to social exclusion (Nowicki & Brown, 2013). Different forms of acceleration may draw more or less attention to the degree of difference between the advanced learning of high-ability students and their typically developing peers. We refer the reader to Southern and Jones (2015) for a comprehensive discussion of dimensions and issues related to various types of acceleration. In the context of this study, we suggest that inclusion depends on engagement with core curricula in socially accepting educational environments.

In inclusive learning environments, we might expect fewer concerns about the social impact of acceleration, given the overarching goal to be inclusive of diverse learners. As mentioned, research on the inclusion of students with exceptional needs has tended to focus on the inclusion of students with learning difficulties (e.g., de Boer & Pijl, 2016; Haq & Mundia, 2012). Indeed, little is known about students' beliefs about acceleration and their beliefs are particularly important because students are at the centre of the social environment in school. Students' insights into life in inclusive classrooms are especially important because "as schools become increasingly diverse, and the complexity of the educational environment grows, it is less and less likely adults alone can know all there is to know about, and solve, all of the problems our students face" (Katz, Porath, Bendu, & Epp, 2012, p. 3). To address concerns about the social inclusion of students who accelerate, it's important to understand students' perspectives on this issue.

3.2.3 Theoretical framework. Acceleration aims to find an improved fit between a student's abilities and the educational materials that are presented. The rationale for accelerative interventions can be explained in terms of Vygotsky's (1978) sociocultural views on learning and development. In a Vygotskian perspective, good learning happens when a child engages in tasks that s/he can perform with help but cannot yet perform independently (Vygotsky, 1978). To explain the difference between what a child already knows and new learning, Vygotsky proposed the construct *Zone of Proximal Development* (ZPD). The ZPD is "the distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers" (Vygotsky, 1978, p. 86). Applied to acceleration for high-ability students, Vygotskian theory illustrates how students must work beyond their existing knowledge to experience new learning.

In addition to considering actual and potential development, Vygotsky's perspective emphasizes the importance of social interactions with teachers or more capable peers to guide new learning (Kanevsky, 2011b). As a measure of inclusive education, social interactions are considered important indicators of degree of social integration of students with special education needs (Koster, Nakken, Pijl, & van Houten, 2009). Vygotsky's emphasis on social interactions in new learning lends support to the significance of our current investigation investigating beliefs about grade-based held by students Grades 6, 7, and 8 inclusive classrooms. We examined beliefs because beliefs influence behaviors, as explained by Ajzen's theory of planned behavior (1985).

Ajzen's theory of planned behavior (1985) explains the links between beliefs, intentions, and behaviors. Ajzen (1985) theorized that an individual's beliefs influence (a) their attitudes towards the behavior, (b) their perceptions of the subjective norm towards the behavior, and (c) the perceived degree of control over the behavior. Taken together, these three factors influence an individual's intentions to perform a behavior; however, the ultimate performance of any behavior is also influenced by the degree of actual behavior control, which may differ from the degree of perceived behavioral control.

Theory of planned behavior has been widely applied in the field of education research to understand the links between beliefs and behaviors (Armitage & Conner, 2001). Applied to the concept of acceleration for high-ability students, this theory implies that when educators hold negative beliefs about acceleration, they may be less likely to recommend or support accelerative interventions, resulting in restricted access to accelerative opportunities. In this study, we examined students' beliefs about grade-based acceleration; theory of planned behavior suggests that the beliefs held by students provide an indication of how these students might behave towards students who accelerate.

3.3 Using Group Concept Mapping to Explore Beliefs

For this investigation into students' beliefs about grade-based acceleration in an inclusive education environment, we used a mixed method approach called group concept mapping (Trochim, 1989). Group concept mapping is ideal for exploratory research because it is "particularly appropriate for those situations in which theory is underdeveloped or research precedent is lacking" (Kunkel, Pittman, Hilderbrand, & Walling, 1994, p. 262). This methodology takes a multi-phase, participatory approach,

which uniquely applies the rigour of statistical analyses to the richness of qualitative data (Nowicki, Brown, & Stepien, 2014).

In the first phase of group concept mapping, participants generate data in response to a focal question. The researcher must define a single focus to ensure the final conceptualization reflects related ideas within a concept. Next, the researcher prepares the generated data for the second participatory phase, in which participants structure the data. This preparation involves synthesizing a list of items by eliminating repeated or irrelevant statements and splitting compound ideas. Data synthesis also reduces data generated in the first phase to a manageable set of 100 or fewer items (Kane & Trochim, 2007). Next, participants are invited to structure the data by sorting and rating the synthesized list of statements. First, each participant sorts the statements into groups in a way that makes sense to them and assigns a name to each group they make. Next, participants rate the statements along one or more dimensions, such as importance or feasibility. After the participants have structured the data, the researcher uses multi-dimensional scaling to statistically analyze the way the statements were sorted by participants. In multi-dimensional scaling, each statement is assigned an x-y coordinate that is mapped as a data point on a bivariate chart. In the chart, the distances between data points indicate how often participants sorted statements together. Finally, the researcher analyzes the data point map using hierarchical cluster analysis to identify key clusters, or concepts, on the map. These key concepts can be labelled by selecting terms from the group names suggested by participants.

3.3.1 Study background and purpose. The purpose of this study was to create a structured conceptualization of students' beliefs about factors to consider in grade-based

acceleration. Through a group concept mapping approach (Trochim, 1989), students in grade 6, 7, and 8 inclusive classes first shared their thoughts on what it might be like if a fast learner moved into a class with older classmates, then structured a synthesized list of generated data through sorting and rating activities. By applying multi-dimensional scaling and hierarchical cluster analysis, we created a group concept map illustrating how students conceptualized factors to consider in the decision to accelerate.

The data reported in this study form part of a larger study examining students' beliefs about grade-based acceleration in inclusive educational environments. The study comprised two phases of data collection with the same group of participants. In the first phase, we conducted individual interviews and explored students' perspectives on grade-based acceleration and strategies for the inclusion of students who accelerate. A thematic analysis of the qualitative data collected in phase one interviews is reported elsewhere (Dare & Nowicki, 2018). Here we report how students conceptualized factors to consider when deciding on acceleration, based on the second phase of data collection.

3.4 Method

3.4.1 Participants. Participants were 26 students in Grades 6, 7, and 8 including 16 girls and 10 boys. Although we did not have ethics clearance to inquire about individual participants' educational needs, the school advised us that none of the participants were formally identified as intellectually gifted. All participants attended an elementary school in rural southern Ontario, Canada. The province of Ontario serves over two million students in elementary and secondary schools, and follows a philosophy of inclusive education, aiming to embrace diversity and promote fundamental human rights in all schools provincewide (Ontario Ministry of Education, 2014).

The school participating in this study served approximately 220 students in grades 4 to 8, with almost a quarter (23%) of students receiving special education services (Ontario Ministry of Education, 2016). Following inclusive practices, students with special needs were educated in inclusive classes within the school. The school population included one in ten (10%) students whose first language was not English (Ontario Ministry of Education, 2016). We selected the school for this study because the local District School Board had formal administrative procedures supporting acceleration for high-ability students; however, none of the students in the school had accelerated and most of the participants did not know of anyone who had accelerated ($n = 20$). All 26 participants were involved in phase one data generation, and 24 of the original 26 students completed phase two sorting and rating activities.

3.4.2 Measures. In the data generation phase, data were extracted from interview transcripts in response to the following focal question: “What do students in inclusive classes think about grade-based acceleration for high-ability students?” In the interviews, we framed the notion of educational acceleration in child-friendly language, “if a fast learner moved into a class with older students.” For the data structuring phase, students completed the following three activities: (a) sorted the generated ideas into groups, (b) labelled each group, and (c) rated each idea according to how important it was when deciding whether to move a fast learner into a class with older students. Statements were rated using a five-point scale where 1 = not at all important, 2 = a little bit important, 3 = quite a bit important, 4 = very important, 5 = extremely important, and 0 = don't know.

3.4.3 Procedure. Below I describe the ethics and recruitment processes.

Ethics. Prior to commencing the study, we obtained institutional and district school board ethics approval. At the school level, we also sought the principal's approval and students required written parental consent to participate. Before interviewing students, the interviewer obtained verbal consent from students to participate in the interview and to have the interview recorded.

Recruitment. We began our recruitment process by reviewing a list of over 40 elementary schools posted on the school board's website. We identified a school within reasonable proximity to the first author, who was responsible for collecting the data, and contacted the school principal to provide information about the study. The principal reviewed the study proposal and agreed to the school's participation. The principal distributed letters of information and parent/guardian consent forms to potential participants in Grades 6, 7, and 8. Students took the information home and only those students who returned signed consent forms participated in the study.

3.4.4 Data generation. In the first phase, students participated in individual interviews. These interviews were conducted by the first author and took place in a quiet room in the school. Interviews began with a warm-up discussion about the students' favourite subjects in school. Next, the interviewer asked what the student thought about some students learning faster than others, and whether the student knew anyone who had moved into a class with older classmates. The interview then moved on to the following brainstorming questions: "If a student learns faster than other students in the same grade, what do you think about the fast learner moving into a class with older students?", "What might it be like if you had a younger student, who was a fast learner, move into your class?", "What might it be like for a fast learner to be moved into a grade with older

students?” and finally, “What are some things that teachers and parents should think about when deciding whether students who learn faster be placed in classes with older students?” The questions were designed to elicit students’ beliefs about acceleration for high-ability students. When appropriate, the interviewer also asked the follow up question “Can you think of anything else?” to give students opportunities to expand on their initial responses. All interviews were audio-recorded to ensure individual responses were accurately documented. The recordings were transcribed verbatim and the transcripts were examined to extract statements that responded to the focal question.

3.4.5 Data synthesis. In preparation for phase two data structuring, we read and re-read the interview transcripts and extracted statements that illustrated students’ beliefs about grade-based acceleration. This process of extraction was guided by the study’s research question and focussed on beliefs about placing high- ability students in classes with older classmates. Examples of statements that were not extracted included comments about current class environment (e.g., “right now we’re in a five/six split, so I’m always with younger kids”), and comments about other strategies for high-ability students (e.g., “give harder work”). A total of 144 raw statements were extracted from phase one transcripts. We prepared the list of raw statements for data structuring by removing repetitions and clarifying statements (Nowicki, Brown, & Stepien, 2014). As an example, when removing repetitions, we retained the statement “The older students would just pick on them” but deleted the statements “The older students would probably just give them a hard time” and “People would probably be like picking on them a little bit” because they repeated the idea of potential for being picked on. To ensure clarity and consistency, we edited all references to an accelerated student to read “them” and “they.”

Data synthesis reduced the list of 144 extracted statements to a set of 53 unique statements, well within the recommended maximum of 100 statements for data structuring (Kane & Trochim, 2007).

3.4.6 Data structuring. Phase two of the study was conducted six weeks after phase one. In phase two, students sorted and rated the set of 53 statements. The researcher supervised small groups of two to four participants as they independently completed the sorting and rating activities in a quiet room in the school. Students used sets of printed cards for the sorting activity, and printed lists of statements for the rating activity. Each student worked independently at their own large table. Although the small groups did not involve discussions of individual sorting or rating decisions, students were able to complete the activities in the company of their friends. The small group settings lessened the overall time required to carry out the data structuring phase. Over the two-day data collection period, the classroom teachers suggested the groupings of students and best timing for the sorting/rating sessions to minimally disrupt the school day.

During the data structuring sessions, the interviewer gave each student a set of 53 cards and instructed students to sort the cards into groups in a way that made sense to them, but not to make a group of leftover or miscellaneous cards. Students were asked to label each group of cards according to the main theme or idea they perceived as they sorted the cards. We provided sticky notes and pens so students could write notes as they created the groups. The interviewer assured students that there were no right or wrong answers, and that they could change or edit the group names at any time as they sorted the statements.

After students sorted the statements into groups, the interviewer asked them to assign a rating to each statement, using the five-point scale described above. We chose a five-point rating scale as optimal for ease of use (Preston & Colman, 2000). Students circled their chosen rating on printed lists of statements. Finally, students were invited to provide written comments on any of the statements that seemed “new or surprising” to them.

3.5 Results

We used Concept Systems® Global software to analyze the data using multi-dimensional scaling and hierarchical cluster analysis.

3.5.1 Multi-dimensional scaling produces the data point map. Multi-dimensional scaling results in a data point map which models the relationships between statements as data points on a bivariate chart, where each data point represents one statement. To create this map, each individual's sorted data was entered into a binary matrix, with one matrix row and column for each of the statements. The matrix cells were populated with ones and zeroes to indicate whether statements were sorted together (ones) or not (zero). Individual binary matrices were summed to create a group similarity matrix, which was analyzed using multi-dimensional scaling. In this type of analysis, we use a statistic called Kruskal's stress value as an indicator of how well the model fits the way participants structured the data (Petrucci & Quinlan, 2007). Kruskal stress values range between 0 and 1, and lower values represent better fit. When multi-dimensional scaling is applied to group concept mapping, stress values under 0.365 are considered acceptable (Kane & Trochim, 2007). Our data point map had a stress value of 0.2081, well within acceptable limits.

3.5.2 Hierarchical cluster analysis identifies the key concepts. After creating the data point map, we used agglomerative hierarchical cluster analysis (HCA) to analyse key groupings, or concepts, among the sorted data. Agglomerative HCA treats each data point as its own cluster and examines the distances between data points to determine groupings of data according to the distance (which represents how often statements were sorted together by participants). HCA uses algorithms to identify these thematic groupings and produces a range of possible cluster models. In this study, we ran HCA to create models ranging between three and ten clusters, then used quantitative and qualitative indicators to identify the best fitting cluster model. Quantitatively, we examined bridging values to determine clusters that were consistently sorted together. Bridging values vary between 0 and 1, where values near zero indicate statements were frequently sorted together and values near 1 indicate statements were sorted with other statements across the data point map (Kane & Trochim, 2007). Qualitatively, we examined statements within each cluster to evaluate internal conceptual fit. We examined a variety of models, ranging between three and ten clusters, and our analyses indicated a five-cluster model was the best fit to the data. Figure 1 shows the five-cluster concept map.

We selected labels for each concept on the map based on the group names that participants contributed through the sorting activities. Our selections were guided by algorithms in the Concept Systems® Global software which calculate a list of ten best-match labels for each cluster from the group names given by participants. From the lists of best-match labels, we assigned cluster names using participants' original labels, edited for concordance.

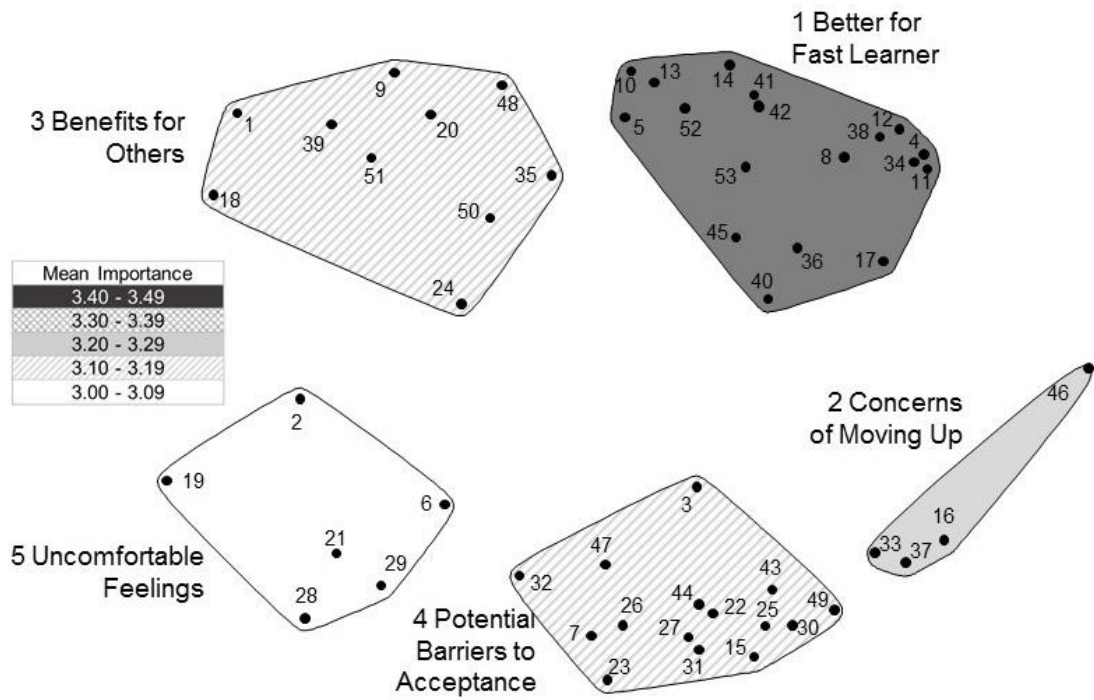


Figure 3-1: Group concept map showing five key concepts in students' beliefs about grad-based acceleration for high-ability students.

Table 3-1
Statements in Each Cluster, Statement Bridging Values, and Importance Ratings

Cluster	<i>BV</i>	<i>M</i>	<i>SD</i>	<i>New</i>
Better for the fast learner	0.18	3.40	0.542	
36 It's not fair to keep someone at a level that they're past.	0.22	4.04	0.859	1
42 They can actually learn something new if they're moved up.	0.08	4.04	0.908	0
41 Moving up might give them more freedom to learn.	0.09	3.92	0.830	0
13 Moving up would be a bit better for the fast learner, so then they can do work that suits them instead of easier work.	0.09	3.87	0.815	0
17 They would be pushed to learn more.	0.34	3.83	0.887	0
52 If a student is reading at a higher level and they move up, they'd have more books at their level to read.	0.11	3.71	1.042	0
45 It's not fair for fast learners to have to go at a slower pace for everybody else.	0.19	3.67	1.274	1
10 They could learn faster in the higher grade.	0.12	3.54	0.884	0
34 They might feel happy because they're smart.	0.18	3.50	1.022	0
14 Moving someone up wouldn't be that big of a deal, because they're all from the same school, so they probably already know each other.	0.15	3.38	0.924	0
53 Some students that move up might be accepted because they have older brother and sisters.	0.13	3.38	1.013	0
38 They would know a lot of the answers.	0.27	3.17	1.154	0
4 Moving up would be pretty cool because you'd think you're pretty smart.	0.21	3.17	1.494	0
8 You're very lucky if you can skip a grade and understand it.	0.19	3.13	1.262	0
11 If you skipped a grade you would feel proud of yourself.	0.22	3.08	1.442	0
40 They would be smarter than some of the other kids.	0.26	2.96	1.122	0
5 It's a good idea to move a really smart student up because if you didn't, they would give away all the answers to the class and everyone would get As.	0.13	2.96	1.160	1
12 They would be happy because they didn't have to stay in school for however longer.	0.21	1.78	1.166	4
Concerns of moving up	0.44	3.29	0.122	
46 They would feel accomplished and scared at the same time.	0.75	3.46	1.103	0
33 They would probably be sad because they wouldn't be able to see their friends.	0.26	3.29	1.160	0
37 They will miss academic stuff.	0.35	3.25	1.189	2
16 They might feel a bit nervous because they're with a bunch of older kids.	0.41	3.17	0.963	1

(Table 3.1 continues)

(Table 3.1 continued)

Cluster	<i>BV</i>	<i>M</i>	<i>SD</i>	<i>New</i>
Better for others	0.45	3.21	0.464	
48 Other students could learn stuff from them.	0.29	3.88	0.992	1
24 Moving up is fine, as long as the people in that class are okay with them being there.	0.38	3.61	1.033	0
9 They would be one more person to converse with, to get their opinions and different ideas.	0.38	3.52	0.994	2
51 They could help you out.	0.45	3.33	1.090	0
35 It would be a little different to have someone move up, but I think it would work.	0.23	3.33	1.167	1
50 Having a younger student move up wouldn't be too weird if you were in a split class.	0.30	3.29	1.268	3
39 It might be less stress on the teacher because the student wouldn't run out of things to do.	0.58	3.13	1.154	4
1 If the fast learners moved ahead, it might give the teacher more time for slower learners.	0.71	3.08	1.139	1
18 I'd want to be their friend and learn how they learn so fast.	0.76	2.58	1.283	1
20 I would think it was cool to be in a class with them because they were so smart.	0.39	2.33	1.090	0
Potential barriers to acceptance	0.10	3.19	0.590	
31 The older students would just pick on them.	0.00	3.79	1.179	0
27 They might not be accepted.	0.01	3.71	0.955	1
22 They might have a harder time fitting in because they're younger.	0.02	3.63	1.056	1
25 They would be excluded a lot.	0.05	3.63	1.135	0
49 They could be called rude names like "nerds" or "geeks".	0.14	3.57	1.161	0
30 They might find it harder because they might not know as many people.	0.09	3.38	0.875	0
7 They might feel not as smart as everyone else, if they're younger.	0.18	3.33	1.239	2
26 People from their grade would think, "I guess that person's too good for us," and forget about them.	0.08	3.25	1.189	1
47 Some people would be really offended.	0.14	3.22	1.204	1
44 The older students might find it harder to get along with someone that's younger than them.	0.06	3.21	1.062	0
3 It might be a little overwhelming to be moved up.	0.24	3.21	1.179	1
32 People don't exactly accept moving students up because they think it's unfair.	0.22	3.04	1.233	0
43 The older students might be jealous.	0.11	2.83	1.274	1
15 They could get hurt in gym, like someone like throwing things at them.	0.00	2.71	1.488	3
23 They are probably going to be shorter than the rest of the class.	0.11	1.38	0.647	2

(Table 3.1 continues)

(Table 3.1 continued)

Cluster		<i>BV</i>	<i>M</i>	<i>SD</i>	<i>New</i>
Uncomfortable feelings		0.63	3.08	0.366	
6	I'd feel like I'm not learning fast enough.	0.41	3.63	1.245	1
19	The teacher might spend more time with them because they're younger.	1.00	3.43	1.037	3
28	Some things just might be hard for them, like art, maybe they're smart but they're not artistic.	0.73	3.00	1.319	2
21	It would be a bit weird because it's really rare to find a student who moved up.	0.47	2.88	1.116	3
29	I might feel a bit like uncomfortable because there would be a younger student in the class.	0.44	2.83	1.167	1
2	Moving a student up would be very surprising because it hasn't happened before.	0.71	2.71	1.268	4

Note: BV = bridging value. New = number of times a statement was identified as new or surprising by participants. Statements are listed from most to least important in each cluster.

3.5.3 Frequency of comments identified as new or surprising. Among the eighteen participants who identified statements that were *new or surprising* to them, the number of statements mentioned ranged between 1 and 11 ($M = 3.1$, $SD = 2.80$). From the set of 53 statements, 28 statements were identified as new or surprising by at least one participant, suggesting these statements were unexpected or had not previously been considered by individual participants. Table 1 shows the final clusters, cluster contents, bridging values, importance ratings, and frequency of mentions as new or surprising.

Below we describe the clusters, listed in order of mean importance rating from most to least important.

Cluster 1: Better for the Fast Learner. Cluster 1, *Better for The Fast Learner*, was the largest cluster in the map and contained 18 statements. The average importance rating for this cluster was 3.4 ($SD = 0.542$, bridging value = 0.18). As the label suggests, statements in this cluster reflected aspects of acceleration that participants believed would be positive for a student who accelerates.

This cluster contained the two highest rated statements in the data set, “It's not fair to keep someone at a level that they're past” ($M = 4.04$, $SD = 0.859$, bridging value = 0.22) and “They can actually learn something new if they're moved up” ($M = 4.04$, $SD = 0.908$, bridging value = 0.08). Notably, these were the only two statements in the list of 53 with an average importance rating greater than 4. The idea that accelerated students might “learn something new” had the lowest bridging value in the cluster, indicating this notion anchored the cluster. Despite the relatively high average cluster rating, this cluster contained the second lowest rated statement in the entire data set, “They would be happy because they didn't have to stay in school for however longer” ($M = 1.78$, $SD = 1.166$,

bridging value = 0.21). Beliefs about benefits included statements about potential positive feelings that the accelerated student might experience, including feeling “happy”, “lucky”, and “proud of yourself.”

Although this cluster contained the greatest number of statements, only four of the 18 statements were noted as new or surprising (n comments = 7). Among the written comments provided by participants, one student noted, “If they are more intelligent they should move up.”

Cluster 2: Concerns of Moving Up. Cluster 2, *Concerns of Moving Up*, was the smallest cluster, containing only four statements with importance ratings ranging from 3.17 to 3.46 ($M = 3.29$, $SD = 0.122$, bridging value = 0.44). The statements in this cluster revealed students' beliefs about negative feelings a fast learner might experience if they moved into a class with older students. Comments referred to various possibilities, including feeling “sad because they wouldn't be able to see their friends,” “a bit nervous because they're with a bunch of older kids,” and a mix of “accomplished and scared at the same time.” As the smallest cluster, *Concerns of Moving Up* also had the fewest comments (n comments = 3) about new and surprising ideas, with two out of the four statements identified as new or surprising.

Cluster 3: Benefits for Others. The third cluster, *Benefits for Others*, contained 10 statements with importance ratings ranging from 2.33 to 3.88 ($M = 3.21$, $SD = 0.464$, bridging value = 0.45). Some statements in this cluster reflected beliefs about potential benefits for older classmates from having an accelerated student in their class. The highest rated statement in the cluster was “other students could learn stuff from them” ($M = 3.88$, $SD = 0.992$, bridging value = 0.29). Other beliefs about benefits for classmates

included “they would be one more person to converse with,” “they could help you out,” and “I’d want to be their friend and learn how they learn so fast.” A couple of statements in this cluster reflected beliefs about benefits to teachers. Statements included “If the fast learners moved ahead, it might give the teacher more time for slower learners,” and “It might be less stress on the teacher because the students wouldn’t run out of things to do.”

In this cluster, seven out of the 10 statements were identified as new or surprising (n comments = 13). Written comments revealed that the potential impact that acceleration could have on teachers was an aspect that some participants had not considered. For example, one participant commented that the statement about less stress on the teacher “is a really good fact because then the teacher wouldn't have to be always finding more work for the fast learner.”

Cluster 4: Potential Barriers to Acceptance. The cluster *Potential Barriers to Acceptance* ($M = 3.19$, $SD = 0.590$, bridging value = 0.10), comprised fifteen statements. The contents of this cluster reflected potential challenges to acceptance that accelerated students might face. The cluster was anchored by the statement “the older students would just pick on them” ($M = 3.70$, $SD = 1.179$, bridging value = 0.00). Examples of other statements in this cluster include “They might not be accepted,” “Some people would be really offended,” and “The older students might be jealous”. This cluster included the least important statement in the data set, “They are probably going to be shorter than the rest of the class” which had a mean importance rating of 1.38 ($SD = 0.647$).

Participants identified nine out of 15 of the statements in this cluster as new or surprising (n comments = 13). Comments indicated that some students did not agree with potential barriers to acceptance. For example, in response to statement 15 (“They could

get hurt in gym, like someone like throwing things at them”), one participant wrote, “I didn't think someone in a younger grade would be offended or hurt in gym”, and another participant wrote “that’s harsh.” One student commented that statement 23, “They are probably going to be shorter than the rest of the class” was “surprising to me because they are getting moved up a level because they are smart and not because of their height.”

Cluster 5: Uncomfortable Feelings. The fifth cluster on the map, *Uncomfortable Feelings*, included six statements ($M = 3.08$, $SD = 0.366$, bridging value = 0.63). The highest rated statement in this cluster was “I'd feel like I'm not learning fast enough” ($M = 3.63$, $SD = 1.245$). Other statements in this cluster included the adjectives “weird,” “uncomfortable,” and “surprising” to describe what it might be like to have an accelerated student move into a class with older students. A statement concerning teachers, “The teacher might spend more time with them because they're younger” was included in this cluster, but had a bridging value of 1.00 indicating this statement bridged concepts across the map. One statement in this cluster referred to the potential for an accelerated student to find some aspects of schoolwork more difficult than others: “Some things just might be hard for them, like art, maybe they’re smart but they’re not artistic.”

Among the five clusters, cluster 5 *Uncomfortable Feelings* was the most often mentioned as new or surprising (n comments = 14); indeed, every statement in this cluster was identified as new or surprising by at least one participant.

3.6 Discussion

Participants generated many ideas about acceleration, even though some thought it was “rare” or had “never happened.” They also competently structured the ideas, as reflected in the low stress value for the data point map. The best-fitting cluster model

revealed five key concepts in the data. Within the concept, *Better for the Fast Learner*, the two most highly rated statements in the entire data set reflected the importance of equity (“It's not fair to keep someone at a level that they're past”) and access to learning opportunities (“They can actually learn something new if they're moved up”). Many of the statements in this concept reflected the notion that accelerative interventions might enable high-ability students to learn in their zones of proximal development. Phrases such as “more freedom to learn”, “do work that suits them instead of easier work”, and “pushed to learn more” suggest that students believed there could be academic benefits for the accelerated student. This belief is supported by research showing positive effects on measures of academic achievement following acceleration (e.g., Assouline et al., 2015; Gross, 2010; Steenbergen-Hu et al., 2016).

Other statements in the concept *Better for the Fast Learner* reflected beliefs about benefits for accelerated students that relate to students' feelings about themselves. Examples of statements include “moving up would be pretty cool because you'd think you're pretty smart”, “they would be happy because they didn't have to stay in school for however longer” and “if you skipped a grade you would feel proud of yourself.” Evidence about the extent to which acceleration has a measurable effect on students' well-being and self-perceptions suggests that small positive effects are experienced by some students who accelerate (Rogers, 2015; Steenbergen-Hu & Moon, 2011), although earlier research suggested acceleration has little effect on socio-emotional measures (Neihart, 2007).

In addition to benefits for individuals who accelerate, students believed there could be advantages to others as a result of accelerating fast learners; these ideas were

clustered in the concept *Benefits for Others*. In this cluster, some statements reflected advantages to older students from having an accelerated student in the class, for example the opportunity to converse with and learn from the accelerated student, and having a classmate who “could help you out.” As mentioned in our discussion of the theoretical framework, Ajzen’s (1985) theory of planned behaviour suggests that students’ beliefs may indicate how these students might behave towards students who accelerate. In this study, the concept *Benefits for Others* included beliefs that implied the potential for social acceptance among this group of participants. Examples of beliefs that might influence participants’ behaviours included “I would think it was cool to be in a class with them”, “I’d want to be their friend and learn how they learn so fast,” and “It would be a little different to have someone move up, but I think it would work.”

The concept of *Benefits for Others* also included benefits for teachers, such as the teacher having more time for other learners or experiencing less stress “because the students wouldn’t run out of things to do.” Although these potential benefits are not well-documented in the literature on acceleration, these findings suggest the students in our study believed that benefits might extend beyond those experienced by the accelerated student. This finding may point to areas for future research into unintended benefits of acceleration in inclusive educational environments.

Students in our study were sensitive to a variety of feelings on the topic of acceleration. While some of these beliefs were included in the concept *Better for the Fast Learner*, the concept map also revealed the following two key concepts relating to feelings: *Concerns of Moving Up* and *Uncomfortable Feelings*. Notably, participants rated the feelings of the accelerated student as relatively more important than

uncomfortable feelings in the decision to accelerate. The concept *Concerns of Moving Up* comprised beliefs about the potential for accelerated students to feel scared, sad, nervous, or to have gaps in their academic learning. These feelings are important considerations in the decision to accelerate, and by definition, acceleration should be “based on readiness and motivation” (National Association for Gifted Children, 2004, para. 2).

Our analysis showed that all of the six statements in the cluster *Uncomfortable Feelings* were surprising to one or more participants. This finding suggests that although the notion of acceleration might be uncomfortable for some, beliefs about feeling “uncomfortable”, “weird”, or “like I’m not learning fast enough” were not universal. We were encouraged by this evidence, which reflects the underlying principle of inclusion—acceptance of diversity—was embraced by some, if not all, of the participants in our study.

In contrast to beliefs about potential benefits, students in our study expressed beliefs about potential barriers to acceptance. Such beliefs surfaced despite the inclusive nature of the students’ school environment. Research into the inclusion of students with learning difficulties shows that students recognize learning differences among classmates and that these differences may be linked to social inclusion or exclusion (Nowicki et al., 2014). Indeed, high-ability children may encounter a forced-choice dilemma where they feel pressured to choose between “the needs for acceptance by peers and the pursuit of high-level academic achievement” (Jung, Barnett, Gross, & McCormick, 2011, p. 182). Although students in our study rated beliefs about potential barriers to acceptance as relatively less important than potential benefits, this finding suggests there is more to be done to promote attitudes of inclusive acceptance and respect for diversity. Ultimately,

inclusive educators may need to use inclusion strategies to ensure “school is a welcoming, positive, and productive place where children want to spend their days” (Nowicki & Brown, 2013, p. 255) and high-ability students feel accepted, whether or not they accelerate.

3.7 Study Limitations

Participants in this study generated a broad range of ideas about acceleration, and were able to structure the ideas into key concepts. However, the sample size is too small for results to be quantitatively generalizable. Also, participants in younger or older grades may hold different beliefs on the topic. Notably, students in this study attended a school that adhered to the philosophy of inclusive education, where students with special education needs were educated alongside peers in inclusive classes. Students in other settings may hold different beliefs about the inclusion of accelerated students. The current study explored students' beliefs about factors to consider in grade-based acceleration, and we did not explore students' beliefs about other interventions for high-ability students. We chose this focus because acceleration is an evidence-based intervention for high-ability students that is often questioned due to concerns about social issues. However, future research could examine students' beliefs about other strategies to meet the special education needs of high-ability students.

We also recognize the constraints of the consent process, and acknowledge that the views of students with parental consent to participate may have differed from the views of those who did not participate.

Despite these limitations, this study has considerable strengths. Our choice of methodology brings the rigor of quantitative analysis to qualitative data. It also honours

students' voice and their expertise in inclusion. Our findings contribute to the literature on interventions for high-ability students and have important implications for inclusive educational practice.

3.8 Conclusions and Implications

Advocates for acceleration argue that chronological age should not be a barrier to accessing appropriate levels of education (e.g. Colangelo et al., 2004; Gallagher & Smith, 2013; Kanevsky & Clelland, 2013). Indeed, if we focus exclusively on grouping by chronological age, we may risk overlooking considerable differences in cognitive development (Peters et al., 2017). But it's worth remembering, acceleration isn't just about academic fulfillment. A holistic approach to education encompasses social and emotional considerations as well. Perhaps with this in mind, educators who are hesitant about acceleration have tended to express concerns about social and emotional outcomes (Colangelo et al., 2004). A Vygotskian perspective reminds us that intellect and affect are intertwined and that new learning happens in the context of social interactions (Kanevsky, 2011b; Vygotsky, 1978). For high-ability students to experience new learning in their ZPDs, they need social interactions with adults and more capable peers; for some, this need can be fulfilled through sensitively implemented accelerative interventions (Gross, 2010).

While concerns about social and emotional adjustment are well meant, research has revealed that "educators and students may conceptualize the social aspects of acceleration differently" (Dare, Dare, & Nowicki, 2017, p. 13). Findings from the current study imply that in inclusive settings, fears about social rejection of students who accelerate could be addressed within a framework of equity and inclusion. Students in our

study expressed beliefs about possible benefits of acceleration for high-ability students, as well as benefits for other students and for teachers. Participants also expressed beliefs about potential barriers to acceptance; inclusive educators need to be aware of and watchful for these barriers to inclusion.

As many educational systems aim to provide quality education in inclusive environments, the re-examination of concerns about social inclusion of students who accelerate is overdue. To achieve authentic inclusion, students in today's classrooms must be actively involved in co-creating a meaningfully inclusive environment for all students (Katz et al., 2012). The findings from our study provide a glimpse into beliefs about acceleration for high-ability students, from the perspective of students in grades 6, 7, and 8 inclusive classes. Participants expressed a variety of ideas about what it might be like to have a younger student in their midst, and competently structured the generated ideas into key concepts. Although students acknowledged it might "be a bit weird because it's really rare to find a student who moved up," they rated fairness and opportunity to learn as the most important considerations when deciding whether to accelerate a high-ability student. Perhaps in the future, equity and excellence will take priority over feeling weird, and acceleration will become more widely accessible.

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4. Strategies for Inclusion: Learning from Students' Perspectives on Acceleration in Inclusive Education

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In an ideal world, school is a place where every student feels comfortable and learns at a suitable pace. In pursuit of this ideal learning environment, schools around the world have adopted inclusive approaches to education (Ainscow, 2007). Inclusive teachers value diversity and foster the development of caring, respectful learning communities. At the same time, teachers aim to help all students fulfill their potential (Ontario Ministry of Education, 2014b). In inclusive environments that support diversity, teachers must provide individualized support to students with unique learning needs, and this includes students who have special needs due to exceptionally high intellectual ability. One evidence-based intervention to support students with exceptional ability who are not developing their potential is *acceleration* (Assouline et al., 2015; Gross, 2010; Steenbergen-Hu & Moon, 2011), or allowing a student to proceed through educational material at a faster rate or at a younger age than conventional (Pressey, 1949). In addition to providing academic challenge, acceleration can help students with exceptional intellectual abilities establish new friendships (Gross, 2010; Gross et al., 2011). Despite research evidence showing positive academic and socio-emotional outcomes, access to accelerative interventions is sometimes denied due to teachers' concerns about social adjustment and acceptance (McCoach & Siegle, 2007; Rambo & McCoach, 2012; Southern et al., 1989; S. Wood et al., 2010). However, little is known about how students

in inclusive classes perceive acceleration, despite the critical role that students play in the social inclusion of exceptional peers.

Most often, the discussion around inclusion has centred on how teachers can promote inclusion of students with disabilities (e.g., Berry, 2008; Hettiarachchi & Das, 2014; Jordan, Schwartz, & McGhie-Richmond, 2009; Tiwari, Das, & Sharma, 2015). Although Saloviita (2015) opined that “inclusion is now used to refer to full learner diversity, including gender, sexual orientation, ethnic, cultural, linguistic or religious background, socio-economic status, disability and special educational need” (p. 67), this list of *full diversity* excludes mention of diverse age. In response to evidence demonstrating positive academic, social, and emotional outcomes of acceleration (Assouline et al., 2015; Gross, 2010; McClarty, 2015a; Rogers, 2007; Steenbergen-Hu et al., 2016; Steenbergen-Hu & Moon, 2011), educational acceleration has been recommended as exemplary practice “to match high level student general ability and specific talent with optimal learning opportunities” (National Association for Gifted Children, 2004, para.1). However, if teachers are to confidently implement this intervention in practice, they must understand how accelerated students who are younger than their classmates can be included in today’s diverse classrooms. To fully understand the complex dynamics of inclusion, we must explore and examine students’ perspectives.

Through our study, elementary school students in inclusive classes in Grades 6, 7 and 8 shared their thoughts on acceleration. Our overarching research question was “What do students in Grade 6, 7, and 8 inclusive classes think about grade-based acceleration for high-ability students?” Within our enquiry, we also considered the following three sub-questions: “Do students perceive differences in how quickly students

learn?" "What are students' perspectives on placing high-ability learners with older students?" "What strategies generated by students might support the inclusion of accelerated students in inclusive classes?"

4.1 Terminology

The National Association for Gifted Children (2004) defines *acceleration* as an approach to education that allows high-ability students "to move through traditional educational organizations more rapidly, based on readiness and motivation" (para. 2). *High-ability* refers to students who are capable of high academic performance. While acceleration is sometimes viewed as an intervention for students identified as gifted, the term high-ability is more appropriate in the context of acceleration because it emphasizes ability and de-emphasizes restrictive definitions of giftedness which rely on intelligence test scores (Dare & Nowicki, 2015; Steenbergen-Hu & Moon, 2011). Moreover, this term implies a continuum of abilities, rather than an "absolutist conception of giftedness that emphasizes a relatively stable category to which an individual does or does not belong" (Porath, 2004, p. 154). Because earlier research reported students' beliefs that "some people learn faster than others" (Nowicki, Brown, & Stepien, 2014, p. 77), we used the term *fast learner* when discussing high-ability students with participants in this study. We chose the term *fast learner* because it is in the language of elementary-aged students and avoids formal identification terms such as *gifted* or *talented*, which may have been unfamiliar to participants.

4.2 Study Background

Our study was conducted in Ontario, Canada. In Canada, provincial governments are responsible for providing education. Ontario is the most populated of Canada's

provinces and has implemented several internationally recognized inclusive policies and strategies including the Ontario Equity and Inclusive Education Strategy (United Nations Educational Scientific and Cultural Organization, 2016). Through this strategy, the Ontario government championed fundamental human rights in schools and pledged to support “a publicly funded education system that gives all students the opportunity to reach their highest potential” (Ontario Ministry of Education, 2014). In 2012, the Ontario government legislated the Accepting Schools Act, requiring schools to “promote a positive school climate that is inclusive and accepting of all pupils, including pupils of any race, ancestry, place of origin, colour, ethnic origin, citizenship, creed, sex, sexual orientation, gender identity, gender expression, *age* [emphasis added], marital status, family status or disability” (Legislative Assembly of Ontario, 2012, p. 3). And even more recently, the Ontario Ministry of Education released a 98-page guideline document, *Equity and Inclusive Education in Ontario Schools: Guidelines for Policy Development and Implementation* (2014), to support the implementation of equitable and inclusive learning environments. In Ontario, all students must be “supported equitably through the identification and removal of discriminatory barriers that limit their ability to achieve to their full potential” (Ontario Ministry of Education, 2014, p. 15).

4.2.1 Acceleration. Although the term *acceleration* has been used extensively in the research literature on education for high-ability students (e.g., Culross, Jolly, & Winkler, 2013; Gross, 2010; Henfield, Moore, & Wood, 2008; Neihart, 2007; Siegle, Wilson, & Little, 2013; Wood, Portman, Cigrand, & Colangelo, 2010), we contend that this intervention may be more accurately described as *optimal pacing*. Because high-ability students often already know—or quickly grasp—grade content (Peters, Rambo-

Hernandez, Makel, Matthews, & Plucker, in press), they need additional challenge to be engaged in inclusive classrooms (Kanevsky & Clelland, 2013). The need for students to learn in an optimal zone just beyond current knowledge can be understood in the context of Vygotskian developmental theory and the zone of proximal development (Vygotsky, 1978). According to Vygotsky (1978), learning happens when students work beyond their actual development, as demonstrated by activities they can complete independently, in a zone where they need assistance from adults or more capable peers to complete activities. This optimal zone is called the zone of proximal development. In the context of acceleration for high-ability students, providing educational material at a rate faster than prescribed by age-based curricula can create a better match between students' abilities and their pace of study (Kanevsky & Clelland, 2013). An important aspect of Vygotsky's socio-cultural perspective is that learning in the zone of proximal development happens in cooperation with others (Vygotsky, 1978). Applied to this study, exploring the beliefs of potential classmates may help teachers understand how accelerated students could be included in the social and academic environment of inclusive classes.

There are many ways in which students can accelerate; indeed, Southern and Jones (2015) listed twenty types. Accelerative options generally fall into two main categories: (a) content-based acceleration, where students access curricula from higher grades while remaining in classes with same-aged classmates, and (b) grade-based acceleration, where students are placed with older-age classmates (Southern & Jones, 2004).

Various forms of acceleration can be appropriate interventions for high-ability students with diverse backgrounds. For example, high-ability minority students (Lee,

Olszewski-Kubilius, & Peternel, 2010), high-ability students who have learning disabilities (Bees, 2009), and high-ability students in rural educational settings (Stambaugh & Wood, 2015) may all benefit from opportunities to accelerate.

Acceleration for high-ability students has been associated with various positive effects. For example, several quantitative studies have demonstrated that students who accelerate achieve higher academic success compared to non-accelerated ability-matched peers (Kulik & Kulik, 1984; McClarty, 2015; Steenbergen-Hu & Moon, 2011) and qualitative studies have found that students who accelerate develop new friendships with older students (Dare, Smith, & Nowicki, 2016; Gross, 2006).

4.2.2 Facets of inclusion. The notion of inclusion in education includes both academic and social inclusion. *Academic inclusion* includes educational practices which support students' access to core curricula (Fisher & Frey, 2001) through interactions with peers as "part of the life of the classroom" (Katz et al., 2012, p. 3). Acceleration enables high-ability students to access core curricula at a pace which may be faster than typical. *Social inclusion* refers to "the inclusion and acceptance of students in the school community" (Dare, Nowicki, & Felimban, 2017). Social inclusion may be perceived through healthy relationships with others, participation in group activities, feelings of belonging, and acceptance by classmates (Koster et al., 2009; Specht, 2013).

To be fully inclusive, schools must be both academically and socially inclusive. When sensitively implemented, acceleration can support both facets of inclusion (Gross et al., 2011). Nonetheless, teachers' concerns about a perceived potential for negative social implications have been a barrier to widespread implementation of acceleration (Colangelo et al., 2004b; Siegle et al., 2013; Southern et al., 1989; S. Wood et al., 2010).

This hesitancy persists despite research showing that high-ability students exhibit “superior socio-emotional adjustment and fewer behavioral difficulties than their typically developing peers” (Francis, Hawes, & Abbott, 2016, p. 279) .

The inclusion of students with exceptionalities has been widely examined around the world; however, much of the existing literature has focussed on the inclusion of students with learning difficulties (Koster et al., 2009). For example, in a study conducted in the United Kingdom, Freitag and Dunsmuir (2015) examined elementary students' behavioral intentions towards children with Autism Spectrum Disorder (ASD). They found students' intentions to behave inclusively were associated with their beliefs about whether it would be easy to interact socially with a student with ASD (Freitag & Dunsmuir, 2015). Among middle school students in Saudi Arabia, students mentioned offering friendship and support, helping with homework, and including in play as examples of inclusionary behavior towards students with learning difficulties (Dare, Nowicki, & Felimban, 2017). In a Canadian study, Katz, Porath, Bendu, and Epp (2012) found students in Grades 4 to 7 were empathetic towards inclusion of students with disabilities but perceived barriers to social and academic inclusion. And comparing perspectives of American elementary students, Shogren et al. (2015) found positive school culture, shaped by principals and teachers who promoted a philosophy of inclusion, fostered a sense of belonging among students with and without learning difficulties.

Nonetheless, the overarching goal of inclusive education is to ensure *everyone* feels accepted. Research suggests that high-ability students may not feel a sense of acceptance; rather, they may be acutely aware of being different from their typically-

developing peers (Gross, 2010). They may even experience feelings of loneliness and isolation (Blaas, 2014; P. S. Jackson, 1998). Although teachers tend to express positive views about including high-ability children in their classes (Monsen, Ewing, & Kwoka, 2014), research shows some teachers remain resistant to the practice of acceleration, often citing social concerns (McCoach & Siegle, 2007; Rambo & McCoach, 2012; Southern et al., 1989). Such concerns about social acceptance seem contrary to the philosophy of inclusion, which embraces diversity in the classroom.

4.3 Study Purpose and Design

At the time of writing, we are not aware of any research examining the topic of acceleration from the perspective of students in inclusive classes. Therefore, the purpose of our study was to hear the voices of those students, and explore the beliefs that students' in grades 6, 7, and 8 inclusive classes hold about grade-based acceleration for high-ability students. Student voice is particularly important in fostering inclusive school communities that are accepting of high-ability students (Prior, 2011). Indeed, children are guaranteed the right to be heard under the 1989 United Nations Convention on the Rights of the Child (as cited in Wickenden & Kembhavi-Tam, 2014). Our study is an important step in hearing the voices of students in inclusive classes on the topic of grade-based acceleration in inclusive learning environments. Our findings can help teachers understand students' beliefs about including younger students with older classmates in the middle school years.

This research examining students' beliefs is framed by Ajzen's (1985, 1991) theory of planned behavior. Ajzen's (1985) theory describes the links between beliefs, intentions, and behaviors. According to theory of planned behavior, an individual's

beliefs influence three components which in turn influence intentions to perform a behavior. The three components of behavioral intentions include (a) an individual's attitude towards a behavior, (b) the subjective normative expectations of others perceived by the individual, and (c) the perceived degree of behavioral control. Applied to this study, theory of planned behavior illustrates how the beliefs which students hold about grade-based acceleration can influence their behavioral intentions and provides insight into whether intended behavior towards a younger high-ability student in their midst would be inclusionary.

Because of the paucity of research on this topic, we used a qualitative approach to our investigation. Qualitative research is well-suited for “exploratory research where little is known, and is useful in describing complex social issues, such as those surrounding inclusion” (Dare et al., 2017, p. 534). In addition to describing participants' beliefs about grade-based acceleration, we also created a data display of student-generated strategies to foster social inclusion of students who accelerate. Our approach followed quality indicators for qualitative research in special education with respect to sampling, question design, data accuracy and data analysis (Brantlinger, Jiménez, Pugach, Richardson, & Klingner, 2005). Specifically, we conducted in-person interviews with participants from the population of interest. We followed Patton's (2015) practical purposeful sampling recommendation, and specified a minimum sample size of 20 participants based on “expected reasonable coverage of the phenomenon given the purpose of the study” (p. 314). Our final sample size exceeded the minimum because we included all students who agreed to participate. We designed interview questions that were reviewed by experts for appropriateness; expert reviewers included four researchers with experience in education

research, all had research-based post-graduate degrees, and two had extensive teaching experience in the elementary school system. For data accuracy, we audio-recorded and transcribed interviews verbatim. Finally, we used qualitative data analysis (QDA) software to systematically organize, code, and query the data.

4.4 Method

4.4.1 Participants. Participants included students in a school in rural southern Ontario, within a local district school board which had a policy supporting acceleration. Across the district, the school board served over 15,000 students in grades K-12 in its 61 schools. In keeping with policies and practices in Ontario, the participants' school followed inclusive education principles, emphasising the inclusion of students with special education needs in inclusive classes. The school served a population of 220 students from Grades 4 to 8. Approximately 10% of students in the school lived in lower-income households and 6.4% received special education services (Ontario Ministry of Education, 2016).

Participants included 16 girls and 10 boys in Grades 6, 7, and 8. None of the participants, nor their classmates, were formally identified as exceptional due to intellectual high ability, and none had experienced acceleration. Table 1 shows the number of participants by grade and gender. Six participants, including two males and two females in Grade 8 and two females in Grade 7, indicated they knew or knew of someone who had accelerated. Acquaintances who had accelerated included "cousins," a "sister's old boyfriend," a "friend in enrichment classes" at a different school, and a parent who had "skipped a grade" in school.

Table 4-1
Participants Gender and Grade

<i>Gender</i>	<i>Number of Participants</i>		
	<i>Gr 6</i>	<i>Gr 7</i>	<i>Gr 8</i>
Male	3	4	3
Female	5	8	3

4.4.2 Ethics approval and consent. Prior to collecting data, we obtained ethics approval from our Institutional Research Board and the local District School Board. We also sought approval from the school principal. To recruit students, the school principal distributed letters of information and parent/guardian consent forms to students in Grades 6, 7, and 8. Twenty-six students returned signed consent forms. Students who had parent/guardian consent took part in individual, face-to-face interviews, conducted by the first author. Before asking the interview questions, the interviewer informed students about the voluntariness of participation and gave assurance that their responses would remain confidential. All students gave their permission to have their interviews audio-recorded for accuracy.

4.2.3 Instrument and data collection. We followed Patton's (2015) interview guide approach to gathering data. In this approach, an interview guide specifies the topics to be covered but "the interviewer remains free to build a conversation within a particular subject area" (Patton, 2015, p. 438). We designed our guide in question format; the interview questions were designed to "elucidate and illuminate" the subject of our research, namely students' beliefs about grade-based acceleration (Patton, 2015, p. 439). We then asked a panel of experts review the instrument for wording that might be unclear or confusing to children ages 9 to 13 years. Expert feedback was incorporated into the final guide, described below.

Interviews took place in a quiet space in the school, during the regular school day. The interviews were conducted by the first author, and began with the following warm-up question: *We're going to talk about school and learning, and I thought we'd get started by talking about what grade you are in and what's your favorite thing about school?*

Next, we asked students to tell us their opinions on whether some students learn faster than others, using the following prompt: *In a different study, some students told us that some students learn faster than others. What do you think about that?* We asked the following question to elicit students' thoughts on grade-based acceleration: *If a student learns faster than other students in the same grade, what do you think about the fast learner moving into a class with older students?* We also asked about how accelerated students might be included through the following questions: *What might it be like if you had a younger student, who was a fast learner, move into your class?* and *What are some things that could be done to help the student who moved up feel included?* Using a semi-structured approach, we encouraged students to elaborate on initial responses by asking probing questions such as *Can you think of anything else?* As recommended by Patton (2015), we concluded the interviews by asking *Is there anything I should have asked about that I didn't think of?* and giving participants the opportunity to add further comments.

4.2.4 Data analysis. The first author transcribed the audio recordings and entered them into QDA software. QDA software facilitates a rigorous approach to sorting, coding, and querying the data (Bazeley, 2011) and helps ensure results are “sorted and coded in a systematic and meaningful way” (Brantlinger et al., 2005, p. 202). We employed a thematic approach because this approach is particularly appropriate for qualitative studies exploring participants' “psychological world of beliefs” (Saldaña, 2016, p. 298). Our approach to analysis was grounded in the data and open to emergent themes (Patton, 2015). In other words, we examined the data for recurring ideas without adhering to a preconceived coding framework. Specifically, the first author transcribed,

read, and re-read all the transcripts, then coded the data by identifying and assigning labels to sections of text that were relevant to our research questions. The coded data were then grouped into categories. The second author engaged in peer-debriefing, a credibility measure used in qualitative research which involves reviewing and providing critical feedback on the descriptions, analyses, and interpretations of the study (Brantlinger et al., 2005). The results are described in detail below with illustrative quotes from participants (Saldaña, 2016).

4.5 Results

We report our findings in the following three sections: (a) students' perspectives on whether some students learn faster than others, (b) students' perspectives on grade-based acceleration, and (c) suggested strategies to promote the inclusion of accelerated students. In sections (a) and (b) on students' perspectives, we report the number of students grouped in each category. In section (c) on inclusion strategies, we report the number of comments for each strategy to reflect the emphasis placed on each, as many participants suggested more than one strategy.

4.5.1 Students' perspectives on learning faster. When asked whether some students learn faster than others, every participant indicated they believed that was true. Most students ($n = 17$) absolutely agreed; for example, one girl in Grade 8 said, "a lot of students learn faster than others; I definitely agree with that." And a girl in Grade 6 said, "some people can just pick it up and some of us just are like, 'What? I don't get what they're saying.'" Other participants ($n = 9$) agreed that students learn at different speeds and commented on factors that might be associated with learning speeds. Three students suggested the ability to learn faster might vary by subject. For example, "some might

learn faster in math, and some might learn faster in language” (Grade 7 female). Another three students believed how quickly a student learns might be related to learning or teaching styles. One boy explained, “... some people have a different way of learning and the teacher can have another way of learning that they won’t understand, but other people will understand” (Grade 6 male).

4.5.2 Students’ perspectives on grade-based acceleration. Students voiced a variety of perspectives on the idea of moving a fast learner in with older students. We coded students’ perspectives into three categories (a) positive opinions, (b) objections and concerns, and (c) “it’s complex.” We report the number of students who voiced each perspective. We also report comments relating to issues of equity and perceived fairness in relation to acceleration.

Positive opinions. Comments coded into the category *positive opinions* reflected agreement with and support for the idea of moving fast learners into classes with older students. Many participants (n = 11) agreed with the concept of acceleration: “I think it’s a really good idea” (Grade 6 male). Students spoke about the opportunity to learn as a reason for acceleration. Comments included “I think that it’s a pretty good idea because then they can learn faster” (Grade 7 female); “I would agree with [moving a fast learner up] because they don’t want to be stuck at stuff they already know, they want to be pushed more to education, the harder stuff, so they can learn more” (Grade 6 male); and “I think that’s alright because you get to learn new things” (Grade 8 male). Another participant said, “then they’re learning what they should learn ... that’s how smart they are” (Grade 6 female). One participant reflected on seizing the opportunity: “I would say yeah, if you can skip a grade, then go ahead” and reflected that students who have the

opportunity to accelerate are very fortunate: “you’re very lucky if you can skip a grade and understand it” (Grade 6 female). And a student who thought moving up a grade would be “pretty cool,” went on to say, “I’d want to be their friend, and learn how they learn so fast” (Grade 7 male).

Objections and concerns. Among negative comments towards acceleration, some students ($n = 7$) reflected concern for the student who moves up as well as concern for students in the receiving class. Concerns for the student who accelerates included comments about potential gaps in the student’s learning; for example, “they might miss something that their new classmates already know so they have to catch up” (Grade 8 female). Separation from existing friends was another concern: “It’s harder on the person who skips it because they’re not in the same class as their friends,” (Grade 7 female). The potential for being bullied by older classmates was also mentioned, for example, “the people in the grade that they were moved up into . . . might bully them a little bit and it might cause some mental problems for that child” (Grade 8 male).

Some objections to acceleration were based on concern for students in the receiving class and centred on the feelings of older students. For example, despite agreeing that some students learn faster than others, one participant said

I think it’s hard for the people who are in [the receiving] grade, because they kind of think they’re more stupid because they can’t move up higher, and that person who is so much younger than them is learning at their pace. (Grade 7 female)

It’s complex. Some participants ($n = 8$) described the potential for both positive and negative aspects of grade-based acceleration. One participant summed up both sides by suggesting grade-based acceleration “may be good, in some sense, but in some sense

is bad” (Grade 8 male). Indeed, our label for this category was taken from the following response:

I think [accelerated students] would maybe be excluded a lot. . . . it depends on the people. Like, I know some people who are really smart and if they go into a higher grade, they wouldn't be accepted, but I know some people that would be accepted because they have older brothers and sisters and they know them. Also, the people from their grade, let's say a grade six went to a grade eight class, the grade sixes would kind of forget about them, and not really care anymore, and be like “oh I guess that person's too good for us.” So, like yeah, it's kind of complex.
(Grade 8 female)

Comments coded into this category reflected a grasp of potential advantages and disadvantages of acceleration, including the potential to perform better (or worse) under greater pressure: “[the student who accelerated] would also have the pressure to do even better because you are in a higher grade, so that pressure works differently on some people; some people work well under pressure, some don't, and then that could change how you're doing” (Grade 7 female). Another student suggested that the opportunity to accelerate would be good but “would feel weird cause they're with a bunch of older people” (Grade 7 female). Another participant acknowledged that different people hold differing opinions towards acceleration: “I think it's fine, as long as the people in that class are okay with them being there, because sometimes those people don't exactly feel welcome” (Grade 7 female).

Issues of equity and fairness. Within students' perspectives on grade-based acceleration, the themes of fairness and jealousy emerged. A few students (n = 4) voiced

opinions on the equitability of acceleration. Interestingly, these comments reflected different perspectives. A couple of students suggested that moving a fast learner ahead would be unfair to other students: "I don't think it'd be fair for everyone else" (Grade 6 female). However, another student took the view that failing to accelerate a student who has a pre-existing grasp of grade-level material would be unfair to that student:

It's not fair to keep someone at a level that they're not, that like they're past. If I was at a higher level, I wouldn't want to be learning the same thing over and over again that I already know and am quick at. I'd like want to move on to something that's like a little more. (Grade 7 female)

This participant weighed both perspectives: "In some ways it can be fair, but in other ways it's like totally not right" and went on to explain:

It's not fair because some people may have a hard time and stuff, and some people in my classes may get easier work, and if someone just came from a lower grade, it might not make them feel so good because they're older and they should know some of the stuff ... maybe they should just get harder work, not moving up into another grade. (Grade 6 female)

Some participants ($n = 6$) commented on a potential for jealousy towards the student who accelerated. For example, a male participant in Grade 7 who voiced a positive opinion about the concept of acceleration said, "If I could [accelerate], I would. But I would be just a little jealous of someone that was my friend that did it." Another male participant in Grade 6 said, "Some people might be jealous like, 'Why is he moving up? I don't think he's that smart!'" The possibility that jealousy could lead to social exclusion was voiced in the following comment from a participant who objected to

acceleration: "People might like be a bit mean to them because they were jealous" (Grade 7 male). And a male participant in Grade 8 indicated that his reaction to the acceleration of a younger student might depend on the behaviour of the student who accelerated: "I might be a little jealous, but as long as they weren't sort of rude about it, 'Haha I got bumped up into your grade,' then I'd probably be alright with it."

4.5.3 Strategies to support the inclusion of accelerated students. We asked participants how students who accelerate could be supported to feel more included in school. The inclusive strategies that students generated fell into six main themes, reported below in order of emphasis according to frequency of comments (see Table 2). Notably, some students ($n = 4$) said their class already offered an inclusive learning environment that would be welcoming to an accelerated student. For example, one girl said, "In my class, a lot of the kids are accepting of everyone. We all get along with each other; we've had a couple new students this year, and they've found lots of friends" (Grade 7 female). A boy in the same grade said, "I don't think [including a student who accelerated] would be that big of a deal because they're all from the same school, so they probably already know each other."

Table 4-2

Themes Among Suggested Inclusionary Strategies

<i>Strategy</i>	<i>Emphasis</i>
Invite them ^a to join your group	●
Get to know them	●
Avoid singling them out	◎
Help them with school work	◎
Group them together or with buddies	◎
Structure learning activities	◎

^a *Them* refers to a student who accelerates.

● 10 or more references

◎ 5 to 9 references

◎ 1 to 4 references

Invite them to join your group. Participants in our study most often mentioned including students who accelerated by explicitly inviting them to join their group. These invitations extended to academic and social activities. Examples of comments about inclusion in academic group work included the following: “If they didn’t have a partner to work with in class, you could go work with them” (Grade 7 female) and “include them yourselves...let them in your group” (Grade 6 male). In social activities, extending the hand of friendship was suggested as another way to include accelerated students: “be their friend” (Grade 7 male). Students also mentioned including accelerated students in activities at recess. For example, “maybe if you were playing a game at recess, you could ask them if they’d like to play with you” (Grade 7 female); “play volleyball, or whatever you’re playing, with them” (Grade 6 female); and “include them with your sports” (Grade 7 male).

Get to know them. The second most often mentioned inclusion strategy was to get to know the accelerated student and treat them as a person. Examples of comments in this category included the following: “Talk to him . . . get to know him a little bit more” (Grade 6 male), “treat them with respect” (Grade 7 female), and “maybe they’re actually a nice person if they actually get the time [to know them]” (Grade 6 female).

Avoid singling out. Students suggested that inclusion could be encouraged by not treating the student who accelerated as different. For example, “if the people talked to them like they don’t consider their age when they were talking to them, be like, ‘this is still a person so I can talk to them just like I would talk to a different person my age’” (Grade 8 female) and “treat the student the same” (Grade 7 female). A couple of

participants suggested this strategy applied to teachers as well: “Don’t give them different tasks than the other people” (Grade 8 female).

Help them with school work. Some participants suggested that helping students who accelerate with school work might promote inclusion. Examples of comments in this category included “help them when they’re stuck on work” (Grade 6 female) and “teach them what you’re learning, because they could skip in the middle of the year and not really know what to do” (Grade 7 male).

Group them together or with buddies. Some students suggested building on existing social relationships to promote inclusion. For example, one student suggested high-ability students could be accelerated in small groups: “Maybe move two or three of them up, instead of just one, so they have each other” (Grade 8 female). Another student suggested that having a friend or acquaintance in the receiving class might help the student who accelerates feel more comfortable: “If there was another person that that kid knew in that class, then that would make it feel less awkward” (Grade 6 female).

Structure inclusive activities. A few suggestions related to teaching and learning activities. One suggestion was to create opportunities to get to know the student: “make a learning activity where everyone gets to talk to everyone, and everyone learns a bit about everyone” (Grade 7 female). Another suggestion was to structure activities that would allow students to demonstrate their knowledge: “show them that the student knows as much as they do” (Grade 7 female). One student suggested that teachers could avoid academic exclusion by exposing the student who accelerated to “the same curriculum that you are [teaching] everybody else” (Grade 6 female).

Student-generated strategies for inclusion. Figure 1 illustrates the strategies that students generated and shows how these strategies may combine to foster an inclusive learning environment for accelerated students. In the figure, strategies that could be used by classmates are in the upper segment and strategies that could be implemented by teachers are below, with the strategy to *avoid singling out* spanning both. Three classmate-led strategies related to social relationships and connect to the principle of showing respect for individuals by (a) getting to know them, (b) inviting them to join in, and (c) avoiding singling out. Participants also suggested that classmates could *help with school work*, a strategy that supports academic inclusion through social interaction. This strategy may be especially helpful when recently accelerated students are adjusting to a new grade-level. As Table 2 illustrates, students placed less emphasis on teacher-led strategies; however, they suggested that appropriate grouping of students and appropriate learning activities were two ways in which teachers could help students who accelerate feel included.

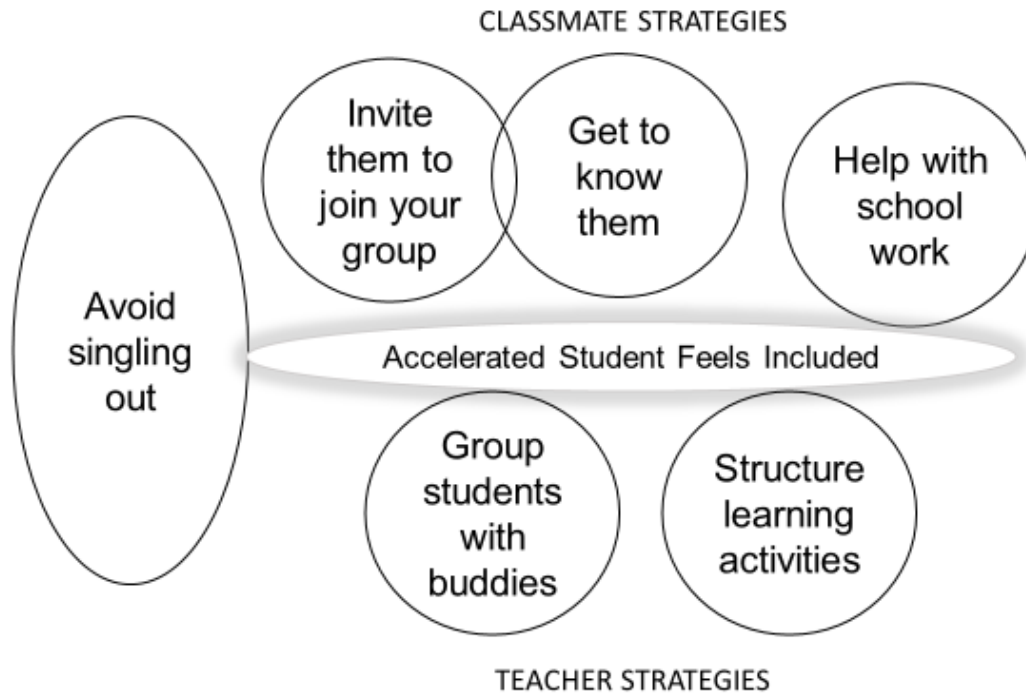


Figure 4-1: Strategies to include accelerated students in inclusive classes.

4.6 Discussion

Our study explored grade-based acceleration for high-ability students from the perspective of students in inclusive classes in Grades 6, 7 and 8. Although little has been published on inclusive strategies for students who accelerate, we know that teachers play a key role in implementing strategies to ensure high-ability learners fully develop their potential in inclusive classrooms (Bennett et al., 2008). Effective strategies include (a) establishing an environment that values intellectual thinking and creativity, (b) encouraging students to discover new learning “beyond the normal acquisition-of-knowledge level,” (c) providing challenging opportunities to interact with adults, students and a variety of experts, and (d) creating a safe environment for taking risks in learning (Bennett et al., 2008, p. 146). All of these strategies necessitate respect for individual needs and learning differences and appreciation of high-ability students’ needs to learn at their own level.

Research has shown that students are aware of different learning speeds (Klingner & Vaughn, 1999); similarly, our findings indicate that study participants strongly believed that some students learn faster than others. Knowledge of students’ awareness of learning differences may be useful when explaining the educational needs of diverse learners to students in inclusive classes. In the context of acceleration, teachers may explain the need for high-ability learners to access curricula at a pace faster than typical to match their ability to learn faster.

Many students in our study expressed positive attitudes towards the idea of supporting their high-ability peers through grade-based acceleration. Some participants, however, acknowledged competing factors in the decision to accelerate, indicating that

students in this age group can understand the intricacies and fine-touch required in the decision to accelerate. Research shows that the decision to accelerate a student must be thoughtfully and sensitively undertaken to support positive outcomes (Culross et al., 2013; Feldhusen et al., 1986; Gross, 2010). For example, potential candidates for acceleration should be carefully screened and accelerated students should be well-supported by the receiving teacher (Culross et al., 2013). Screening should include assessment of the student's academic abilities as well as their readiness and motivation to accelerate (Culross et al., 2013; Gross, 2008). Key stakeholders, including teachers, parents, principal, and the student, must decide together which type of acceleration is most appropriate at what time, and they should also set out plans to evaluate the strategy in each individual case (Gross, 2008). One tool that can facilitate this discussion is the Iowa Acceleration Scale (Assouline et al., 2009). The Iowa Acceleration Scale uses information from a variety of sources to guide a team-based decision on the suitability of acceleration on a case-by case basis. However, as the scale was developed in the United States, some of the terms and tests in this scale may need to be adapted for use in other countries (Gross et al., 2011).

Among study participants, a minority expressed objections and concerns about grade-based acceleration. These objections and concerns tended to be linked to potential feelings of jealousy or perceived unfairness. As inclusive education is built on the principles of equity and fairness, we were intrigued to find that study participants invoked these same principles in their arguments both for and against the idea of acceleration for high-ability learners. Although the majority of participants supported the concept of acceleration, statements from students opposed to the idea indicated they mistook equal

treatment for equality. This mistaken belief has also been reported in the literature on attitudes towards including students with learning disabilities (Berry, 2008).

Acceleration is an equitable practice which supports individualised programming for high-ability children at a pace that matches their needs (Assouline et al., 2015). Since equity involves providing treatment based on needs, objections to the practice of acceleration in the name of “fairness” reflect a misunderstanding of what it means to provide equitable opportunities.

Across the three grades in our study, participants suggested a variety of strategies to encourage the inclusion of students who accelerate and emphasized behaviors classmates could undertake to be inclusive. In Koster et al.'s (2009) analysis of 62 studies of social inclusion they identified “playing together,” “working together on tasks,” and “participation in group activities” as examples of measures of social inclusion (p.397). Although Koster et al.'s (2009) analysis encompassed only inclusion of students with learning difficulties, participants in our study believed similar strategies could foster the inclusion of high-ability students who accelerate. Specifically, participants mentioned getting to know students who accelerate, inviting students who accelerate to join their group, and helping with school work as inclusive strategies.

Some participants expressed openness to establishing new friendships with accelerated students. In a report on acceleration across Australia, Gross et al. (2011) indicated that highly academically able students “may be socially isolated in a class of age-peers; they may be just too different in their abilities, attitudes and values to be easily accepted” (p. 40). In exemplary acceleration practice, social isolation of high-ability students among same age-mates does not preclude consideration for acceleration. On the

contrary, lack of friends may indicate a high-ability student is experiencing a poor fit in same-age grade placement, and acceleration may be one way to ameliorate this mismatch (Gross et al., 2011). Indeed, our own research showed parents' perceived improvements in the quality and quantity of friendships that their children experienced following acceleration (Dare, Smith, & Nowicki, 2016). Findings from our research lead us to suggest that schools which foster an inclusive culture may provide ideal learning environments where younger high-ability students can form new friendships among older classmates.

Through our analysis of student generated inclusive strategies, we identified two themes that relied on teacher implementation: *structuring learning activities* and *grouping students with buddies*. The research literature on strategies for social inclusion of students with learning difficulties has often focused on strategies that can be implemented by teachers or administrators (Nowicki, Brown, & Stepien, 2013). Indeed, planned interactions among students of all abilities can help promote inclusion (Nowicki & Brown, 2010). This approach echoes suggestions by participants in our study that teachers could organize activities requiring social interactions and sharing of knowledge. A couple of comments from participants suggested that sharing knowledge with students who accelerate could work in both directions. Whereas one student suggested he would like to learn about learning from a hypothetical fast learner who moved into his class, another student suggested helping fill knowledge gaps that students who accelerate might encounter.

Research has shown that social exclusion in schools may reflect a focus on difference (Nowicki, Brown, & Stepien, 2014). Teachers need to know that high-ability

students may be keenly aware of being different from their typically-developing peers (Gross, 2010) and may feel isolated and lonely (Blaas, 2014; Jackson, 1998).

Interestingly, some comments in our study implied awareness of potential negative aspects of focussing on difference. Specifically, some participants proposed that singling out students who accelerate could hinder inclusion and they recommended teachers and students avoid such behaviors. These findings suggest that social inclusion involves a delicate balance between celebrating diversity and identifying similarities. As Florian (2014) eloquently put it, “inclusive pedagogy is an approach to teaching and learning that supports teachers to respond to individual differences between learners, but avoids the marginalisation that can occur when some students are treated differently” (p. 289). In practice, this balance may be difficult to achieve; high-ability students who accelerate continue to need special education support and differentiated programming (Dare et al., 2016; Gross et al., 2011). However, principals and teachers must take the lead to foster inclusive environments where individual differences are respected (Gross et al., 2011). Exemplary practice in school leadership involves creating an environment where “a child being accelerated is just one example of something that is different” (Gross et al., 2011, p. 44). Other examples of respected differences might include students bringing different ethnic foods to school, girls selected for a typically male school soccer team, or boys choosing dance instead of sports activities.

4.7 Practical Implications

The findings from this study have many practical implications for institutions and individuals. Our review of the literature indicates that some educators hold misconceptions about social adjustment and acceptance of students who accelerate

(McCoach & Siegle, 2007; Rambo & McCoach, 2012; Southern et al., 1989; S. Wood et al., 2010). To help dispel the myths around educational acceleration, teacher education institutions must inform student teachers about evidence-based interventions for high-ability students. Teacher preservice education and professional development can have a positive influence on teacher knowledge and attitudes towards supporting high-ability students (Lassig, 2009). Findings from this study suggest that teachers' fears about the potential for social exclusion of accelerated students may need critical, contextual re-examination. Participants in in this study, who were educated in inclusive classes, expressed awareness of learning differences, were generally open to the idea of grade-based acceleration. Through pre-service education and professional development, teachers could be made more familiar with accelerative options as a form of differentiation for high-ability students (Kanevsky, 2011; Lassig, 2009). Also, professional development on how to use tools such as the Iowa Acceleration Scale could help teachers feel more confident making decisions about acceleration in individual cases (Assouline et al., 2009).

Our findings also have implications for teachers supporting high-ability students in inclusive education environments. Students in our study were aware that students learn at rates slower, or faster, than others in same-age classes. While our sample size is too small to generalize to other populations, teachers can assess their own students' awareness of different learning needs and expand or build on this awareness to help explain the need for individualised or differentiated learning. These differences in learning needs can be acknowledged and respected within a spectrum of diversity, rather than triggering exclusionary behaviour. The strategies suggested by participants in this

study may already be familiar to teachers working in inclusive environments; applied to the inclusion of students who accelerate, encouraging students to “get to know” their classmates as individuals may foster inclusivity, regardless of ability or learning difficulty.

Participants in our study were sensitive towards the needs of students who accelerate. Teachers working with accelerated students also need to be cognizant of these needs (Hoogeveen et al., 2009). According to Gross et al, (2011), “schools displaying exemplary practice [in acceleration] place emphasis on, and allocate time to, adequately preparing the student, the receiving teacher and students in the class the accelerand will move into” (p. 28). Opportunities to cultivate acceptance of students who accelerate might include helping students become acquainted through structured activities and by grouping students together with like-minded peers (Nowicki & Brown, 2013). Some participants expressed sensitivity towards the feelings of students in the receiving class and the potential for negative feelings of jealousy. In response, teachers need to remain mindful to take a sensitive approach to implementing differentiated learning to avoid the perception of “singling out” accelerated students.

Although the majority of participants supported the concept of grade-based acceleration for high-ability students, some students in our study were not as open to the idea. Teachers need to be aware of the potential for negative attitudes towards acceleration among other students (or even among other teachers!) as such attitudes may be a barrier to the social inclusion of students who accelerate in inclusive classes. Teachers can address these attitudes within the philosophy of equity and social justice. The issue of “fairness” featured among students’ responses, indicating students have a

grasp of the need for equitable opportunities. However, students might benefit from instruction in the difference between equity and equal treatment; equity is sometimes mistakenly viewed as receiving the same treatment rather than receiving needs-based treatment (Gross et al., 2011). The principle of needs-based treatment can be illustrated using the analogy of healthcare, where fairness means everyone gets what they need, rather than getting the same treatment. Just as individuals have different healthcare needs and therefore receive different medical treatment, individuals also have different educational needs and require different educational support to fully develop their potential (Berry, 2008).

4.8 Limitations and Future Research

Our study population was from one inclusive school in southern Ontario and other researchers in other settings may find different results. In particular, our study was limited to students in Grades 6, 7, and 8 in inclusive classes, and students in other grades or different schooling systems may voice different opinions. Future research could look for regional variations and also explore potential differences in beliefs about grade-based acceleration across different grade-levels. Only a few participants in this study knew of students who had been accelerated, and it is unclear whether their perceptions would change if they encountered accelerated students in their classes; however, this limitation could be considered a strength of the study because participants considered a hypothetical scenario rather than focusing on individuals. None of the students in this study were identified as exceptional due to high-ability. Future research could examine beliefs held by high-ability students about grade-based acceleration in inclusive classes. We also recognize that selection bias may limit our study findings, as participants were volunteers

who required parent/guardian consent to participate. We acknowledge that students with consent may have differed in some way from students who did not participate. Despite these limitations, which are characteristics of our qualitative approach, studies such as this in education “remind us to question what we think we know and who we think we are as professionals” (Brantlinger et al., 2005, p. 200).

4.9 Conclusion

Our study sought to understand acceleration for high-ability students from the perspective of students in an inclusive elementary school, so researchers and teachers can learn from what students have to say. This knowledge may help teachers feel better prepared to cultivate inclusive classroom environments. To achieve the goals of inclusive education, teachers must find ways to promote both academic and social inclusion while supporting all students to develop their potential. Acceleration is an educational strategy that can support these goals for high-ability students; however, the option to accelerate is sometimes denied due to teachers' fears about social adjustment and acceptance (McCoach & Siegle, 2007; Rambo & McCoach, 2012; Southern et al., 1989; S. Wood et al., 2010). Such fears may run counter to the philosophy of equitable and inclusive education, which supports acceptance, respect, and high expectations for learning (Ontario Ministry of Education, 2014b). Encouragingly, participants in our study were open to accelerative options for high-ability students and ready to accept accelerated students within their inclusive educational setting.

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<http://doi.org/10.1177/0016986210367940>

5. Final Considerations

This chapter concludes my dissertation. Through these final considerations, I aim to tie together findings from the three manuscripts, provide reflections on my learning, and propose future directions stemming from this research.

5.1 Overall Findings

Taken together, the manuscripts in this dissertation provide insights into the perspectives of students ages 9 to 14 on grade-based acceleration. To recap, I conducted the following research: (a) created a structured conceptualization of beliefs about deciding on grade-based acceleration from the perspective of Australian students who accelerated (Chapter Two); (b) created a structured conceptualization of beliefs about deciding on grade-based acceleration from the perspective of Canadian students in inclusive classes in Ontario, Canada (Chapter Three); and (c) explored Ontarian students' beliefs about grade-based acceleration and potential inclusion strategies for students who accelerate (Chapter Four). By examining these issues, I aimed to explore students' perspectives on factors to consider in the decision to accelerate, and to explore students' beliefs about how students who accelerate might be included in inclusive classes. Through the lens of Ajzen's (1985) theory of planned behaviour, individual student's beliefs reveal how they might behave towards younger classmates who moved up a grade. Most importantly, I aimed to add to existing literature on acceleration by hearing from students who have seldom been heard.

5.1.1 Learning from Chapter Two. In chapter two, I reported my research with Australian high-ability students. I recruited participants for this research through

networks and organizations in Australia that support education for high-ability students. In my original proposal, I planned to involve high-ability students in generating *and* structuring the data; however, I had not anticipated so many of the high-ability students in this study would have experienced acceleration. As the reader may recall, respondents included 17 high-ability students who had accelerated, and this number is greater than the minimum required for group concept mapping (Kane & Trochim, 2007). Kane and Trochim (2007) advise that “it is not necessary that all participants take part in every step of the process . . . a much smaller group may perform the sorting task” (p. 11). In keeping with their advice, I decided to use data sorted and rated by the students who accelerated to create a structured conceptualization of important considerations in the decision to accelerate. By involving these students in structuring the data, the final concept map provides insights that are grounded in students’ experiences.

Findings from this study showed Australian students who accelerated held beliefs that tended to align with existing acceleration guidelines (Assouline et al., 2009; Culross et al., 2013; Feldhusen, 1982). For example, participants rated the concept *Academic Challenge* as a key consideration in the decision to accelerate. In fact, among the set of 60 items, they rated the question *Is the child academically capable?* as the most important item overall. This finding is perhaps not surprising as the need for academic challenge is an initiating factor in the consideration of accelerative interventions. But a Vygotskian perspective reminds us that academic, social, and emotional experiences are intertwined in learning and development (Vygotsky, 1978). For this reason, students’ academic, social, and emotional needs must be considered holistically when thinking about accelerative interventions. In my research, Australian students generated a

comprehensive list of beliefs about considerations that extended beyond academic needs, and these beliefs were conceptualized into clusters in the concept map, including *Child's Thoughts About Moving Up, Single Subject Acceleration, New Class, and Others' Thoughts*.

5.1.2 Learning from Chapter Three. Acceleration is somewhat rare in Canada (Kanevsky, 2011), and I was unable to recruit sufficient students who accelerated in Canada to conduct a group concept mapping inquiry on the topic of grade-based acceleration. I tried recruiting high-ability students across the provinces of Canada using an approach similar to the recruitment method used across the states in Australia; namely, by reaching out to Canadian organizations that support bright and gifted children. The overall response was lower than in Australia, and among twelve Canadian high-ability students who were willing to participate in the study, only three had accelerated. Consequently, I could not conduct a concept mapping study with Canadian students who accelerated.

To add Canadian perspectives to this dissertation, I asked students in inclusive Grade 6, 7, and 8 classes about their beliefs on the topic of grade-based acceleration. Their perspectives are particularly valuable as potential classmates. In the study reported in Chapter Three, I again used a concept mapping approach to explore how students in inclusive classes in Ontario conceptualized the importance of factors to consider in the decision to accelerate. Once again, I chose this methodology because it is a rigorous, mixed method approach which places analytic emphasis in the hands of participants. Through two phases of data collection, I heard students' perspectives on grade-based acceleration, and asked their advice on what parents and teachers should consider when

deciding whether fast learners move into classes with older classmates. The group concept mapping investigation revealed participants' beliefs about various possible advantages of grade-based acceleration. Perceived possible advantages included aspects of accelerative interventions that could be better for the student who accelerated, conceivable benefits to classmates, and the potential for the practice of accelerative placements to ease teachers' workload. Students also identified some concerns about moving up, including potential barriers to the social acceptance of students who accelerate.

Comparing findings from Australian and Ontarian (Canadian) participant groups must be exercised with caution, as differences could be associated with differences in cultural contexts, educational environments, academic ability, or some interaction effect. With this caution in mind, similarities in participants' perspectives may indicate points of agreement, or emphasis, when considering various factors in the decision to accelerate. In addition, acknowledging areas where beliefs diverge can illustrate differing viewpoints. For ease of reference in the following descriptions, I refer to study participants who were from inclusive classes in Ontario as *Canadian*.

Through the two concept mapping studies, both groups of participants rated what's best for high-ability students' academic development to be of key importance when deciding on grade-based acceleration. In addition, both groups expressed an awareness of potential barriers to the social acceptance of fast learners who move into classes with older students. Across both Australian and Canadian studies, friendships (e.g., *Whether the child would still be able to be with their friends*, Australian Item 29; *They would probably be sad because they wouldn't be able to see their friends*, Canadian

Item 33) and social acceptance (e.g., *The school's social system – whether they year group they are moving into is friendly*, Australian Item 26; *Moving someone up wouldn't be that big of a deal because they're all from the same school, so they probably already know each other*, Canadian Item 14) were mentioned by students as considerations in the decision to accelerate.

On the topic of social acceptance, inclusive education aims to ensure all students are accepted regardless of diversity. Canadian participants were educated in a school adhering to a philosophy of inclusion, and some participants explicitly described an accepting culture within the school. However, some of the Canadian participants expressed beliefs about potential social issues that could arise following grade-based acceleration, such as loss of friends and potential bullying. Interestingly, an item in the Australian data put a different perspective on friendships and bullying; *If the child is being bullied in the same year or maybe they might be having friendship problems, consider whether they could start again if they move up a class* (Australian Item 21). Issues of potential jealousy or taking offence towards students who accelerated were mentioned by Canadian participants; for example, *Some people would be really offended* (Canadian Item 47) and *The older students might be jealous* (Canadian Item 43). Conversely, a comment from an Australian participant indicated that grade-based acceleration might lessen the potential for same-age classmates to feel aggrieved: *You don't want same-age children to feel like the fast learner is more important than them, so you don't want to give higher level work in the same class* (Australian Item 28). These comments illustrate diversity in students' beliefs about the social acceptance of students who accelerate.

Research suggests that some high-ability students do not feel socially accepted among same-age peers; they may experience feelings of loneliness and isolation (Blaas, 2014; P. S. Jackson, 1998), and be acutely aware of being different from their typically-developing peers (Gross, 2002). Some high-ability students encounter what has been called a *forced-choice dilemma*—they feel they must choose between fulfilling their academic potential and being accepted by their peers (Jung, Barnett, Gross, & McCormick, 2011). On the other hand, in an ideal inclusive classroom where uniqueness is accepted, “no one need feel that they do not belong” (Specht, 2013, p. 46). In the context of inclusion, chronological age can be considered an aspect of diversity. One Australian participant who accelerated put it this way: “If one person thinks like another person, it doesn’t really matter what age you are” (Tom, age 9).

5.1.3 Learning from Chapter Four. In chapter 4, I thematically analyzed the interview transcripts from the first phase of interviews with Canadian participants. In this analysis, I examined whether participants perceived differences in how quickly students learn, and whether their perspectives on grade-based acceleration were generally positive or negative. I also analyzed and reported student-generated strategies on how students who accelerated could be supported in inclusive classes. This research involved the same group of Canadian students who participated in the group concept mapping study reported in chapter three. However, this study differed from the group concept mapping study in several ways, including type of analysis and data analyzed. The research presented in Chapter Four relied exclusively on thematic analysis of qualitative data collected in phase one interviews. In comparison, the research presented in Chapter Three relied upon statistical analyses of the way students sorted and rated a synthesized list of

statements. Although Chapter Three relied on a second phase of participation, the chapters are presented according to the chronological sequence of events in the process of acceleration; Chapter Three relates to the decision to accelerate, and Chapter Four relates to inclusion following acceleration. Specifically, Chapter Three focussed on factors for parents and teachers to consider in the decision to accelerate, whereas Chapter Four focussed on students' ideas about inclusion strategies for students who accelerate.

Through the study presented in Chapter Four, students shared ideas about things they could do to help a student feel more accepted, and, encouragingly, four of the students said their classes were already very accepting. While conducting this research, I perceived the school to have a warm and welcoming feel; the principal and staff were very accommodating, and the students were polite, friendly, and helpful.

My examination of Canadian students' beliefs about grade-based acceleration in inclusive classes, found students mentioned issues of fairness as well as learning potential. Some said fast learners deserve have opportunities to learn what they don't already know. However, a few Canadian participants suggested that moving a fast learner in with older students would be "unfair." Findings from the study presented in chapter four led to some practical implications to promote social inclusion of students who accelerate. These implications included the suggestion that students might benefit from direct instruction on the difference between equal treatment, where students receive the same educational supports, and equity, where students receive the educational supports they need to develop their potential.

5.1.4 Students' advice on making decisions about grade-based acceleration.

Australian and Canadian students who participated in this research expressed many

beliefs that aligned with existing guidelines on making decisions about acceleration. As participants mentioned, important considerations in the decision to accelerate include considering the students' wishes, taking into account academic abilities across all subject areas, and placing students who accelerate in supportive environments (Assouline et al., 2009; Culross et al., 2013). Participants' concerns often mirrored those expressed by educators; this finding emphasizes the need for students who accelerate to be supported to feel socially comfortable among older students (Gross et al., 2011). Canadian and Australian participants believed that social acceptance may rely to some extent on intrapersonal qualities of the high-ability student (e.g., *Whether the child is socially prepared for moving up a year*, Australian Item 49; *They might feel a bit nervous because they're with a bunch of older kids*, Canadian Item 16). However, both groups of students also expressed beliefs about the context of social acceptance within the school environment (e.g., *If the older children aren't very nice, the younger child is probably going to be teased, but if there's some nice older children, moving to a higher class is probably a good idea*, Australian Item 36; *Moving up is fine, as long as the people in that class are okay with them being there*, Canadian Item 24).

A key finding from my research with Australian students who accelerated was that they rated academic needs as more important than social concerns when making decisions about acceleration. Similarly, Canadian students rated *Better for the Fast Learner* as a relatively important concept in considering grade-based acceleration. These insights from students were particularly interesting in light of findings from research I conducted with parents of Australian students who accelerated (Dare, Smith, & Nowicki, 2016). Describing their experiences, parents placed "an equal emphasis on positive

academic, social, and emotional outcomes [of acceleration], and outcomes were linked across these three areas” (Dare, Smith, & Nowicki, 2016, p. 16). This finding echoes Vygotsky’s (1978) perspective that learning is a dynamically complex process, wherein affect and intellect are related, and reminds us of the dangers of becoming too concerned with one facet of acceleration over another (i.e., socio-emotional vs. academic). The findings from my dissertation research suggest that students in these studies believed a holistic, student-centred, and inclusive approach is most appropriate when making decisions about accelerative interventions.

5.2 Reflections

Educating high-ability children can be challenging. For every child to develop their potential, approaches to education must be flexible, adaptable, and equitable. At the same time, the philosophy of inclusive education aims to ensure “all students have a sense of belonging, of being included and cared for, and of interconnectedness with something larger than themselves—of being a part of a community.” (Katz et al. p. 3). Research shows that accelerative interventions can begin to address the needs of high-ability students. My research examined students’ beliefs about grade-based acceleration, and explored this idea through the lens of inclusion.

5.2.1 Personal reflections. A doctoral journey teaches many things, not least that we have much more to learn. And who better to learn from than young people currently in school? I am grateful to every student who shared their thoughts with me, and I hope my interpretation and presentation of the results does justice to all who participated.

As a parent of children who experienced different types of acceleration, I was keen to learn about others’ experiences with acceleration. After reviewing the literature,

and hearing many stories about acceleration over the course of my doctoral studies, I am convinced that many high-ability students could benefit from grade-based acceleration. Yet, I am more convinced than ever that acceleration must be implemented with care, sensitivity, and authentic respect for diversity.

Through my research in Australia, I learned that acceleration works well in schools that practice a culture of acceptance, where acceleration is viewed as just another way to differentiate (Dare et al., 2016). Although grade-based acceleration is somewhat rare in Canada (Kanevsky, 2011), and the province of Ontario has no provincial policy on acceleration (Kanevsky & Clelland, 2013), my research with students in inclusive classes in Ontario suggests accelerative interventions may work well for high-ability students in Ontario's inclusive education system. As education systems around the world move towards inclusive education (Ainscow, 2007), questions about whether students who accelerate may face difficulties fitting in to the new class can be addressed within a philosophically inclusive approach.

During my research with Australian students, I spoke to many parents of students who accelerated. In these informal conversations, I heard about families' journeys through the process of acceleration. While some parents shared positive stories of children who thrived in school environments that were accepting of accelerative interventions, others told stories of resistance towards acceleration, negative criticism towards their choices, and isolation of parents whose children accelerated. I found many informal stories to be quite evocative. For example, one teacher told his Grade 5 class they "should" be able to complete assigned work because a classmate who had accelerated could do it; one particularly advanced student was allowed to accelerate if she

was willing to forgo academic awards; a mom revealed she daren't tell her friends that her child was moved up a grade for fear of criticism; and a dad chatted for over an hour, then declared there'd been no follow up from the school and I was the first person who had taken an interest since his son accelerated years earlier. These shared anecdotes of the challenges families face were not part of my formal data collection on students' perspectives, yet they serve as a reminder that educational acceleration can be a public event (Assouline et al., 2009), and concerns about the social acceptance of students who accelerate reach beyond acceptance by classmates.

Although students' personal experiences with acceleration were not the primary focus of this dissertation, through my discussions with Australian participants I learned that students who accelerated expressed positive comments about their experiences. For example, Rashed (age 12) said, "I found out the last week of term [that I'd be accelerating] ...the main emotions were, 'Yay! I'll be doing less boring work!'" Eve (age 9) said, "I liked [moving up], it was fun, I was actually challenged more". And Zoe (age 11) told me, "I skipped grade 3. I didn't think that was too much of a dramatic change for me. ... I found I was with more of my friends." Comments such as these encourage me to continue with my research focussed on grade-based acceleration.

5.3 Limitations

When contemplating the findings from this research, some limitations are worth keeping in mind. First, participants included students who had parental consent to participate. Conceivably, the requirement for parental consent may bias the sample in some way. On a similar note, as with all research, participation was voluntary, which means students who participated may differ systematically from their non-participating

peers. Among Australian students, inclusion criteria included self-identified high-ability, rather than a formal identification or assessment. However, I am confident all participants had high-ability because the recruitment process targeted organizations that supported high-ability students, and, in addition to parents' reports, all Australian students involved in sorting and rating the data confirmed they had experienced grade-based acceleration. Finally, the relatively small samples sizes, while sufficient for this exploratory research and concept mapping approach, mean that other researchers in other settings may discover different findings.

5.4 Future Directions

This section covers two aspects of future directions arising from the research presented in this dissertation: making decisions about grade-based acceleration, and areas for future research.

5.4.1 Making decisions about acceleration. The purpose of this dissertation was to examine students' beliefs about grade-based acceleration. By examining students' beliefs, I hoped to shed new light on grade-based acceleration, and to better understand how accelerative interventions might be applied, especially in the context of inclusive classes. My research showed that Australian and Canadian students believed there are multiple factors to consider when making decisions about acceleration. Both groups rated student-centred factors as key considerations.

Understanding students' perspectives on grade-based acceleration may help educators and parents make informed decisions about accelerative interventions. In addition, acceleration guidelines such as the Iowa Acceleration Scale can help educators and parents navigate the complex issues surrounding acceleration and make well-

informed, individualised decisions about acceleration (Assouline et al., 2009). As described in chapter two, experts at the Belin-Blank Center for Gifted Education and Talent Development developed the Iowa Acceleration Scale to aid in the decision-making process. According to the authors, the Iowa Acceleration Scale “provides educators and parents with a systematic and defensible way to generate recommendations and guidelines that will help make educated and appropriate placement decisions” (Assouline et al., 2009, p. x). The findings from this dissertation lend support, from the perspectives of Australian students who accelerated and Canadian students in inclusive classes, to many of the recommendations in the existing literature about making informed decisions on accelerative interventions.

Moving forward, perhaps educators and parents can be made more aware of existing research on accelerative interventions. By increasing awareness and knowledge of current research on acceleration, decision-makers will be better informed to make objective decisions about accelerative interventions which prioritise consideration of high-ability students' needs. Perhaps teachers can receive training on how to use acceleration guidelines. This professional development could be incorporated into pre-service training on the special education needs of high-ability students and Advanced Qualification courses on special education. In addition, perhaps in future more policy-makers will recognize the need for policies to guide equitable decisions about accelerative interventions.

5.4.2 Future research directions. Vygotsky's view, that learning and development happen through social interactions within cultural contexts, reinforces the importance of examining the social aspects of educational acceleration. Much of the

existing research on accelerative interventions uses quantitative measures of academic and socio-emotional outcomes of acceleration (e.g., McClarty, 2015a; Rogers, 2007; Steenbergen-Hu & Moon, 2011); future research could use qualitative approaches to examine more closely the dynamic relationships between intellectual and affective experiences of students who accelerate.

To better inform policy, programming, and decision-making for Canadian high-ability students, future research could examine accelerative experiences of students who accelerated in inclusive Canadian classrooms. However, finding Canadian students who accelerated in regular classes may be a bit of a chicken or egg situation—if acceleration is rarely practiced, it may be difficult to find students who experience acceleration in Canadian classrooms. Nonetheless, I believe this avenue of research deserves further exploration to better understand the cultural context of educational acceleration within Canadian inclusive education systems.

One regret stemming from my doctoral journey is that I was unable to recruit sufficient teachers to create a concept map illustrating how teachers conceptualize grade-based acceleration. Although some researchers have examined teachers' attitudes using surveys and interviews, I think we could learn more about teachers' beliefs using a concept mapping approach. Through group concept mapping, we could explore teachers' beliefs in their own words, examine how teachers rate the importance of various aspects of grade-based acceleration, and compare how educators and students view grade-based acceleration. This type of comparative research could illustrate similarities and differences in the perspectives of students and teachers, who may hold different beliefs about acceleration (Dare, Dare, & Nowicki, 2017).

Likewise, future research could examine the beliefs of other stakeholder groups, including parents of high-ability children and principals. Students, teachers, parents, and principals might rate the importance of various considerations differently, and it may be helpful to understand where similarities and differences exist, so we can better understand different perspectives.

Finally, in my research with Canadian students in inclusive classes, some students believed benefits to others—teachers and older classmates—could ensue from accelerative practices. It would be valuable to investigate whether these benefits have been realised in environments where acceleration is widely accepted and practiced.

5.5 Last Words

Acceleration is one way to help meet the educational needs of high-ability students; however, other interventions may also be needed, and acceleration may not be suitable for every high-ability student. To make well-informed decisions about appropriate interventions, we need to examine the evidence about what works well for high-ability students. To this end, acceleration can be considered as part of a menu of choices. When deciding on acceleration, decision-makers need to know what factors to consider, and educators need to know how to ensure students who accelerate feel accepted at school. This dissertation adds students' voices to the literature on these issues, moving us closer to embracing genuine inclusivity across full learner diversity.

5.6 References

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Appendix A: Ethics approval UWO



Research Ethics

Western University Health Science Research Ethics Board
 NMREB Delegated Initial Approval Notice

Principal Investigator: Dr. Elizabeth Nowicki
 Department & Institution: Education/Faculty of Education, Western University

NMREB File Number: 106880
 Study Title: Acceleration in Inclusive Education: Educators', Parents', and Students' Beliefs
 Sponsor:

NMREB Initial Approval Date: July 27, 2015
 NMREB Expiry Date: July 27, 2016

Documents Approved and/or Received for Information:

Document Name	Comments	Version Date
Instruments	Student Data Generation Interview Guide GBA Beliefs	2015/06/30
Instruments	Instrument Student Sort Rate GBA Beliefs	2015/06/30
Instruments	Parent Survey	2015/06/30
Instruments	Instrument Parent Sort Rate GBA Beliefs	2015/06/30
Instruments	Instrument Educator Sort Rate GBA Beliefs	2015/06/30
Instruments	Educator Survey	2015/06/30
Recruitment Items	UWO grad student email GBA beliefs	2015/06/30
Recruitment Items	Principals Letter GBA Beliefs	2015/06/30
Recruitment Items	UWO Grad Office email GBA Beliefs	2015/06/30
Recruitment Items	ABC Online Notice GBA Beliefs	2015/06/30
Recruitment Items	ABC Executive GBA Beliefs	2015/06/30
Recruitment Items	ABC Members GBA Beliefs	2015/06/30
Revised Caregiver Letter of Information & Consent	LOI revised parent consent clean	2015/06/30
Revised Letter of Information & Consent	LOI parent revised	2015/06/30
Revised Letter of Information & Consent	LOI educators revised	2015/06/30
Revised Western University Protocol		2015/06/30

The Western University Non-Medical Research Ethics Board (NMREB) has reviewed and approved the above named study, as of the NMREB Initial Approval Date noted above.

NMREB approval for this study remains valid until the NMREB Expiry Date noted above, conditional to timely submission and acceptance of NMREB Continuing Ethics Review.

The Western University NMREB operates in compliance with the Tri-Council Policy Statement Ethical Conduct for Research Involving Humans (TCPS2), the Ontario Personal Health Information Protection Act (PHIPA, 2004), and the applicable laws and regulations of Ontario.

Members of the NMREB who are named as Investigators in research studies do not participate in discussions related to, nor vote on such studies when they are presented to the REB.

[Redacted] Department of Health & Human Services under the IRB registration number IRB 00000941.

[Redacted] NMREB Chair or delegated board member

[Redacted] Ethics Officer to Contact for Further Information

[Redacted]	[Redacted]	[Redacted]	[Redacted]
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This is an official document. Please retain the original in your files.

Appendix B: Ethics approval UNSW



Human Research Ethics Advisory (HREA) Panel B: Arts, Humanities and Law
 The University of New South Wales
 UNSW Sydney, NSW, Australia, 2052
 E: [REDACTED]

01-Oct-2015

Dear Dr Susen Smith,

Project Title	Perspectives on Acceleration in Inclusive Education
HC No	HC15598
Re	Notification of Ethics Approval
Approval Period	01-Oct-2015 - 30-Sep-2020

Thank you for submitting the above research project to the **HREAP B: Arts, Humanities & Law** for ethical review. This project was considered by the **HREAP B: Arts, Humanities & Law** at its meeting on 29-Sep-2015.

I am pleased to advise you that the **HREAP B: Arts, Humanities & Law** has granted ethical approval of this research project, subject to the following conditions being met:

Conditions of Approval Specific to Project: Conditional approval is granted subject to the provision of the Department of Education's SERAP approval letter, letters of support or approval from participating schools, and evidence of a Working with Children check for Lynne Dare (approval number).

Conditions of Approval – All Projects:

- The Chief Investigator will immediately report anything that might warrant review of ethical approval of the project.
- The Chief Investigator will notify the **HREAP B: Arts, Humanities & Law** of any event that requires a modification to the protocol or other project documents and submit any required amendments in accordance with the instructions provided by the **HREAP B: Arts, Humanities & Law**. These instructions can be found at <https://research.unsw.edu.au/research-ethics-and-compliance-support-recs>.
- The Chief Investigator will submit any necessary reports related to the safety of research participants in accordance with **HREAP B: Arts, Humanities & Law** policy and procedures. These instructions can be found at <https://research.unsw.edu.au/research-ethics-and-compliance-support-recs>.
- The Chief Investigator will report to the **HREAP B: Arts, Humanities & Law** annually in the specified format and notify the HREC when the project is completed at all sites.
- The Chief Investigator will notify the **HREAP B: Arts, Humanities & Law** if the project is discontinued at a participating site before the expected completion date, with reasons provided.
- The Chief Investigator will notify the **HREAP B: Arts, Humanities & Law** of any plan to extend the duration of the project past the approval period listed above and will submit any associated required documentation. Instructions for obtaining an extension of approval can be found at <https://research.unsw.edu.au/research-ethics-and-compliance-support-recs>.
- The Chief Investigator will notify the **HREAP B: Arts, Humanities & Law** of his or her inability to

continue as Coordinating Chief Investigator including the name of and contact information for a replacement.

A copy of this ethical approval letter must be submitted to all Investigators and sites prior to commencing the project.

The HREAP B: Arts, Humanities & Law Terms of Reference, Standard Operating Procedures, membership and standard forms are available from [REDACTED]

Should you require any further information, please contact the Ethics Administrator at:

E: [REDACTED]

W: <https://research.unsw.edu.au/human-research-ethics-home>

The HREAP B: Arts, Humanities & Law wishes you every continued success in your research.

Kind Regards

[REDACTED]

Professor Colin Evers
Convenor HREA Panel B: Arts, Humanities and Law

Appendix C: Canadian Letter of Information and Consent Form



Project: Perspectives on Acceleration in Inclusive Education
Researchers: Lynn Dare, MEd, & Elizabeth Nowicki, PhD,
 Faculty of Education, Western University

Perspectives on Acceleration in Inclusive Education

LETTER OF INFORMATION – Parent Consent

My name is Lynn Dare and I am a PhD student at Western University. I am conducting a study examining beliefs about the inclusion of high-ability students through an educational strategy called acceleration. We would like to invite your child to participate in this study.

The aims of this study are to understand children's beliefs about acceleration. We are seeking your permission, and that of your child, to take part in two individual audio-recorded interviews that will take place during normal school hours. Please note that your child may miss up to approximately 20 minutes of class-work for each interview, but he or she will be given the option, should they choose, to be interviewed at recess or lunchtime.

If you agree that your child may participate in this study, your child will be asked to participate in an individual interview to answer questions about her or his perceptions about placing younger children with older classmates. Each interview will take approximately 20 minutes to complete, and will take place in a quiet area at your child's school during regular school hours. Audio recordings will be transcribed into written notes, and your child's identity will not be recorded by audio or other means. Students who do not have parental consent to participate and have the interview audio recorded will not be interviewed.

The information collected will be used for research purposes only and neither your child's name nor information that could identify your child will be used in any publication or presentation of the study results. All information collected for the study will be kept confidential unless participants report concerns of past neglect or abuse to the researchers.

There are no known risks to participating in this study. A benefit will be that researchers and educators may have a better understanding of children's beliefs about acceleration.

Participation in this study is voluntary. You may refuse to allow your child to participate, and your child may refuse to answer any questions or withdraw from the study at any time with no effect on his or her relationship with the school or with Western University.

If you have any questions about your rights as a research participant or the conduct of this study, you may contact The Office of Research Ethics [REDACTED]. If you have any questions about this study, please contact Lynn Dare at [REDACTED] or Dr. Elizabeth Nowicki [REDACTED].

Sincerely, [SIGNATURE]

Lynn Dare

This letter is yours to keep for future reference.



Project: Perspectives on Acceleration in Inclusive Education
Researchers: Lynn Dare, MEd, & Elizabeth Nowicki, PhD,
Faculty of Education, Western University

Perspectives on Acceleration in Inclusive Education

CONSENT FORM – Parent Permission for Student Participation

If you agree that your child may participate in this study, please sign and return this consent form by [DATE]

I have read the Letter of Information, I understand the nature of the study, and I agree that my child may participate and that the interview may be audio-recorded. All questions have been answered to my satisfaction.

Name of child (please print): _____



Parent/Guardian Signature: _____

Parent/Guardian Name (please print): _____ Date: _____

Person Obtaining Consent (print name): _____

Signature: _____ Date: _____

Appendix D: Australian Letter of Information and Consent Form

 University of Western Ontario Western Education	 UNSW AUSTRALIA
PARENT/GUARDIAN INFORMATION STATEMENT AND CONSENT FORM Students Perspectives on Acceleration in Inclusive Education Dr. Susan Smith	

The study is being carried out by the following researchers:		
Role	Name	Organisation
Chief Investigator	Dr. Susan Smith	UNSW
Co-Investigator/s	Lynn Dore, MEd Elizabeth Nowicki, PhD	University of Western Ontario, Canada
Research Funder	This research is being funded by the Social Sciences and Humanities Research Council of Canada and an Australian Endeavour Research Fellowship.	

What is the research study about?

Your child has been invited to take part in this research study because he or she is a student between 9-14 years of age.

To participate in this project your child will need to meet the following inclusion criteria:

- Be a student aged between 9-14 years
- Have your permission to participate in the study

The research study aims to investigate teachers', parents', and students' beliefs about acceleration for high-ability students. The reason we want to know more about beliefs about grade-based acceleration for high-ability students is to develop recommendations for educational practices and professional development that support high-ability students.

Does my child have to take part in this research study?

Your child's participation in this research study is voluntary. So it's up to you whether to let your child take part or not. Your decision will not affect your relationship with The University of New South Wales the University of Western Ontario, Canada.

This Parent/Guardian Information Statement and Consent Form tells you about the research study. It explains the research tasks involved. Knowing what is involved will help you decide if you want your child to take part in the research.

Please read this information carefully. Either you or your child can ask questions about anything that you don't understand or want to know more about. Before deciding whether or not your child can take part, you should discuss it with your child. You might want to also talk about it with a relative or friend.

If you decide you want your child to take part in the research study, you will be asked to:

- Sign the consent form;
- Keep a copy of this Parent/Guardian Information Statement;

What does participation in this research require, and are there any risks involved?

If you and your child decide that your child will take part in the research study, he or she would:

- Be asked to participate in an interview that will take approximately 20 minutes. During the interview, a member of the research team will ask your child questions about her or his perceptions about placing younger children with older classmates.
- In the second phase, your child will be given a stack of cards with the responses from the phase one interviews printed on the cards. They will be asked to read the statements and sort them into groups. Then they will be asked to rate each statement in terms of importance. The interview will take approximately 20-30 minutes.

 <p>University of Western Ontario Western Education</p>	 <p>UNSW AUSTRALIA</p>
<p>PARENT/GUARDIAN INFORMATION STATEMENT AND CONSENT FORM Students Perspectives on Acceleration in Inclusive Education Dr. Susan Smith</p>	

Aside from you and your child giving up your time, we do not expect that there will be any risks or costs associated with taking part in this study.

Your child will be asked to participate in two interviews. The first interview will take approximately 20 minutes. The second interview will be scheduled a few weeks after the first and will take approximately 20-30 minutes. During the interviews a member of the research team will ask your child questions about the placing younger children with older classmates. With your permission we would like to digitally record the interviews using an audio recorder. The interviews will take place at UNSW.

Will there be any payment to participate in this project?

There are no costs associated with participating in this research study, nor will you and your child be paid.

What are the possible benefits to participation?

We hope to use information we get from this research study to benefit others who are considering academic acceleration for high-ability students by providing more information about teachers', parents', and students' beliefs about acceleration.

What will happen to information about my child?

By signing the consent form you consent to the research team collecting and using information about your child for the research study. We will keep your child's data for seven years. We will store information about your child confidentially. Digital information will be on a locked computer that only has password access by the research investigators and hardcopy data will be stored in a locked room in the co-investigators home university. Your child's information will only be used for the purpose of this research study and it will only be disclosed with your permission.

It is anticipated that the results of this research study will be published and/or presented in a variety of forums. In any publication and/or presentation, information will be provided in such a way that your child will not be individually identifiable in these publications.

You have the right to request access to the information about your child that is collected and stored by the research team. You also have the right to request that any information with which you or your child disagree be corrected. You can do this by contacting a member of the research team.



The audiotaped digital recordings are for the purposes of the research study. After the interview we will transcribe and then delete your child's digital recordings. We will keep your child's digital recordings in the form of transcription for five years. We will store information about your child at the co-investigators home university. Your child's confidentiality will be ensured by using codes instead of names on the data file.

How and when will I find out what the results of the research study are?

You and your child have a right to receive feedback about the overall results of this study. You can tell us that you wish to receive feedback by emailing ldare@uwo.ca. This feedback will be in the form of a one-page summary. You will receive this feedback after the study is finished.

What if I want to withdraw my child from the research study?

If you decide to let your child take part in the research study and then change your mind later, or they no longer wish to take part, you are free to withdraw them from the study at any time. If you do withdraw, you will be asked to complete and sign the 'Withdrawal of Consent Form' which is provided at the end of this document. Alternatively you can ring the research team and tell them you no longer want to participate.

 University of Western Ontario Western Education	 UNSW AUSTRALIA
PARENT/GUARDIAN INFORMATION STATEMENT AND CONSENT FORM Students Perspectives on Acceleration in Inclusive Education Dr. Susen Smith	

If you decide to withdraw your child from the research study, the researchers will not collect additional information from your child.

Your child is free to stop the interview at any time. Unless you say that you want us to keep them, any recordings will be erased and the information your child has provided will not be included in the study results. Your child may also refuse to answer any questions that they do not wish to answer during the interview.

What should I do if I have further questions about my child's involvement in the research study?

The person you may need to contact will depend on the nature of your query. If you want any further information concerning this project or if you have any problems which may be related to your child's involvement in the project, you can contact the following member/s of the research team:

Research Team Contact



Name	Lynn Dare
Position	Primary Researcher
Telephone	Direct Phone: [REDACTED]
	Office Phone: [REDACTED]
Email	[REDACTED]

What if I have a complaint or any concerns about the research study?

If you have any complaints about any aspect of the project, the way it is being conducted, then you may contact:

Complaints Contact

Position	Human Research Ethics Coordinator
Telephone	[REDACTED]
Email	[REDACTED]
HC Reference Number	HC15598

 University of Western Ontario Western Education	 UNSW AUSTRALIA
PARENT/GUARDIAN INFORMATION STATEMENT AND CONSENT FORM Students Perspectives on Acceleration in Inclusive Education Dr. Susan Smith	

Consent Form – Parent/Guardian providing consent for their child

Declaration by the Parent/Guardian

- I have read the Participant Information Sheet or someone has read it to me in a language that I understand;
- I understand the purposes, study tasks and risks of the research described in the project;
- I have had an opportunity to ask questions and I am satisfied with the answers I have received;
- I freely agree to my child participating in this research study as described and understand that I am free to withdraw them at any time during the project and withdrawal will not affect my relationship with any of the named organisations and/or research team members;
- I understand that I will be given a signed copy of this document to keep;

Parent/Guardian Signature

Name of Child (please print)	
Name of Parent/Guardian (please print)	
Signature of Parent/Guardian	
Date	

Declaration by Researcher*



- I have given a verbal explanation of the research study, its study activities and risks and I believe that the participant has understood that explanation.

Researcher Signature*

Name of Researcher	
Signature of Researcher	
Date	

*An appropriately qualified member of the research team must provide the explanation of, and information concerning the research study.

Note: All parties signing the consent section must date their own signature.

 University of Western Ontario Western Education	 UNSW AUSTRALIA
PARENT/GUARDIAN INFORMATION STATEMENT AND CONSENT FORM Students Perspectives on Acceleration in Inclusive Education Dr. Susen Smith	

Form for Withdrawal of Participation – Parent/Guardian

I wish to **WITHDRAW** my consent for my child to participate in the research proposal described above and understand that such withdrawal **WILL NOT** affect their relationship with The University of New South Wales, the University of Western Ontario, Canada.

Parent/Guardian Signature

Name of Child (please print)	
Name of Parent/Guardian (please print)	
Signature of Parent/Guardian	
Date	

The section for Withdrawal of Participation should be forwarded to:

CI Name:	Dr Susen Smith
Email:	██████████
Phone:	██████████
Postal Address:	██████████ ██████████ University of New South Wales Sydney NSW 2052 AUSTRALIA

Curriculum Vitae

Education:

- PhD. Education Studies, Applied Educational Psychology (2013-current) - University of Western Ontario
- M.Ed., Educational Psychology (2013) - University of Western Ontario
- O.C.G.C., Research Analyst Post-Graduate Program (2008) - Georgian College
- B.A. Psychology, Minor in Law (2004) - Carleton University

Credentials:

Credentialed Evaluator - Canadian Evaluation Society (2014)

Recognition:

- Social Sciences and Humanities Research Council Doctoral Fellowship, Canada (2014-2018) - Social Sciences and Humanities Research Council [\$80,000]
- Doctoral Student Award - National Association for Gifted Education (2016)
- Doctoral Excellence Research Award (2016) – Western University, London, Ontario [\$10,000]
- Great Interviewer Award (2016) – Child Research Participant, NSW, Australia [priceless]
- Endeavour Research Fellowship (2015) – Australian Government, Australia [\$18,500]
- Jessica Jean Campbell Coulson Award (2015) – Canadian Research Centre on Inclusive Education [\$2000]
- Ontario Graduate Scholarship, Ontario (2014-2015, declined) [\$15,000]
- Dunlop Award for Distinguished Graduate Contribution (2014) – Canadian Association for Educational Psychology, Canada [\$100]
- Western Graduate Research Scholarship (2013-2014) – Western University, London, Ontario [\$9,591]
- Centre for Inclusive Education Research Award, London, Ontario (2013) [\$750]
- Graduate Thesis Research Award (2012-2013) – Western University, London, Ontario [\$900]
- Joseph-Armand Bombardier Canada Graduate Scholarship (2012-2013) - Social Sciences and Humanities Research Council, Canada [\$17,500]
- Ontario Graduate Scholarship, Ontario (2012-2013, declined) [\$15,000]
- Western Graduate Research Scholarship (2011) – Western University, London, Ontario [\$5,568]
- Millward Brown Leadership Award (2008) – Georgian College, Barrie, Ontario [\$1,000]
- Georgian Scholar Honour List (2008) - Georgian College, Barrie, Ontario
- Senate Medal for Outstanding Academic Performance (2004) - Carleton University, Ottawa, Ontario
- Dean's Honour List (2001, 2002, 2003) - Carleton University, Ottawa, Ontario
- Hyman Soloway Scholarship (2003) - Carleton University, Ottawa, Ontario [\$500]
- Claude Bissell Scholarship (2003) - Carleton University, Ottawa, Ontario [\$500]
- University Part-Time Scholarship (2001) - Carleton University, Ottawa, Ontario [\$500]

Publications:

- Dare, L. & Nowicki, E. (2018). Beliefs About Educational Acceleration: Students in Inclusive Classes Conceptualize Benefits, Feelings, and Barriers. *Journal of Educational Research*. doi: 10.1080/00220671.2018.1440368
- Dare, L. & Nowicki, E. (2018). Strategies for inclusion: Learning from students' perspectives on acceleration in inclusive education. *Teaching and Teacher Education*, 69, 243-252. doi:[10.1016/j.tate.2017.10.017](https://doi.org/10.1016/j.tate.2017.10.017)
- Dare, A.W., **Dare, L.**, & Nowicki, E.A. (2017). Concurrent enrollment: Comparing how educators and students categorize students' motivations. *Social Psychology of Education*, 20(1), 195-213. doi: [10.1007/s11218-016-9364-8](https://doi.org/10.1007/s11218-016-9364-8)
- Nowicki, E.A., Brown, J. D., & **Dare, L.** (2017). Educators' evaluations of children's ideas on the social exclusion of classmates with intellectual and learning disabilities. *Journal of Applied Research in Intellectual Disabilities*. doi 10.1111/jar.12356
- Stack-Cutler, H., Schnirer, L., & **Dare, L.** (2017). Engaging Populations Living with Vulnerable Conditions in Community-Based Research: A Concept Mapping Approach to Understanding Positive Practices. *Journal of Community Psychology*. doi: [10.1002/jcop.21880](https://doi.org/10.1002/jcop.21880)
- Dare, L., Nowicki, E.A., & Felimban, H. (2017). Saudi children's thoughts on inclusive education. *International Journal of Inclusive Education*, 21(5), 532-543. doi: [10.1080/13603116.2016.1218948](https://doi.org/10.1080/13603116.2016.1218948)
- Dare, L., Smith, S., & Nowicki, E. (2016). Parents' experiences with their children's grade-based acceleration: Struggles, successes, and subsequent needs. *Australasian Journal of Gifted Education*, 25(2), 6-21. doi: [10.21505/ajge.2016.0012](https://doi.org/10.21505/ajge.2016.0012)
- Kim, J., Kim, D.J., Ortenzio, F., **Dare, L.**, Frank, C., Kost, R.G., & Lowes, M.A. (2016). Patients with psoriasis and personalised trade-offs in treatment decisions: Lessons learned from focus groups. *JAMA Dermatology*, 152(6), 720-722. doi:[10.1001/jamadermatol.2016.0501](https://doi.org/10.1001/jamadermatol.2016.0501)
- Felimban, H., Nowicki, E.A., **Dare, L.**, & Brown, J. (2016). A comparison of Saudi and Canadian children's knowledge of the causes of learning difficulties. *British Journal of Special Education*, 43(4), 394-415. doi: [10.1111/1467-8578.12153](https://doi.org/10.1111/1467-8578.12153)
- Dare, L. & Nowicki, E.A. (2015). Conceptualizing concurrent enrollment: Why high-achieving students go for it. *Gifted Child Quarterly*, 59(4), 249-264. doi: [10.1177/0016986215597749](https://doi.org/10.1177/0016986215597749)
- Dare, L. & Nowicki, E.A. (2015). Twice-exceptionality: Parents' perspectives on 2e identification. *Roeper Review*, 37(4), 208-218. doi: [10.1080/02783193.2015.1077911](https://doi.org/10.1080/02783193.2015.1077911)
- Dare, L. & Nowicki, E.A. (2015). [A Puzzling Paradox: Twice-exceptional students hidden in our classrooms](#). *Education Canada*, 55(3), 49-51.
- Dare, L., Nowicki, E., & Smith, S. R. (2017). *On deciding to accelerate: Conceptualized by students who accelerated*. Manuscript submitted for publication.
- Coyne-Foresi, M., Crooks, C., Chiodo, D., Nowicki, E.A., & **Dare, L.** (2018). A mixed methods exploration of benefits for youth mentors in an indigenous high school peer mentoring program. Manuscript submitted for publication.
- Dare, L. & Nowicki, E.A. (2018). "The road less travelled": What it means to experience grade-level acceleration. Manuscript submitted for publication.

Technical and Contracted Research Reports (selected):

- Van den Daele, G. & **Dare, L.** (2018). Tri-County Mennonite Homes 2017 Family Satisfaction Survey. *Report for Tri-County Mennonite Homes.*
- Frank, C., Zorzi, R., Van den Daele, G., **Dare, L.**, McGinnis-Dunphy, M., & Brooker, A. (2017). Beginning Teachers' Learning Journeys Longitudinal Study Year 1 Report. *Report for the Ontario Ministry of Education: Professionalism, Teaching Policy and Standards Branch.*
- Dare, L., & Van den Daele, G. (2017). Tri-County Mennonite Homes 2016 Resident Satisfaction Survey. *Report for Tri-County Mennonite Homes.*
- Van den Daele, G. & **Dare, L.** (2017). Tri-County Mennonite Homes 2016 Employee Satisfaction Survey. *Report for Tri-County Mennonite Homes.*
- Van den Daele, G., **Dare, L.**, & Frank, C. (2016). Assessment of CESBA's 2010-2015 Adult and Continuing Education School Improvement Program. *Report for Ontario Association of Adult and Continuing Education School Board Administrators.*
- Dare, L. (2015). ABC Membership survey 2015. *Report for the Association of Bright Children of Ontario.*
- Dare, L., Van den Daele, G., & Dare, A.W. (2015). Tri-County Mennonite Homes 2015 Employee Satisfaction Survey. *Report for Tri-County Mennonite Homes.*
- Dare, L., & Van den Daele, G. (2015). Tri-County Mennonite Homes 2015 Resident Satisfaction Survey. *Report for Tri-County Mennonite Homes.*
- Dare, L., Frank, C., & Van den Daele, G. (2015). Preventing and addressing abuse and neglect of older adults: E-learning course outcomes evaluation. *Report for the Registered Nurses' Association of Ontario.*
- Frank, C., Zorzi, R., **Dare, L.**, Van den Daele, G., Ismail, Y., Zapotoczny, V., Bakker, P., Osseni, R., & Sklash, K. (2015). Longitudinal Evaluation of Ontario's New Teacher Induction Program (NTIP) NTIP Reflections Year 3 Final Report. *Report for the Ontario Ministry of Education, Teaching Policy and Standards Branch.*
- Frank, C., Zorzi, R., **Dare, L.**, Van den Daele, G., Ismail, Y., Zapotoczny, V., Bakker, P., Osseni, R., Sklash, K. (2015). Longitudinal Evaluation of Ontario's New Teacher Induction Program (NTIP) NTIP Reflections Year 3 Highlights Report. *Report for the Ontario Ministry of Education, Teaching Policy and Standards Branch.*
- Dare, L. (2015). ABC Conference 2015: Mental Health and Wellness, Feedback Summary Report. *Report for the Association for Bright Children of Ontario.*
- Dare, L., Frank, C., & Van den Daele, G. (2015). A Guide to evaluating an e-learning Course. *Report for the Registered Nurses' Association of Ontario.*
- Dare, L. & Frank, C. (2015). Psoriasis Decision Aid Focus Group Findings on Tool Design. *Report for the Rockefeller University Hospital Center for Clinical and Translational Science.*
- Nowicki, E.A., **Dare, L.**, & Brown, J.D. (2014). Children's thoughts on the social exclusion of peers with disabilities. *Report for the London and District Catholic School Board.*
- Nowicki, E.A., **Dare, L.**, & Brown, J.D. (2014). Strategies for including students with disabilities. *Report for the London and District Catholic School Board.*
- Nowicki, E.A., **Dare, L.**, & Brown, J.D. (2014). A study on children's beliefs about learning difficulties. *Report for the London and District Catholic School Board.*
- Van den Daele, G. & **Dare, L.** (2014). 2014 Family Satisfaction Survey, Greenwood

- Court & Nithview Community. *Report for Tri-County Mennonite Homes.*
- Van den Daele, G. & Dare, L. (2014). High School Outreach Program Evaluation Toolkit. *Report for the Toronto Public Library.*
- Frank, C., Zorzi, R., Dare, L., Ismail, Y., Van den Daele, G., Sinclair, S., & McCall-Thomas, E. (2014). Longitudinal Evaluation of Ontario's New Teacher Induction Program (NTIP) NTIP Reflections Year 2 Final Report. *Report for the Ontario Ministry of Education, Teaching Policy and Standards Branch.*
- Dare, L. (2011). Palliative Care Volunteer Program Study. *Report for Royal Victoria Regional Health Centre, Volunteer Resources.*
- Dare, L. (2010). All Boys English Pilot Program Study. *Report for Hamilton-Wentworth Catholic District School Board.*
- Frank, C., Dare, L., & Staring, P. (2010). Parent Involvement in Peel District School Board: A study of parents', principals', and teachers' views. *Report for Peel District School Board Parent Involvement Committee.*
- Dare, L. & Schilling, M. (2008). Where R U Now? A study of Post-Secondary Pathways. *Report for Simcoe Muskoka Catholic District School Board.*

Professional Development Workshops Delivered:

- Introduction to Group Concept Mapping** (January 2018) for Centre for School Mental Health, Western University, London, Ontario.
- Group Concept Mapping – A Research Methodology** (January 2018) for Research Analyst Post-Graduate Program, Georgian College, Barrie, Ontario.
- Qualitative Methods in Program Evaluation** (November 2016) for Toronto Public Library, Toronto, Ontario.
- Introduction to Program Evaluation** (August 2016) for Toronto Public Library, Toronto, Ontario.
- Qualitative Methods in Program Evaluation** (November 2014) for Toronto Public Library, Toronto, Ontario.
- Designing Survey Questions for Program Evaluation** (October 2014) for Toronto Public Library, Toronto, Ontario.
- Issues in Qualitative Analysis and Reporting** (June 2014) co-hosted workshop for the Canadian Evaluation Society Annual Conference, Ottawa, Ontario.
- Qualitative Methods in Program Evaluation** (May 2014) for Toronto Public Library, Toronto, Ontario.

Invited Presentations:

- Dare, L. (December 2017, invited keynote). *Skipping a grade: "It's not a big deal or anything."* Paper presented at Association for Bright Children of Ontario annual conference, Toronto, Ontario.
- Dare, L. & Nowicki, E. (May 2016, invited). *Acceleration: Learning from accelerated students.* Presentation at Association for Bright Children of Ontario annual conference, Toronto, Ontario.
- Dare, L. (February 2016, invited). *Being parents of twice-exceptional children.* Guest speaker at GLD Australia, Sydney, Australia.

- Dare, L. (December 2015, invited). *From parenting to research: A journey in acceleration*. Guest speaker at the Gifted Families Support Group Inc, Sydney, Australia.
- Dare, L. (November 2015, invited). *Conceptualizing dual enrollment: By students!* Presentation at the Gifted Education Research Forum, Sydney, Australia.
- Dare, L., Nowicki, E.A., & Smith, S. (October 2015, invited). *Comparing beliefs about acceleration through group concept mapping*. Poster at Gifted Futures Forum for Talent Enhancement, Sydney, Australia.
- Dare, L. & Dare, A.W. (July 2015, invited). *Is acceleration a good idea?* Presentation at Redeemer University College Gifted Additional Qualification Course, Ancaster, Ontario.
- Dare, L. (May 2014, invited). *High-achieving secondary students' perspectives on concurrent enrollment*. Poster at Canadian Association for Educational Psychology annual meeting, St. Catharines, Ontario.

Peer-Reviewed Conference Presentations:

- Dare, L. & Nowicki, E. (2017). *Voices of Ontario's Grade-Skippers*. Paper presented at the Ontario Council for Exceptional Children, Annual Special Education Conference, Toronto, Ontario.
- Dare, L. & Nowicki, E. (2017). *Grade-skippers share their advice: "Trust the process," "Be yourself," and "Don't panic!"* Paper presented at the National Association for Gifted Children 64th Annual Convention, North Carolina, USA.
- Dare, L. & Nowicki, E. (2017). *Moving students up a grade: Students' beliefs about acceleration in inclusive classes*. Paper presented at the Canadian Society for the Study of Education 44th annual conference, Toronto, Ontario.
- Dare, L. (2016). *'They Shouldn't HAVE to Be Bored': Children's Perspectives on the Decision to Accelerate*. Paper presented at the National Association for Gifted Children 63rd Annual Convention, Florida, USA.
- Dare, L. & Nowicki, E. (2016). *High school students enrolled in university: 10 reasons why it's a good thing*. Poster presented at the Society for Teaching and Learning in Higher Education conference, London, Ontario.
- Dare, L. & Myers, P. (2015). *Avoid Fuzzy Data: How to ask clear survey questions*. Professional Development session for the Canadian Committee of Graduate Students in Education at the Canadian Society for the Study of Education 43rd annual conference, Ottawa, Ontario.
- Dare, L. & Nowicki, E. (2015). *2e*. Poster presented at the Canadian Society for the Study of Education 43rd annual conference, Ottawa, Ontario.
- Dare, L., Nowicki, E. & Dare, A. W. (2015). *Understanding Students' Perspectives on Acceleration*. Learning Fair at the Learning Out Loud Ministry of Education Forum, Toronto, Ontario.
- Dare, L. & Nowicki, E. (2014). *The Many Faces of Twice-Exceptionality*. Poster presented at the Ontario Council for Exceptional Children 58th annual special education conference, Niagara, Ontario.
- Dare, L. & Nowicki, E. (2014). *Concurrent enrollment: High-achieving secondary students' perspectives on acceleration*. Paper presented at Canadian Society for the Study of Education 42nd annual conference, St. Catharines, Ontario.

Dare, L. (2014). *Understanding reasons for program participation*. Ignite Presentation for the Canadian Evaluation Society annual conference, Ottawa, Ontario.

Dare, L. & Nowicki, E. (2013). *Why Accelerate? Words from the WISE*. Poster presented at the Ontario Council for Exceptional Children 58th annual special education conference, Niagara, Ontario.

Professional Associations:

Canadian Evaluation Society
 American Evaluation Association
 Canadian Association for Educational Psychology
 Association for Bright Children of Ontario
 Canadian Society for the Study of Education
 Learning Disabilities Association of Ontario
 National Association for Gifted Children
 Plain Language Network

Training & Certificates:

Canadian Evaluation Society, Strategic Project Management for Evaluators (2017)
Western University, Certificate in University Teaching and Learning (2015)
National Institutes of Health, Plain Language Training (2015)
Moodle, Teaching with Moodle an Introduction (2015)
University of California Irvine on Coursera, Project Management: The Basics for Success (2015)
Western University, Worker Health and Safety Awareness (2014)
Western University, Accessibility at Western – Accessibility in Teaching (2014)
Canadian Evaluation Society, Essential Skills Series – Logic Models (2014)
Western University, Mental Health Interactive Learning Module (2013)
Western University, Teaching Assistant Training Program (2013)
North Simcoe Muskoka Palliative Care Network, Advanced Hospice Palliative Care Training (2011)
Royal Victoria Regional Health Centre, Accessibility Standards Training: Customer Service (2010)
Canadian Evaluation Society, Essential Skills Series: Evaluating for Results (2009)
Hospice Simcoe, Fundamental Hospice Palliative Care Volunteer Training (2006)

Volunteer Roles (recent):

Royal Victoria Regional Health Centre – Volunteer Visitor (2006- present)
 Royal Victoria Regional Health Centre – Co-Team Lead for Volunteers on the Palliative and Cancer Care Unit (2010 – 2015)
 Simcoe County Regional Science and Technology Fair – Judge (2007, 2008, 2010, 2015, 2016, 2017)
 Canadian Committee of Graduate Studies in Education, Association of the Canadian Society for the Study of Education – Peer-reviewer for 2015 Annual Conference, Ottawa.