Teachers Regulating Competition in Gifted Classrooms

By

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Abstract

This qualitative study examined teachers’ experiences with regulating academic competition in gifted classrooms. Three current Ontario high school teachers were interviewed regarding their perspectives and practices related to competition in their gifted classrooms. The findings of this study indicate a pressing need for teachers to balance the effects of competition through their pedagogical decisions. All participants described a competitive climate in their classrooms, where students strongly valued academic achievement and compared themselves to others. Participants felt that competition often motivated student achievement, and they also described experiences where competition generated excessive anxiety and stress for some students. To balance these positive and negative effects of competition, participants made conscious decisions in the way they assigned tasks, gave feedback, and disclosed class grades. From the insights of the participants, three overarching best practices were identified for regulating academic competition in gifted classrooms: embrace student competitiveness, emphasize growth over grades, and promote wellness.

Keywords: gifted education, academic competition, high-ability, teacher experiences
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Chapter 1: Introduction

Introduction to the Study

Societies have long advocated specialized education for children with exceptional intellectual abilities. In the 4th century BC, Plato established exclusive classes for young men and women of high intelligence. In 19th century England, Sir Francis Galton developed the first instruments for the formal measurement of intelligence. The term ‘gifted’ was originated in 1918 by Lewis Terman, a Stanford psychologist who used the term to describe his research subjects: students of high measured intelligence.

As of 2015, the Ontario Ministry of Education guidelines identify students as Intellectually Gifted as early as grade 3 by their performance on an intelligence test. Beginning in grade 4, they may enter a self-contained gifted classroom. The Ontario Ministry of Education defines giftedness as:

\[\text{[Having]} \text{ an unusually advanced degree of general intellectual ability that requires differentiated learning experiences of a depth and breadth beyond those normally provided in the regular school program to satisfy the level of educational potential indicated. (Ontario, 2010)}\]

In this study, the term *gifted* will be used to describe all students of high intellectual ability, not just those formally identified by the Ontario Ministry of Education (see Appendix A: Definitions). I have chosen to study gifted students in a broader sense because there are many reasons why a student of high intellectual ability may not be formally identified. Ontario school boards differ in their exact definitions of giftedness, with cutoffs ranging from the 97th to the 99th percentile of intelligence. Students with additional exceptionalities, those who enter the Ontario education system after grade 3, and English Language Learners may all go unidentified. Furthermore, formally identified gifted students may choose to attend other specialized programs for high-achievers rather than a Ministry-established gifted program. Thus, I have chosen to study *gifted classrooms* in a broad sense, referring to all self-contained, full-time programs for high-ability or high-achieving students.

A gifted classroom may present a unique social environment due to several factors. When the distribution of intellectual ability is skewed to the high range, students may be expected by their teachers, parents, and themselves to perform to a high standard. Peer competition and academic pressure, which are common among gifted students (Peterson, Duncan, & Canady, 2009), may impact psychological and intellectual development.

The little-fish-big-pond effect is known to occur in gifted classrooms, in which a student views themselves as academically inadequate relative to their higher-performing classmates (Marsh & Craven, 2002). Imbalances may arise...
when the strengths of the students lie in different subject areas—the Ontario identification process only requires exceptionality in some area of the intelligence test. As they grow, gifted students often stay in the same classes together year after year. They may develop complex relationships within this group and become isolated from their mainstream peers.

**Purpose of the Study**

There is reason for concern about the welfare of gifted youth despite their high ability and typically high achievement. Social adjustment is difficult for these students, especially for those with the highest ability (Woolfolk, Winne, & Perry, 2005; Robinson & Clinkenbeard, 1998). Gifted adolescents, especially girls, are more likely to experience depression and social and emotional problems (Woolfolk et al., 2005). While research does show that gifted students benefit from being grouped together rather than in mixed groups (Robinson & Clinkenbeard, 1998), placement in a gifted classroom is only one potential accommodation.

My research will focus on the role of competition in the unique environment of the intermediate/senior gifted classroom. It is known that competition can motivate learning, but it can also damage confidence and self-concept. This is dependent on the climate of the classroom and on the individual perceptions of the student (Udvari & Schneider, 1998). I am interested in how teachers regulate competition in gifted classrooms in the interest of students’ social and intellectual development.

This study will explore the perspective and the role of the teacher with regard to competition in intermediate/senior gifted or high-achieving classrooms. I will seek to understand how the competitive aspects of these classrooms come to develop, and how they affect teaching and learning. I will gain an understanding of specific teachers’ philosophies and approaches to managing gifted classrooms, and the challenges that these teachers face in regulating competition between students.

**Research Question**

The following central question will frame my research:

In what ways do teachers regulate academic competition in intermediate/senior gifted classrooms?

Key issues will be addressed by the following sub-questions:

- What do teachers believe about the consequences of competition?
- How does competition manifest in gifted and high-achieving classrooms?
- How do teachers approach and manage these manifestations?
How do teachers conduct their gifted or high-achieving classes differently from their mainstream classes?

How do teachers address social and emotional growth in the gifted or high-achieving classroom?

**Background of the Researcher**

I am currently a teacher candidate in the Master of Teaching program, Intermediate-Senior division, at the Ontario Institute for Studies in Education at the University Toronto. I was a student in the Toronto District School Board from mid-kindergarten onward, entering a gifted classroom in grade four. My parents considered it the best that public education had to offer. There was never any question of whether I would enter the program after being identified, or whether I would ever return to a mainstream class. Roughly ten of my original gifted classmates stayed with me through high school, the remainder having transferred to other programs or relocated.

Upon entering grade 4, I became aware of an incredible diversity of abilities among my gifted peers. Some could devour three novels in a day, some hauled in massive, beautifully painted poster assignments, and others invented secret languages to communicate during silent reading time. A person might have been unremarkable in one area, but they were always exceptional in some way. Most of our class time was spent on low-pressure, exploratory activities, but when work was handed back, students eagerly compared their scores. There was a sense of shame around scoring anything less than perfect on systematic tasks such as math or spelling because we were gifted, after all. Any deduction of marks would be explained away as careless mistakes and misunderstanding. Some students were more sensitive to incidents of failure than others. I recall doing poorly on a measurement quiz but refusing to accept any help. I was convinced that the quiz was flawed and that I had made only careless errors.

Competition and the focus on grades steadily grew throughout my years in the gifted program. In middle school we began to clearly identify who was the most talented in each particular subject. Our teachers adamantly assured us that everybody had the potential to reach Level 4+, but in their efforts to help us they would often showcase the work of the best student as an exemplar. I wondered if it was true that we all had the potential, and whether the teachers actually believed this. Often it seemed that the difference between me and that Level 4+ was simply a matter of fate or chance. By the final years of high school, grades were highly valued as a means to university acceptance. However, the atmosphere had somewhat shifted from competition to camaraderie—“we’re all in this together.”

For all this time I have been interested in what is unique about the social dynamics of a gifted classroom. I have wondered what teachers thought of us,
and whether they considered our giftedness in how they taught. Some teachers seemed to enjoy covering more advanced topics, and others insisted on holding us to the same expectations as everybody else. At times it seemed that students’ strengths and interests were neglected in an effort to promote a well-rounded curriculum. I wondered if our teachers were making certain decisions in an effort to help us to mature and adjust socially. Many teachers gave us some sort of talk about giftedness and what it meant for us academically and socially. Certain teachers strongly encouraged us to interact with the mainstream students in combined class activities and field trips.

Evaluations, and the way the teacher framed them to the class, seemed to affect our self-concepts profoundly. As a shy and self-conscious child, the thought of scoring poorly on a test was immensely frightening, let alone having my peers know about it. From time to time I would imagine how easy my life would be if I went back to a mainstream classroom. However, I did not take this idea seriously because I had strong memories of boredom and disengagement from my years prior to entering the gifted program.

**Significance of the Study**

The needs of intellectually gifted students are often overlooked in light of their supposed natural ability. Teaching gifted students is a unique and challenging undertaking. Students are identified and placed in gifted classes because they require a differentiated learning experience in order to be engaged and to satisfy their potential. To group these students together is not enough; teachers must be perceptive and adept at meeting these students’ intellectual and emotional needs. Particularly in the intermediate/senior years, when academic pressure often runs high, mental health is a key concern.

As competition can be a natural tendency of groups, it is the responsibility of the teacher to regulate the competitive-cooperative climate. This study will investigate the beliefs and practices of teachers in intermediate/senior gifted classes, and their implications to gifted education. Insights will be drawn for parents and educators with regards to supporting gifted students in both their emotional and intellectual growth.
Chapter 2: Literature Review

Case Study

My research takes the form of a case study, the study of a real-life bound system (Cresswell, 2013). This type of research yields a rich, in-depth comprehension of the topic. I have designed an instrumental case study with the intent to understand the issue of competition in gifted classrooms. I acquired qualitative data from interviews with three teachers of gifted classrooms, forming a multiple case study (Cresswell, 2013). Each case was analyzed on its own, and then a cross-case analysis was be performed.

Giftedness

Giftedness, by Lewis Terman’s original conception, is defined by an innately high IQ within the 1st percentile (1916). Indeed, the Ontario Ministry of Education currently defines the exceptionality of giftedness as “an unusually advanced degree of general intellectual ability […]” (2001, p. A20). In many Ontario school boards the sole criterion for identification is an intelligence test score in the top 2% for the age group (Simcoe County District School Board, 2009; Thames Valley District School Board, 2013; Toronto District School Board, 2013).

Alternate, multidimensional theories of giftedness have been proposed by Renzulli (1998), Heller (2004), and Gagné (2000). Renzulli, in his Three-Ring Conception of Giftedness, defines giftedness as an interaction resulting from the coincidence of three qualities: above-average ability, creativity, and task commitment. Heller further develops this concept with his Munich Model of Giftedness where interdependent factors of innate talent, personality, and environment lead to performance that fulfils the Three-Ring giftedness criteria. Gagné’s Differentiated Model of Giftedness and Talent (DMGT) makes a similar distinction between innate and learned abilities, but inverts the terminology. In the DMGT, natural abilities (‘gifts’) develop into specific expert skills (‘talents’) through the interdependent catalysts of chance, environment, intrapersonal characteristics, and practice. Gagné proposes that one cannot attain an exceptional level of skill without first being innately gifted.

Competition

Festinger (1954), in his theory of social comparison, described competition as a natural behavior by which people seek to improve their abilities. Competition in an educational context is often defined as a behaviour opposing that of cooperation (Johnson & Johnson, 1974; 1983). The research of Johnson and Johnson (1983) suggests that cooperation is the more psychologically healthy of the two. Campbell (1973) described the common teacher’s dilemma...
of whether to emphasize cooperation or competition in the classroom when both can be considered important skills. Campbell suggested that the two behaviours are not diametrically opposite, nor mutually exclusive. For example, athletic competitions involve cooperation within teams. In research on undergraduate students, Kline (1995) confirmed that cooperativeness and competitiveness are in fact independent, orthogonal dimensions.

Moving beyond the competition-cooperation dichotomy, research has also produced a more complex organization of the concept of competition. Tassi and Schneider (1997) developed methods to distinguish between two distinct attitudes: **task-oriented competition**, in which one desires to improve their performance, and **other-referenced competition**, in which one desires to outdo others.

Thus far, competition has only been conceptualized as a behavior. In a classroom context, we must consider that behaviours result from interactions between the environment maintained by the teacher and the attitudes of the students. Kohn (1992) distinguishes between **structural competition**, which is built into the situation, and **intentional competition**, which is held as an attitude. A spelling bee is a task of immutable structural competition in that only one contestant can win. A child with high intentional competition as a part of their personality may make a contest out of any trivial task such as lining up for recess.

Analogous to Tassi and Schneider’s division of task-oriented and other-referenced competition, Ames and Archer (1988) identified two achievement goal orientations: **mastery goal orientation** and **performance goal orientation**. Those with a mastery goal orientation wish to learn and master the task, similar to the attitude of task-oriented competition. Those with a performance goal orientation wish to be perceived by others as capable, similar to the attitude of other-referenced competition. Deemer (2004) used these two goal orientations in a study relating teachers’ classroom practices, teacher perceptions of school culture, and student perceptions of classroom goals.

**Conceptual Framework**

As my study targets gifted classrooms in Ontario, it is inevitable that Ontario’s IQ-based concept of giftedness is employed. However, consideration of the multidimensional models provides valuable insight to data collection and interpretation. In the DMGT model (Gangé, 2000), the contribution of a teacher to the development of a gifted student may fall under environment or intrapersonal characteristics. The teacher regulates the classroom environment, but also their teaching style may interact with the character traits of the student. In my study, the role of the teacher is explored both as a part of the classroom environment and as a contribution to the student’s intrapersonal development.

My study follows the paradigm of competition as a behavior fuelled by
attitude, either task-oriented or other-referenced. Competitive behaviour is best considered independent, not alternate to cooperative behavior. I investigate how teacher perceptions and practices affect competitive student behavior within the classroom. Teacher actions may define the structural competition of a task (e.g. setting up a reward for the top scorer on a quiz) but many more actions may implicitly regulate student attitudes and beliefs as well.

**Effects of Competition**

Proponents of competition in education have cited increases to motivation and performance as beneficial outcomes (Rimm, 1986). Blanchard reported in 1989 that students who matured in environments devoid of competition had impaired ability to cope with life challenges (Cropper, 1998). A qualitative case study of a gifted 12-year-old boy found that his peers had a positive effect on his academic development by motivating him and by fueling competition within the peer group (Lee, 2002).

These beneficial effects of competition are few and far between compared to the range of research showing detrimental effects. However, the undermentioned studies vary widely in their concepts of competition. Rather than fueling an argument to eliminate competition, the literature serves better as a guide on how to make competition effective for a given situation.

One concern about academic competition is that it exerts harmful stress on the students.

Fraser, Nash, and Fisher (1983) measured higher levels of student anxiety in science classrooms that were perceived by students to have more competition. Gifted students under pressure to achieve high grades are noted to resort to academic dishonesty (Abilock, 2009). The academic stress may lead to emotional dysfunction which ultimately puts gifted youth at greater risk for suicide (Leroux, 1983).

A major criticism for competition is that it upsets social and emotional development. Bargin (2000) interviewed high-achieving high school students of colour and found that while many believed that competition benefited their grades, they made no comments about benefits to learning or mastery of skills. This raises concern that academic competition and social comparison lead to maladaptive motivational orientations. Thorkildsen (1988) found that students who believed in a communal purpose for school were more likely than those who believed in a competitive purpose to value learning, to find school satisfying, and to plan on attending college.

Gender seems to divide gifted students’ perceptions of competition. Gifted female high school students discussed in interviews that competition had two conflicting effects: promoting success and eroding friendships (Rizza & Reis, 2001). These students viewed direct competition as a negative behavior and instead referred to their own behavior as “comparing”. Similarly, in a phenomenology of gifted students by Eddles-Hirsch (2010), females had
negative perceptions of ranking and class competition. Most males in this study did not have these perceptions, but did speak of their school’s highly competitive athletic teams.

Competition has been shown to impede student learning and achievement in some studies of mainstream students. R. H. Moos and B. S. Moos (1978) linked high classroom competition with higher absence rates, lower teacher support, lower grades, and less student satisfaction. The authors note, however, that this is likely a system of mutual interdependence rather than direct causation. Feldhusen, Dai, and Clinkenbeard (2000) found that students who perceived high expectations from their peers and parents tend to be the ones to avoid challenges for fear of appearing incompetent to others.

In a controlled experiment, Butler (1989) recorded how often students glanced at their peers’ work during a picture-copying task. Classes were given one of two instructional conditions: other-referenced competitive (“try to make […] one that will be better than anyone else’s”) or noncompetitive. In the competitive condition, older children (age 7-10) glanced more at their peers’ work and furthermore, their products were of lesser quality.

A highly competitive classroom may be the worst environment for those individuals with a cooperative social orientation. Widaman and Kagan (1987) designed an experiment for elementary classrooms where the same spelling unit was taught by three methods: traditional whole-class instruction, Student Team Achievement Division (STAD), and Teams-Games-Tournaments (TGT). The latter two are cooperative methods in which heterogeneous groups of 4-5 students each try to achieve the highest score (Slavin, 1996). In TGT classes, students with a competitive orientation showed much greater improvement in spelling than students with a cooperative orientation. The authors infer that when a classroom structure lacks cooperativity, those with a highly cooperative social orientation, which is more common in ethnic minorities, suffer in their learning.

These inferences are questionable because the authors have conceived of cooperation and competition as polar opposite instructional strategies. Both STAD and TGT methods could be considered to have elements of both cooperation (within the small groups) and competition (between groups). However, another key result of the study is that not all cooperative or competition instructional methods are alike. The effect of STAD on student achievement was opposite to that of TGT, with the most “cooperative” students improving the most. This key result, that the specific instructional practice matters, will inform my research. In collecting and analyzing my data from gifted classrooms, I will focus on understanding the specific details of classroom practices and outcomes.

**Role of the Teacher**

My review of the literature now turns to implications for the teacher of
gifted students. Several of the aforementioned authors have formulated practical recommendations for teachers.

Campbell, who notes that competition and cooperation need not be diametrically opposed, suggests cooperative team rivalry as a learning approach that may combine the best of both whole-group cooperation and individual competition (Campbell, 1973). Widaman and Kagan (1987) showed that the effectiveness of this cooperative team approach depends highly on the specific type of instruction use.

Udvari and Schneider (2000), in their review of competition in gifted children, emphasize differentiation between task-oriented and other-referenced competitive behavior. They recommend that teachers stress task-persistence and self-improvement rather than comparing oneself to others and aspiring to do better than others. Rizza and Reis (2001) advise teachers to encourage their students to use their competitive energies in positive ways (i.e. self-improvement). For the social benefit of gifted girls, it is wise to limit comparisons between students by, for instance, not publicizing class marks.

Rinn, Plucker, and Stocking (2010) express concern for the academic self-concept of gifted students entering self-contained programs where they may experience the Little-fish-big-pond effect. These students tend to see a drop in academic self-concept which could, in turn, affect socio-emotional and academic development. The authors suggest that teachers can sustain motivation in students entering gifted classrooms by giving feedback about individual growth rather than comparisons to other students. As well, they recommend that teachers balance their use of competitive, cooperative, and individualistic activities.

A recent study has shown that competition in adults is most productive when certain motives are in place. Tjosvold, Johnson, Johnson, & Sun (2006) surveyed workers in Mainland China and found that constructive competition was greatest when participants had intrinsic motivation and used the strategy of competing fairly. Constructiveness was observed even when competition was forced on people. In fact, being required by a supervisor to compete was correlated with increases in perceived task-effectiveness, self-confidence, learning, and strength of relationships. Although this finding is not necessarily generalizable to schoolchildren in Ontario, it suggests that teachers may be able to promote specific attitudes in order to make productive the competition that is sometimes inevitable within gifted classrooms.
Chapter 3: Methodology

Research Design and Rationale

This qualitative study employed interviewing as the primary method of data collection. The relevant literature surrounding gifted education and competition was reviewed prior to the interviews for the purpose of informing data collection and analysis.

My research is designed as an instrumental multiple case study. The case study approach fits well with the study because it involves in-depth data collection in a real-life setting (Cresswell, 2013). This yielded a comprehensive and refined understanding of the issue of competition in gifted classrooms. In my research, individual cases were be clearly identifiable, consisting of a teacher's gifted classroom bound by place (the classroom within the school) and time (the duration of data collection). I applied purposeful sampling in my selection of cases. As an instrumental case study, my research sought to use the cases to understand the issue, so I selected the cases most likely to illuminate my research question in a novel way.

Both qualitative and quantitative approaches have been used in the study of gifted education. Quantitative studies are often used to measure specific aspects of student development using precise criteria. Qualitative studies investigate participants’ lives as a whole, or classrooms as a whole, through themes. Although these studies are not generalizable, they yield meaningful and novel real-world understandings. The qualitative approach is appropriate for my research question because I seek a rich understanding of a phenomenon. By drawing from the expertise of a small group of teacher participants, I gathered detailed findings on how competition affects gifted classrooms and how it may be regulated.

Participants

Interviews were conducted to collect qualitative data about the beliefs and practices of Ontario teachers with regard to academic competition in gifted classrooms. Thus, it was important that participants had a rich body of experience in gifted education. Participants were identified by referral sampling. I communicated with colleagues at the Ontario Institute for Studies in Education (OISE) and at practicum schools to get in touch with teachers who would be appropriate for the study. The main criteria were that the teacher has at least five years of experience teaching intermediate/senior gifted classes.

I spoke with prospective participants by telephone and/or email to verify their suitability for the study. I introduced the purpose of the study, the design, and what their involvement would entail. This information was detailed in a consent form (see Appendix B: Participant Letter of Information) which each participant signed and retained a copy of. I built a professional relationship
with participants and welcomed any questions or concerns that they may have had. Following transcription of the interview, I shared the transcript with the participant and asked him/her to comment on its accuracy. Following this step, I remained in touch with participants via email to answer their questions and to ask for clarification about interview statements when necessary.

**Procedure**

The literature review was conducted prior to primary data collection. I identified literature that was current and relevant to the topic of competition in gifted classrooms. The ProQuest electronic database was used to isolate appropriate books and academic journal articles. The search terms ‘gifted’, ‘high ability’, and ‘competition’ were used. The search was filtered to isolate peer-reviewed publications from the last 14 years. Articles were manually screened for relevance to my research with regard to the giftedness criteria, educational setting, and age group. The results were further narrowed by additional search terms and exclusions as required. Articles published more than 14 years ago were reviewed for historical context.

Interviews were conducted individually and face-to-face in the participant’s office at their school, or in a neutral setting. Each interview lasted approximately 1 hour. During the interview I recorded audio and took occasional written notes about the participant’s reactions. Interviews were **semi-structured** and guided by 17 main interview questions formulated in advance (see Appendix C: Interview Questions). The questions addressed teacher beliefs, practices, and experiences with regard to academic competition in gifted classrooms. During the interviews the sequence of my questioning was subject to change but I aimed to cover all the questions.

During the interview design process, the phrasing of questions was carefully adjusted to avoid suggestive wording and to ensure clear understanding to all participants. I prepared primarily **open-ended questions** so that the participant could choose their own terms when answering (Turner, 2010). Follow-up questions were prepared to ensure that the participant stayed on topic with their responses. Prior to interviewing participants, I conducted two **pilot test interviews** for the purpose of refining my interview design and questions. The pilot test participants were young adults who were former students in gifted classrooms. I chose former students because it was not feasible to attain contact with teachers during the summer period. I modified the interview questions to the perspective of a student. This pilot test phase helped me to identify and address the flaws and limitations to my interview design (Turner, 2010). It also allowed an opportunity for me to develop my skills as an interviewer.

Interview audio was recorded using the SmartPen Echo recorder. The digital recording was transferred to a computer and transcribed using the TranscriberAG program. A verbatim transcript was produced and used for data
QDA Miner Lite, version 1.3 software was used to perform coding of the transcripts and code analysis. Transcripts were first coded with a tentative set of coding categories, augmented by new codes which arose during the coding process (See Appendix D: Code List). After two iterations of coding through the entire transcript, sections that were not yet coded were isolated and reread. Additional codes were assigned by running the Text Retrieval function using the following wildcard terms: creativ*, motiv*, compar*, compet*, mark*, shar*, and push*. This helped to locate all instances were the participant used words directly related to a code (e.g. creativity, motivation). Coding decisions were confirmed by re-listening to the relevant sections of interview audio.

Data analysis consisted of within-case analysis of each case, followed by cross-case analysis of themes across all cases (Cresswell, 2013). Each case was examined for relations to the literature, to my conceptual framework, and to my research question and sub-questions. The Code Retrieval and Coding Frequency functions of QDA Miner were used to review what was said relating to a code, and how many times the code was mentioned. My analysis focused on a few key themes relevant to my research objective (i.e. to understand how teachers approach and regulate academic competition within gifted classrooms). Themes were identified from the transcripts by a variety of methods: repetitions of a topic, metaphors and analogies, natural transitions in speech, indigenous typologies, and unmentioned or avoided topics (Ryan & Bernard, 2005). Following within-case analysis, I performed cross-case thematic analysis, comparing the themes identified from across all cases. I summarized my interpretation of the overall meaning of the data by proposing several assertions in Chapter 4: Findings.

Validity was addressed following data collection and following analysis. Validity is the process of documenting the accuracy of a qualitative study (Cresswell, 2013). I first validated my interview data by member checking. Each participant was given a copy of their interview transcript and asked to comment on accuracy. This increased my confidence that there were no transcription errors that could make the data misleading. My validation process also included peer review, in which my colleagues at the Ontario Institute for Studies in Education reviewed and commented on my procedures. One particular concern for the validity of a qualitative case study is whether the findings can transfer to other contexts (Cresswell, 2013). I produced thick descriptions of my cases so that a reader may make an informed decision of whether to transfer my findings to other settings with common characteristics. During the research process I continually reflected on my potential sources of personal bias.

**Ethical Considerations**

Thorough efforts were made to ensure the ethical treatment of research
participants. A consent form was provided for participants to review and to make an informed decision about their involvement (see Appendix B: Participant Letter of Information). The consent form explicitly stated the purpose of the research, the interview process, and the fact that interviews would be recorded and transcribed.

I communicated with participants on an ongoing basis to address questions or concerns that they had about the research. Participants were given the freedom to withdraw from the study at any point in the process. The location and timing of interviews was negotiated for the convenience of the participant. Participants were provided copies of their interview data and will be provided copies of the final research paper upon request.

Participant confidentiality was preserved by the use of pseudonyms for participant names as well as for any identifying details mentioned during the interview. The interview transcript was carefully reviewed for identifying details such as school name. Recordings, transcripts, and other digital materials were stored using password-protected file encryption. All research materials will be destroyed after presentation and/or publication of this research paper.

**Limitations**

This study is limited in that it examines the topic of academic competition from only the perspective of the teacher. Although the literature review includes research from the perspective of gifted or high-achieving students and their parents, these firsthand experiences are not reflected in the interview data. The scope of this data is limited by time and resources. Interviews spanned approximately 60 minutes for each of three teacher participants. My selection of participants was restricted to teachers in the Greater Toronto Area.

As a quantitative study of limited sample size, my results are not generalizable to the population at large. Each case study is bounded by a short period of time. The study is cross-sectional rather than longitudinal; thus I am unable to comment on the development of teacher beliefs and practices over time.

I recognize that as a researcher I have personal bias. My assumptions and experiences may affect my research design, selection of participants, data collection, and data analysis. For instance, as a former gifted student I had a distinct, somewhat negative experience of competition and academic pressure. To acknowledge this limitation, I strive to be transparent about my personal background and connection to the research area. My researcher background is detailed in Chapter 1. Throughout this research study I have continually reflected on my experiences and how they may impact my work.

The biases of my interview participants also impact the research, and as such the experiences recorded in the data are not generalizable to all teachers. My participants, noting my investment in the project as a student researcher, may have responded with what they believed I wanted to hear. I explain to
participants prior to the interview I was not required to, nor did I intend to reach any particular conclusions during the interview. To encourage honest responses, I used neutral language and avoided leading questions so as not to suggest any particular hypothesis or expectation. If a response from the participant was unclear, I asked for clarification so that their experience would be reflected fully and genuinely in my data.

My selection of participants was prone to selection bias. As participation is voluntary and driven by referral, the sample of teachers obtained may not be representative of teachers of gifted students in general. My methodology is likely to have recruited mostly those teachers who have strong beliefs and investment in the subject of gifted education. Those who have not given much thought to how they approach their gifted classroom, or those who have no strong impressions on the subject, are unlikely to come forward as participants. This selection bias is acceptable, as the goal of my research is to gain a rich, in-depth understanding of the subject. This is an instrumental case study in which cases are selected in order to best illustrate the issue of competition in gifted classrooms.

With a study consisting of three cases, it was difficult to control the representation of gender, race, nationality, socioeconomic class, and educational background. The student makeup of each teacher’s classroom may vary widely as well in terms of gender, race, socioeconomic class, involvement of parents, and presence of multiple exceptionalities. As such, my research is unable to address these potentially significant factors. In particular, literature has shown that gender, race, and presence of multiple exceptionalities affect the way a student experiences gifted education (Eddles-Hirsch, 2010; Foley-Nicpon et al., 2012; Tirri & Nokelainen, 2011; Tyler et al., 2006; Woolfolk et al., 2005). These dimensions would be highly relevant for future study. For example, a study may focus on teacher perceptions relating gender with competition in gifted classrooms.

The elementary setting is another key area of future study. My research concentrates on intermediate/senior gifted classrooms and as such it does not explore elementary gifted classrooms in which competition may take on entirely different forms. A follow-up study may examine gifted classrooms spanning from grade 4 to 12, comparing teacher approaches to regulating competition.
Chapter 4: Findings

Participants

The three participants of this study are current Ontario secondary school teachers who have taught and are currently teaching in gifted classrooms. As well, they all have either prior or current experience teaching mainstream classes as well. These teachers’ experiences are an ideal fit for this study because they can compare their experiences with gifted groups against experiences with mainstream groups. A brief profile of each participant follows.

Participant 1 - John

John teaches Geography and Law for grades 7-12 at School X, a well-established independent school for high-achieving students. For several years prior to his current position, John taught and directed the gifted program in a large, public secondary school.

John was identified as an ideal participant because of his breadth of experience teaching IEP-Gifted, high-achieving, Academic, and Applied groups. He is able to contrast his experiences in each of these classroom settings, as well as contrast between his experiences in public and independent schools.

Participant 2 - Janice

Janice teaches Math and Science in an enriched program called Program A at School A, public secondary school. She graduated from a faculty of education five years ago and was hired directly to teach enriched classes in Program A due to her strong science background. She now coordinates Program A in addition to teaching both Program A and mainstream classes.

Janice was chosen as a participant for her experience teaching gifted students in Math and Science. Many gifted students have specific strengths and interests in math and/or science, and moreover, Janice teaches in a program with a focus on math, science, and technology. Janice can speak about her experience of academic competition in classes where students are highly invested in the subject. She can also provide insights for teaching gifted groups from the perspective of a beginning teacher.

Participant 3 - Anna

Anna teaches general Science and Physics courses in an enriched program called Program B at School B, a public secondary school. She obtained a doctoral degree in Physics before beginning her 24 years of teaching. She has taught gifted students in the highly selective Program B for nine years.

Anna was selected for this study because of her many years of experience teaching in an enriched Math and Science program. She has taught gifted classes and Academic or Applied classes simultaneously on her timetable, so she is able
to contrast her experiences working with each of these groups. Because she
teaches in a highly selective and academically rigorous program, her experiences
of academic competition among students are of particular interest to this study.

Findings

This chapter will describe the overall findings from the data collected from
interviews with the three research participants. The statements made by each par-
ticipant were analyzed through major themes in the literature, as well as themes
that emerged from the data.

The analysis revealed teacher conceptions and practices related to five over-
arching themes: Definitions of giftedness, Climate of a gifted classroom, Merits
and dangers of competition, Addressing competition through pedagogical deci-
sions, and Best practices for regulating academic competition.

Definitions of Giftedness

The participants concur strongly in many of their conceptions of gifted stu-
dents. Although the Ministry of Education has its own definition of a gifted stu-
dent, each participant’s experiences differ markedly from the Ministry definition.
The participants’ definitions of giftedness converged upon three major traits: ma-
turity, motivation, and creativity.

Maturity

Participants characterized gifted students as both intellectually and socially
mature relative to other students of the same age. This differs from the Ministry
definition which references only intellectual ability.

Janice says, “The level of conversation that takes place [in a gifted classroom]
is higher, more mature. Students are more serious.” She then specifies her under-
standing of the intellectual differences between gifted students and mainstream
students: “What stands out in the identified gifted is an extreme ability to con-
tain tons of information, to apply it in a situation. To take in higher-level infor-
mation that's way beyond their level, and a real interest in learning more.”

John gives similar statements about the intellectual abilities of his gifted stu-
dents. He describes these abilities in sharp contrast with those of typical students:

In some areas [gifted students] are more advanced than you are as a teacher,
and as a teacher you're not necessarily used to that. You're kind of used to being
in a position where you're helping them out in some way. And with a lot of
these students it's kind of like the tables are turned.

Janice describes a particular confidence and initiative often seen in high-
achieving students. She says, “I find the students who are high-achieving, they
also take very good initiative. So they're outspoken—not all of them—but
they're confident and outspoken.”

Anna expresses a similar thought, “You also can give them more independ-
et work compared to the University [preparation] students because they are in-
dependent learners and they want to discover and figure out things on their own.”

Anna’s statement alludes to maturity and the ability to self-regulate. She also describes her gifted students as exceptionally intuitive, stating, “They can see the big picture with very few pieces of the puzzle. And that’s the nice part. With Program B students sometimes I can stop halfway through a sentence and they can continue and develop on.”

**Motivation**

All three participants described their gifted students as highly and consistently motivated in their studies. This differs from the Ministry of Education, which identifies giftedness according to ability rather than motivation.

Janice says of her gifted students, “They have a strong interest in education but also very good work ethic and want to do well [...]”

Anna shares a similar experience, “They are very dedicated to learning. So once you go to class you know that they are ready to learn.”

John expresses thoughts on both motivation and energy in the classroom:

[The gifted classroom] tends to be very lively. There's a lot of energy in the class. [...] They tend to be... ready to go. When you come into the class, they're ready to go. And I'm kind of painting broad strokes here, but generally, the general vibe in the class is one that they want to learn, and they come in and they're ready to learn.

John adds that his gifted students’ motivation extends beyond class time. He says, “I know that again, the vast majority of them are going to be doing work at home if they need to do that.”

**Creativity**

Participants highlighted creativity as a key quality of gifted students. Creativity is not a factor in the Ministry definition of giftedness, but it is a part of Renzulli’s Three-Ring Conception of Giftedness (1998). Renzulli defines giftedness as a combination of three qualities: above-average ability, creativity, and task-committment.

The participants describe exceptional creativity in student work, especially from take-home assignments. Janice relates an experience from her grade 9 Science class:

Last year in grade 9, we had them building little houses from shoeboxes that they would wire up. So it'd be like an electric house. And the level of commitment and creativity that I find that goes into Program A classes compared to other classes, it's way beyond what I expect for that age group.

John describes his reactions to the creativity of his gifted students’ work in Geography:

I'd just be like "That's fantastic. I learned a lot marking this." or, "You pushed me and you pushed yourself in ways that you went into new areas that maybe I hadn't dreamed of." One thing that I say sometimes is that when I first assigned
this assignment I had no idea that students could come up with something like this. You went so far beyond what I thought students could create.

Anna highlights her students’ abilities to understand Physics concepts in novel ways. She says, “I probably teach the classical way as a teacher, but they can see shortcuts and it’s not just a shortcut, it’s a different way to solve the question and see the question.”

Each participant relates experiences that demonstrate exceptional creativity in the academic work of gifted students.

**Climate of a Gifted Classroom**

The participants each described their impressions of the climate or atmosphere of a classroom in a gifted program. They spoke about social interactions between students, as well as the collective values of the class. The identified sub-themes are peer support and inclusion, significance of academic achievement, and manifestations of academic competition.

*Peer support and inclusion*

Participants described their gifted classes as close-knit and generally inclusive groups. Janice explains,

> I think because they have the shared passion or interest of being there and being good students and doing well, there is a lot of acceptance of each other in the classroom. And students are eager to share, and help each other. And if there’s one or two students who are struggling, there’s quite a sweetness in the classroom, helping that person through.

John believes that in the case of his grade 7-12 school, the extended time that the students spend together contributes to the close-knit and inclusive atmosphere of the classroom. He explains,

> In the first month they go away for a few days to one of those outdoor ed camps. And they go with the senior students and they’re all together and they tend to bind very closely at that. They’re kind of with each other through the six-year period as opposed to just the four years of a usual high school. They can be very, very tight. By the end of their last year here, they’re almost seamless, and they can interact in so many different ways it’s maybe a little less cliquey than a lot of places.

Anna relates a similar experience with her public school gifted students:

> [...] They have lots of trips and other activities that they do as a group. [...] But anyhow, they are really proud to be in this group, mmkay? And they help each other and they make strong friendships. Like, I notice in grade 12 they’re pretty strong.

While all participants describe a climate of inclusion in their gifted classrooms, they give varying reasons for this. Janice mainly attributes the inclusiveness of the classroom to shared interests among students, while both John and Anna cite group isolation and class field trips as additional factors.
Significance of academic achievement

Participants state that academic achievement is highly valued among their gifted students. Responses suggest not only a personal significance for achievement and grades, but also a social significance.

John says, “There's a culture of excellence in this school, a culture of pushing yourself. [...] To do well in school is cool here, for lack of a better term.”

John later adds that his students tend to celebrate the achievements of their peers:

I think there is that comparing going on, but generally there's not a tearing down or there's not a kind of a backtalk of like "Oh, their parents did it for them," or "You know, they had help with it," or "The teacher really likes them." There just tends to be kind of a positivity towards, especially if it's something that they see as just excellent work, or they find it inspiring in some way.

Anna shares a similar experience regarding student positivity toward peer achievements:

When somebody says something special the class, first of all, they pay attention to that person, And they always give them a clap or... I always encourage my students. I always say "Great job" or put a comment when I'm making the report card. But usually they acknowledge each other's work.

Janice offers a contrasting experience in which the weight placed on academic achievement created a stigma for students who are not among the highest-achieving. She says, “Some students, if they're not doing well, they hide marks from each other because they're embarrassed that they're not as smart as everyone else.” This demonstrates how a class-wide focus on achievement can negatively impact students who are even slightly academically weaker.

John later relates a similar experience in which students compare themselves to others with higher marks:

But in some ways maybe [comparing marks] gets a little unhealthy sometimes where a student may do very very well on something, but they didn't do as well as maybe four or five other students in the class. And so they might say, "Well, I didn't do well because I only got a 95 and these guys got a 98 or 99."

The responses of the participants indicate that gifted and high-achieving classes place great value in academic achievement. This value often leads to positive, congratulatory interactions between students, but it may also cause unease when one student’s achievement is not on par with the top of the class. The negative impact on the relatively weaker students is known as the Little-fish-big-pond effect. This effect describes when a student views themself as academically inadequate relative to higher-performing classmates (Marsh & Craven, 2002). The statements of John and Janice demonstrate how this effect can occur even when all students are achieving grades that would normally be considered high.

Manifestations of academic competition

Participants describe several manifestations of academic competition, conse-
quential to their gifted students’ high regard for academic achievement. John notices that his students frequently compare marks with each other:

[...] there definitely is, to a large degree, a comparing. So when you hand back a project or you hand back something that’s being marked, like a test or something, there is the typical kind of "What did you get? I got this. I got 100%". I don't think that's uncommon.

Janice gives similar statements about the prevalence of mark comparisons:

They always wanna know where they are relative to each other. When we post marks in the classroom we have to be careful to put student numbers, not names. But students are very curious like, "Oh my God, who got a 67 on this test?" and "Who's that 93? Who's above me?" So there's always a comparison going on.

These statements from John and Janice indicate that their gifted students are not only curious about their peers’ marks, but that those marks set the standard by which the students measure themselves. A student might feel proud to know they are the only one to receive 100%, or a student might be dismayed that although they received a high mark, somebody else outdid them by 1%.

Although comparing marks is common, the participants say it is rare that students try to deliberately sabotage one another’s work. John states that he has not seen this kind of behaviour in his students:

I don't think they are actively trying to dismantle other groups, like deleting their work or something like that. I don't think they're going out of their way to try and hurt other groups or other students. But I do think that they definitely are kind of measuring themselves up against other students.

Janice has seen a few instances of a student deliberately trying to prevent another from achieving a high mark. In Janice’s group projects, workload distribution between group members is a factor in each student’s final mark.

We have students write out their workload distribution. So that, if one person’s done it all, the other person doesn't get the same credit. So if three people are working and they’ve done an equal amount of work, then they each get 33% out of 100. Like if there’s two people and they’ve done the same amount, they’d give 50-50.

Janice describes two incidents where a student manipulated the workload distribution to increase his/her own mark and decrease those of other group members:

There’s a few times where I’ve had students lie about the workload distribution, or deliberately prevent the other person from doing work so that they can get, not just a good mark, but a higher workload distribution mark as well. So I’ve had two groups who did that. They basically took over the project and the other person was desperately trying to help, but this girl just wouldn't bring the project to the school. And she would constantly say to her that "You need to come to my house if you wanna."

Occurrences of mark “sabotage” are highly uncommon in the participants’
experiences. This suggests that these gifted students tend more toward task-oriented competition than other-referenced competition. Students are intensely focused on personally achieving high marks, and although they often compare themselves to others, it is rare that they compete simply for the sake of outdoing others.

Anna’s account of competition in her classroom is markedly different from that of the other participants. She explains that open sharing of marks in her gifted classes is rare:

I do rarely see them sharing their marks. They just take their mark and then that’s it. Somehow I think they are aware of other peoples’ marks. But I think they compete mostly with themselves. I see more sharing in my University [preparation] classes, the students being loud and sharing loudly their marks.

But in a Program B class, no.

This lack of outward sharing may indicate an absence of competition, but Anna suggests this may not be the case when she says, “Somehow I think they are aware of other peoples’ marks.” It may be that her students are so invested in their achievement that they only compare their marks privately among trusted friends. Anna says, “I haven’t noticed much sharing in the past. So that shows a sense of competition, probably quiet.”

Following the interview, Anna confirmed this interpretation via email. Anna wrote, “Students are being secretive about their marks because they are competitive. Not sharing gives them some space for improvement by the end of the course, so in a way it is a "silent" competition. They want to surprise each other!”

In her interview, Anna also describes how students in their project groups assess the work of other groups on the grounds of creativity:

And I would say that I can see competitiveness when they do group work.

Like they compete in between groups. I can see that. Who comes up with the best idea or something which is more creative.

The experiences of the three participants, with regard to how competition manifests in student behaviours, are overlapping but varied. John and Janice describe their students frequently and openly comparing marks, while Anna’s students are not nearly as open. Anna indicates that in her classes, students sometimes compete to be the most creative rather than having the highest mark. An overarching commonality between all three participants is that they describe their students as mostly inclined toward task-oriented competition, and less toward other-referenced competition.

Merits and Dangers of Competition

The participants each identified positive and negative aspects of competition in their classrooms. Their responses were grouped as positive effects of competition and negative effects of competition. The participants expressed the need to maintain a balance in order to best support their students’ intellectual and social
development. John, in particular, explained his goal of a harnessing the positive
effects while carefully controlling the balance in order to minimize the negative
effects:

I think you want to find some healthy balance between a healthy competition,
where students can celebrate or kind of focus more on reaching their own,
where they're at. Pushing themselves in that way and doing what they can in
terms of their situation. And on the same time, they can also create a healthy
competition that helps them maybe to stride more and push past the boundaries
that they have. So you don't want this purely competitive environment where
students are just having breakdowns left, right, and centre. It's just so intense.
But on the other hand, you don't want to throw the baby out with the bathwater
and get rid of competition entirely.

John's statement highlights the main effects of competition discussed by all
three participants: the positive effect on motivation, and the negative effect on
anxiety and self-esteem.

Positive effect of competition: Motivation

Participants characterized their gifted students as highly motivated in their
studies, and this was partly attributed to competition between students. Janice
says of her gifted students, “They're competitive, so they compare themselves to
each other a lot. And I think in many ways it's very healthy for them as a driver
to become better. To achieve better.”

Janice later adds that competition between students produces a noticeable
change in the quality of work that she sees.

I find the level of work that students put in is so much more serious and at a
higher level when they know that they are being judged against someone else.
[...] And I do encourage it where I would say something like, "I would love to
display some of the best models out in the classroom."

John expresses how the climate of his school motivates all students to
achieve:

There's a culture of excellence in this school, a culture of pushing yourself. And
I think for a lot of students it's a really good thing. I think it helps them to push
themselves past the boundaries that maybe they've set for themselves. Or it kind
of lifts everything up [...]

Anna agrees that competition can motivate students, but she cautions that this
is dependent on the makeup of the class.

I noticed occasionally if I have a very strong group and I have just one, two,
three students who are weaker, so if a majority is above the average level, the
weaker students are pulled up. While if it's vice versa, unfortunately, the good
students sometimes might be pulled down. It depends but I think the good ma-
jority of good students might encourage the other ones to do better. Like it's a
good atmosphere in the class.

The participants valued the motivational effect of academic competition in
their gifted classrooms. They felt that given the right situation, competition should be encouraged for the benefit of student learning.

*Negative effects of competition: Anxiety and self-esteem*

Participants were equally mindful of the negative consequences of competition. Janice expressed concern for the impact of competition and comparisons on a student’s self-esteem. Janice explains, “Sometimes the competition can be a deterrent for some students because they, all this constant comparison can sometimes make you feel bad about your own ability.”

Anna, who teaches in a rigorous and competitive academic program, has seen students present with mental health issues. She states,

I had students with mental issues in Program B which were like either stressed, or... As you know we keep confidentiality over this. We know that occasionally one is on medication. And they might even confess, or say that because of the work that they put into all the subjects they've got at that point where they are burnt out.

John shares similar experiences regarding mental health in some of his gifted students:

Generally there's probably a pretty good relationship to competition. But I do know that that's something that our students struggle with. And they might have to go to counselling to get help, like to student services or go see a guidance counsellor. Because they're just putting unrealistic expectations on themselves, or they're not seeing clearly, they're comparing themselves too much to other students. And they just literally kind of can't handle it.

John hopes that his students can be inspired by the achievements of others, but also recognize their individual strengths and weaknesses. He states,

[...] I do think that they definitely are kind of measuring themselves up against other students. And again, sometimes that's a good thing. Sometimes that can inspire you in a certain way, but the students also have to realize that there's different strengths in different areas too. So they can't be the best at everything.

The participants have all witnessed situations in which competition was detrimental to student self-esteem and wellbeing. The experiences that they share are evidence that academic anxiety is a serious issue even among students who achieve high grades and are considered gifted.

**Addressing Competition Through Pedagogical Practices**

The participants described various decisions they made as teachers to address competition in their gifted classrooms. Teacher practices were grouped in the areas of grade disclosure, delivering feedback, and group work.

*Grade disclosure*

Janice and Anna have similar approaches to posting student grades. They anonymize the class grades by replacing student names with student numbers,
then post the list in the classroom. The intent is that each student will be unable to connect any other student with a grade that was posted. Anna says that her students still observe the overall distribution of marks, and react to this information. She says of the class grade list, “That is posted so people know the class average. Then obviously those that are below the class average will be disappointed.”

Janice also speaks about students reacting to posted grades:

When we post marks in the classroom we have to be careful to put student numbers, not names. But students are very curious like, "Oh my God, who got a 67 on this test?" and "Who's that 93? Who's above me?" So there's always a comparison going on.

Janice sometimes announces students’ achievements to the whole class. She says, “I mean we do post grades in all of the classes just after every evaluation, but in a Program A class I would say, you know, ‘There's seven students on this test who got above 90 and that's fantastic.’”

John, in contrast with the other participants, returned grades to his students on a strictly individual basis. He explains that his students are always curious about each other’s grades, and they usually share them voluntarily within the class. John states, “When you hand back a project or you hand back something that's being marked, like a test or something, there is the typical kind of ‘What did you get? I got this. I got 100%.’”

**Delivering student feedback**

The participants described their approaches to giving a student feedback about academic work. All participants said they were mindful of the differences between giving a student feedback in private versus in public with the rest of the class. John explains,

Within the whole class, then I'm not gonna be as open about [praising a student’s work]. Cause I don't wanna feed into this competitive aspect, pointing some of the students out where they got 100 and they got 96 and so focusing on them more. Because they're gonna feel bad and it doesn't may any sense. It's like, ‘Well, you did a fantastic job. 96 is incredible, it's amazing.'"

Janice prefers not to single out individual students in her class, but she openly congratulates exceptional achievements with the intention of motivating the students. Janice explains how this approach is more suited to gifted groups than for Academic or Applied:

In an Program A class I would say, you know, "There's seven students on this test who got above 90 and that's fantastic." So I would encourage that kind of behaviour in Program A but I wouldn't do that in an Applied class or even in mainstream because I know I'm working with such a diverse level ability of students, that certain students would be quite turned off and might think that I prefer only the really high-achieving students.

When delivering negative feedback, the participants are especially mindful of their gifted student’s self-esteem. Participants try to give constructive criticism
while also validating the student’s successes. John explains,

I think in a lot of cases here you have to [give negative feedback] with a bit of a
delicate hand because again, the students can be quite hard on themselves and in
some ways they’re their own harshest critic. So I would do it in a way that
would point out a lot of good things that they did because a lot of times there’s a
lot of great things that they did. And then say, ”Good, you know, these are some
areas that you have to work on.” And try and let them down easy, I would say.
Because again, they can be pretty hard on themselves.

Anna agrees, stating, “I don’t like to tell a student that he is ‘wrong’. I say,
‘Maybe you should review that’, or ‘Let me see...’”

Janice describes a dilemma that she faces in giving authentic feedback on stu-
dent work. She worries that too much praise of the high-achievers may create di-
vision within the class, but she also does not want to send the message that every
student is equal in every way.

As much as I would announce, you know, ”Fantastic” to students who got above
90. ”You know, that was a very difficult test, you went above and beyond, very
good.” But then I would try to make students who got the 70s, I would try to
say sometimes, ”It was a difficult test. If you got a 70, you know, that’s still pret-
ty good,” or ”Don’t think that you failed the test just because of what you got.”
So I do have to create certain blanket statements to not create that segregation.
But then at the same time I’m not trying to say that everyone is exactly the
same. I do praise students for working hard and performing well and achieving
more.

**Group work**

The participants use group work frequently in their teaching, and they feel
that it generally works well in their gifted classes. John describes his students as
cooperative and motivated during group projects:

The students generally tend to be quite cooperative with one another. There
doesn’t seem to be a lot of personal conflict. And that makes things move a lot
more quickly. And again, the vast majority are quite interested in what they’re
doing, so it’s not a case of like, two of the people in the group are doing all the
work and two of them are just kind of goofing around the entire time.

Later John adds that he feels that group projects work better in gifted classes
compared to mainstream classes.

I’m more willing, probably, to do group projects [in a gifted class compared to a
mainstream class]. Cause again, there’s less conflict and you’re gonna have less
issues maybe with group work in a gifted environment because again, everything
else I was alluding to before.

Anna shares a similar experience when comparing gifted classes to main-
stream University preparation classes:

So once it’s group work, they help each other. And they want to come up with
their ideas, you know, they try to do their best.[...] They work very well and
they don’t need, you know they don’t need teacher intervention, they don’t lose focus on their work, which occasionally happens with the University [preparation] students. So once you give them a task, um, they stay focused and they want to come up with something which is really creative and unique. So group work is very nice.

Anna highlights inclusivity and cooperativity in the group dynamics of her gifted classes. Janice agrees that in general her gifted students work well together, but she has sometimes noticed tensions in grouping due to competition for marks.

I let them choose their own groups cause that's what I find allows them to work most creatively. Cause if they're working with people they trust, they choose their own friends... but there are times when, I've had two or three times when someone's not been doing very well in the class and so nobody wants to be their partner. Because they feel that that person's not gonna be a very good contributor to the project. So I do run into problems where there is a little bit of selectiveness going on with students. But the majority of the groups, they work quite well together.

Another source of tension for Janice’s students has been the assignment of workload distribution without a group. As previously discussed, Janice described two occasions in which a student tried to prevent others from working on the group project so that he or she would receive a higher workload distribution mark.

Anna describes teaching one cohort in which student work continually suffered due to conflict within project groups.

[I had this happen] just once in 9 years. Yeah, I was very surprised because I didn't expect it. So they had a pretty hard time to make groups. I would say about half of the class had a hard time to make groups. Even to complete labs or small assignments. And there was some tension in the class.

The participants regard group work as generally very effective with gifted students due to high motivation and inclusivity in the classroom. Janice and Anna describe rare incidents of conflict within student groups, the root of which seems to be their focus on achievement and grades. Notwithstanding, all three participants continue to use group work frequently with their gifted classes.

**Best Practices for Regulating Academic Competition**

The participants shared their preferred strategies for balancing the positive and negative consequences of competition in gifted classrooms. The strategies varied by subject area and age group, but across all participants, three overarching best practices were identified. These best practices were to embrace student competitiveness, emphasize growth over grades, and promote wellness.

*Embrace student competitiveness*

The participants were in agreement that competition among students of high
ability is, in some capacity, a naturally occurring and benign part of education. Both John and Janice used the phrase “healthy competition” to describe competitive situations which motivate students to achieve without causing them mental harm. Janice shares a comment that her class raised about the necessary role of comparisons between students:

Students have complained that at the end of such an event where everyone presents what they’ve done and then nobody has really been acknowledged as the best designer or the best so-and-so or the best presenter, they felt that that was a real disadvantage to the groups. Because students themselves said that they can take criticism a lot better than a lot of the newer teaching pedagogy is promoting. [...] So they say that they can take criticism a lot better because then they want to know what they can do to be better.

This statement suggests that when competition is masked and everyone is considered equal, students actually lose an opportunity to improve their work.

To embrace student competitiveness and harness its motivational power, the participants discuss several strategies. Janice explains how she uses verbal prompts to encourage students to compete in a casual way.

I know the type of students in Program A, they thrive on competition so it's fun to say, "...and I want to see whose is the most creative and the most functional." Cause I know they're gonna take it and run with it.

Janice’s open-ended statement of “most creative” means there can be more than one “winner”. Students are encouraged to approach the task in unique rather than formulaic ways.

John discusses his use of low-key competitive activities such as Jeopardy! games.

I'll do things like I'll play Jeopardy to review for a test. So something like that, it's a way that they all can be quite engaged and the stakes aren't that high. I mean, winning in Jeopardy review for a test isn't like, kids aren't gonna come away feeling this tremendous sense of failure. I think they do, when they're in the class they get pretty fired up about it, but it's not something that makes a lasting impact on them in a negative way.

John’s and Janice’s examples both seem to foster a competitive yet easygoing classroom climate. However, John has also had success with involving his students in more intense, high-stakes academic competitions.

I'm a big proponent of the Canadian Geography Challenge, pushing the students that way. And that's pure competition, that's like you got a score out of 100 and you kind of work your way up this hierarchy of scores and you go up against all the class finalists, and then you go on to compete at the world championship. So I'm a big proponent of that. [...] Students tend to be quite supportive even when they don't win. They're pretty okay with everything in that way.

In addition to the Canadian Geography Challenge, John has involved his classes in a program where students give presentations on social issues in order to win money toward their chosen charity.
Well, I mean the decision to do the Youth and Philanthropy Initiative with our grade 9 Geography students. I really like the idea, I thought it was great. Because it was competition but it wasn't for them—it wasn't a competition where they were gonna have some cash prize at the end of it for themselves. Or gets a trophy or something like that. There was this competitive element of it, but it was about something bigger than themselves. It was about people who are less fortunate than them.

John finds notable success in the way the Youth and Philanthropy Initiative motivated his students’ work while also keeping the focus on the social issue being studied rather than on winning.

*Emphasize personal growth over grades*

All three participants mentioned that their students are fixated on marks—on their own marks, and how they compare with their peers. This was the case despite measures to anonymize the marks posted in the classroom. The participants discussed additional strategies to shift the emphasis from the numerical grade to personal growth.

Anna tells her students to “compete with themselves” and aim to beat their personal bests in achievement.

> Competition in a good sense is competing with yourself. Improving yourself. And I encourage my students no matter if they are in Program B or not, to compete with themselves and try to improve themselves, and do not compare themselves to other people. I think this is the best thing to try to improve their achievement, their personal achievement and say, "Yes, I did better this time" or "Oh, I didn't do as good this time as last time, and I have to do something."

Janice gives verbal encouragement to her students. She commends students for their work ethic regardless of how they rank relative to other students.

> I do encourage competition but I make sure that I try to compliment students, you know, on things where they've put in a lot of effort but it may not be the best outcome. It may not be the best design so there's someone else who's definitely gone above and beyond, but then someone else has put in a lot of effort but didn't have this same aesthetic quality. So I and our staff, we make sure to put a healthy emphasis on competition but at the same time make sure that it's not separating and segregating students into groups of losers and winners.

*Promote wellness*

The participants voiced a need for gifted students, who are often very focused on academics, to learn to lead healthy and balanced lifestyles. John described the recent changes at School X to promote student wellness:

> I just think they're doing more activities around wellness in the school. So to kind of promote more of a balanced life, eating healthy, getting enough sleep, getting exercise. Positive thinking, not putting too much pressure on yourself, relaxing, having fun. There's been a whole program that they've really hauled out
probably in the last two or three years around that, and that's kind of escalating more and more. About just trying to get students to think differently about themselves and kind of trying to lead more of a healthy, balanced life. So academics can be a big part of that, but also all these other things that go into that.

John also discussed an emerging awareness of student mental health issues.

You see newspaper articles and you see more research going into the stress that students are under and kind of the mental illness that comes as a result of that.

So I think our school is getting on board with that and we have a social worker, for example, here full-time at the school, who deals with issues such as that.

John went on to explain the role of social workers and guidance counsellors in supporting student wellbeing.

I know students who have gone to see the social worker, just because they need somebody to talk to. Maybe they're having trouble, there is some pressure at home and they're having trouble reconciling that they can't do as well as they think they should be do, the parents think they should be doing, or... And also just our guidance counsellors as well in student services, that's part of their job as well. And part of it is changing timetables, and helping with university applications, but a large part of it is just one-to-one talking. And there are students here who have set up regular meetings with them to talk about these things. Kind of like more a counselling setup.

Janice also shows an awareness of the academic stress that faces her gifted students. As coordinator of Program A, she actively plans events to promote physical and social wellness.

I try to, with Program A specifically, because students themselves put so much emphasis on achievement, I try to sometimes lower that a little bit and put emphasis on social or sports or physical. Just because I know they're not doing it. I'm trying to arrange for every semester some kind of an outing that has nothing to do with school. So like rock climbing. So the students are experiencing each other in a completely non-academic setting. [...] So those are some extra things that I have to deliberately put into place because I know that they're not having a lot of fun. They're, a lot of what they do is school work. Because of parental pressure and their own, you know, desire to do well. So there's some, there's a lot of what I'm trying to do is just make it fun for them—the school experience, to not be just one-directional.

The participants have a multitude of experiences and interpretations of academic competition in gifted classrooms. Their experiences overlap in several common themes. The participants describe maturity, motivation, and creativity as key elements of giftedness. They discuss the climate of a gifted classroom and the struggle to balance the positive and negative consequences of competition. They reflect on how their pedagogical decisions shape the competitive aspect of their classrooms. Finally, the participants draw from their experiences to share best practices for regulating competition, which include embracing competitiveness, emphasizing personal growth, and promoting wellness.
Chapter 5: Discussion

Definitions of Giftedness

The participants all characterized their gifted students by intellectual and social maturity, creativity, and motivation. They gave a more holistic description than the Ontario Ministry of Education, which defines giftedness simply by intellectual ability as measured by a standardized test (Ontario, 2010).

The definitions of the participants align strongly with Renzulli’s Three-Ring Conception of Giftedness, which designates above-average ability, creativity, and task-commitment as the three essential traits of a gifted child (Renzulli, 1998). In my study, the participants’ descriptions of intellectual maturity are analogous to the Renzulli trait of above-average ability, and the participants’ descriptions of motivation are similar to the Renzulli trait of task-commitment.

Although participants discussed general characteristics of their gifted students, they were each careful to include that their students were a heterogeneous group. John specified that typically a few students in each class are not as motivated as the rest. Janice mentioned that while most of her students are highly confident and outspoken, there are some exceptions. Anna recalled one year in which her gifted grade 12 class encountered challenges in getting along, a contrast to the usual climate of the classroom. While the participants broadly define gifted students as mature, creative, and motivated, it is important to recognize that these definitions are not generalizable.

Climate of a Gifted Classroom

The participants spoke about the climate or atmosphere of their gifted classrooms, and the social interactions between students. All three participants felt the classroom was generally an environment of peer support and inclusion. John felt that the positivity of the classroom was particularly notable. Academic achievement was always highly valued among the students. In some cases this is seen in the students’ eagerness to share marks and find out how they scored in comparison to others. By the definitions of Kohn (1992), these students are engaging in intentional competition. They have taken an independent task such as a book report, which itself has no structural competition (i.e. nobody is declared a ‘winner’), and mentally turned it into a contest in which they are vying for the highest mark in the class.

Although gifted classes were described as generally supportive of their peers, the high value placed on academic achievement created competition that was not always friendly. Academic competition, manifesting in grade comparisons and, rarely, grade ‘sabotage’, had a negative emotional effect in some cases. John and Janice both describe students who achieved a commendable grade, but considered this a failure due to a few other students who had scored higher. This reduction in self-esteem due to comparisons with high-achieving peers is described by
Marsh and Craven (2002), who call it the Little-fish-big-pond effect. Rinn et al. (2010) are especially concerned for students moving from a mainstream classroom into a gifted program, where their academic self-concept and self-esteem may drop significantly due to the Little-fish-big-pond effect. The findings of my study, however, suggest that this effect can be strong throughout a gifted program, and not only during the transition from mainstream to a gifted classroom.

**Merits and Dangers of Competition**

The participants discussed their efforts to balance the positive and negative effects of competition in their gifted classrooms. The main positive effect cited was an increase in motivation, and the negative effects cited were increased anxiety and lower self-esteem. All three participants believe that competition can motivate students to achieve more than they would otherwise. This is consistent with past findings which indicate that competition increases motivation and performance in high-ability students (Rimm, 1986).

John viewed academic competition as a doubled-edged sword, where for each opportunity to motivate a student there is also the danger of hurting the student’s self-esteem. The aforementioned Little-fish-big-pond effect is one way in which competition could negatively effect self-esteem. Nonetheless, all three participants viewed negative effects as rare and isolated incidents. This contrasts with the literature, which contains proportionally many studies demonstrating negative effects compared to this demonstrating positive effects. Increased anxiety was found to be correlated with more competitive classrooms (Fraser et al., 1983).

The literature reports additional negative effects on student satisfaction and student friendships (Rizza & Reis, 2001), a phenomenon not seen in this study. Quantitative research has found that when a task is framed as competitive, students produce lower quality work than when the task is framed neutrally (Butler, 1989). This contrasts with my findings, in which Janice discussed intentionally framing tasks when giving students instructions. Janice often framed her tasks as competitive for gifted classes, and she reported a positive effect on student work due to increased motivation.

It is evident from the participants’ experiences that the overall effect of competition varies with each group of students and with each classroom situation. Anna says that when most of the students in a class are highly motivated, they “pull up” the few students who are not, but she does not see this effect in classes with opposite proportions of students. Janice describes a female student who was highly intelligent and enjoyed learning individually but did not enjoy competition. This student had difficulty in the gifted program due to constant comparison with other students who enjoyed competing with one another. This wide variation in the effects of competition is consistent with the literature. Students were found to react either positively or negatively to a competitive classroom depending on their personal social orientation (Widaman & Kagan, 1987) and their gender (Eddles-
Addressing Competition Through Pedagogical Practices

The participants discussed the pedagogical decisions in addressing competition in their gifted classrooms. They disclosed grades privately so as to minimize direct comparisons between students. When giving feedback, they praised the work rather than the grade, and when delivering negative feedback they were mindful of student self-esteem. These practices promote task-oriented competition by encouraging students to focus on their individual progress. All participants reported that their students are naturally very concerned with getting higher grades than their peers, which demonstrates other-referenced competition. The participants' pedagogical decisions work to counter those tendencies by encouraging students to work for self-improvement rather than working to outdo others. These decisions in grade disclosure and feedback are closely aligned with the recommendations of Udvari and Schneider (2000) and Rizza and Reis (2001).

All three participants have positive experiences conducting group work with their gifted classes, and they plan group work often. For Janice and Anna, open-ended group projects became highly competitive situations because students were motivated and eager to have the best, most creative product. Competition was generally productive because students were on-task and channeling their motivation toward the project. The group projects described by Janice and Anna show similarities to the cooperative team rivalry activity examined by Campbell (1973) and Widaman and Kagan (1987). Combining cooperative and competitive approaches, the cooperative team rivalry was proposed as a “best of worlds” between whole-class cooperation and every-man-for-himself competition.

Best Practices for Regulating Academic Competition

Three overarching best practices were identified from the participants' responses. To address competition effectively in gifted classrooms, a teacher should embrace student competitiveness, emphasize growth over grades, and promote wellness. To embrace competitiveness, teachers may plan open-ended group projects or low-key game activities that will motivate students without generating excessive anxiety. To promote personal growth over grades, teachers may speak with emphasis on self-improvement (“You improved since the last quiz”) rather than peer comparison (“You did the best in the class”). These practices are aligned with the recommendations of Udvari and Schneider (2000), who advise teachers to emphasize task-oriented behaviour and self-improvement. The practice of limiting comparisons between students, especially by not publicizing class marks, is recommended by Rizza and Reis (2001) for the wellbeing of gifted girls in particular.

The promotion of wellness is a rising priority in secondary education, and the participants’ experiences demonstrate its particular importance for gifted stu-
dents. John and his school promote a balanced lifestyle of nutrition, sleep, and exercise alongside academic responsibilities. Janice actively plans sporting and social events as diversions from the rigorous academic program. Both John and Anna discuss their awareness of anxiety and depression within their gifted classes. This focus on mental health in gifted students is reflected in the literature. The mental health vulnerability of gifted students has been attributed to self-critical behaviour, high expectations from adults, and difficulty with social adjustment (Leroux, 1983; Neihart, 1999; Schuler, 2000; Pfeiffer & Stocking, 2000).

**Limitations**

This qualitative study examined the perspectives of three current Ontario secondary school teachers with regard to academic competition in gifted classrooms. The participants range from five to 24 years teaching experience, and they teach the subjects of Geography, Math, General Science, and Physics. The results of this study are not generalizable to all gifted classrooms, due to a small sample size and incomplete representation of subject areas. Courses such as English, History, Physical Education, and Languages are not represented in my data.

It must also be noted that none of the study participants are currently teaching in programs for IEP Gifted students. Unlike Janice’s *Program A* and Anna’s *Program B*, the IEP Gifted programs are open only to those formally identified Gifted by the school board using a standardized intelligence test. John is the only participant with past experience teaching IEP Gifted classrooms, and he is able to speak about them in some instances. Overall, this study provides insight into general gifted/high-achieving classrooms and not to IEP Gifted classrooms.

**Further Study**

This qualitative study was designed to illustrate the experiences of three current Ontario secondary school teachers with regard to academic competition in gifted classrooms. One area of further research is the role of gender in competition within gifted classrooms. The participants of this study did not mention any patterns with regard to gender in their classrooms; they were not questioned about this. Rizza and Reis (2001) found that gender sharply divides gifted students’ perceptions of competition, with females avoiding competition in its most direct forms. This would be an interesting avenue of further research, which would allow comparison with studies on the behaviour of girls and boys in mainstream classrooms.

A second area of further study is on competition in elementary gifted classrooms. Student motivations in secondary school often revolve around university plans, so it would be interesting to examine how these high-ability students interact in an elementary classroom where motivations are different. As well, it would be valuable to study the attitudes and behaviours of gifted students at a young age, and to analyze the progression through elementary and secondary schooling.
Bibliography


Appendices

Appendix A: Definitions

**Gifted:** This term refers to individuals with an unusually advanced degree of general intellectual ability. Gifted students require differentiated learning experiences of a depth and breadth beyond those normally provided in the regular school program in order to satisfy their level of educational potential. In this research study, the term *gifted* refers to all students of high intellectual ability, not just those with an Individual Education Plan (IEP) identifying them as gifted.

**Individual Education Plan (IEP):** This term refers to the written record and plan addressing the special education needs of a student in the Ontario education system. An IEP is developed and maintained for every student identified with the exceptionality of Intellectually Gifted by the Ontario Ministry of Education.

**Gifted classroom:** This term refers to a self-contained, full-time school program for gifted-identified students or for students who are not necessarily gifted-identified, but are nevertheless high-ability or high-achieving.
Appendix B: Participant Letter of Information

“Gifted Classrooms: A Qualitative Case Study”

Date: _______________  

Dear ______________________________,

This is a letter inviting you to participate in a research study regarding gifted education. I am a Master of Teaching candidate at the Ontario Institute for Studies in Education at the University of Toronto (OISE/UT). I am researching the topic of social behaviours in Ontario intermediate/senior gifted classrooms as a major research project for my program. My course instructor who is currently providing support for the research process is Dr. Patrick Finnessy. My research supervisor is Dr. Mary Lynn Tessaro.

**Purpose of the Research**
The purpose of my research to understand social behaviours in gifted classrooms and to identify best practices for educators. I believe that your input, as an experienced teacher of gifted students, will provide valuable perspective to my research.

**Procedures**
My research is designed as a qualitative multiple case study. If you choose to participate in this study, you will participate in a face-to-face, individual interview lasting up to 75 minutes. The interview will be scheduled at a place and time convenient to you. During the interview, you may decline to answer any specific questions. The interview will be audio-recorded and transcribed to be analyzed as part of my research. I may contact you via telephone or email for clarification on your responses following the interview. I may also request a follow-up interview should I require further information on particular areas of your experience.

The contents of this interview will be used in my final research paper, informal presentations in my program, and potentially in a conference or publication. I will share with you a copy of my interview transcript to confirm accuracy, as well as a copy of my final paper.

**Risks and/or Discomforts**
There is minimal risk associated with your participation in this study.

**Benefits**
There are no direct benefits to participants of this study. Indirect benefits
include the opportunity for you to reflect on your experiences and practices, and your contribution to a piece of academic literature on gifted education.

**Confidentiality**
I will not use your name or any identifying details in my written work, presentations, or publications. This information remains confidential; only my research supervisor, my course instructor, and I will know your identity as a participant. Your name will not be attached to the interview transcript or audio recording. Digital materials will be stored using password-protected file encryption and hard-copy materials will be kept in a locked file cabinet. I will destroy all research materials after the paper has been presented and/or published which may take up to five years after the data has been collected.

**Compensation**
You will be compensated for your travel cost in attending this interview and any follow-up interviews.

**Opportunity to Ask Questions**
Your participation in this study is voluntary. You have the right to ask questions and to have those questions answered. If you have any questions about the study, please do not hesitate to contact my research supervisor, ____________, or myself at any time. If you have any questions about your rights as a participant that are not answered in this document, or if you wish to report any concerns about this study, please feel free to contact the University of Toronto Office of Research Ethics by telephone or email below.

**Freedom to Withdraw from the Study**
You are free to decline to participate or to withdraw from the study at any time without affecting your relationship with this department, the instructor, or the University of Toronto.

Please sign the attached consent form with full knowledge of the nature and purpose of the procedures. Please retain the second copy for your records. Thank you very much for your help.

Yours sincerely,
Samuel Long

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Research Supervisor: Dr. Mary-Lynn Tessaro
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(416) 946-3273
ethics.review@utoronto.ca
Participant Consent Form

“Gifted Classrooms: A Qualitative Case Study”

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

I have read the letter of information provided to me by Samuel Long, and I agree to participate in the interview(s) for the purposes described.

Signature of Participant: ______________________________________

Name (printed): ________________________________

Date: ________________________________
Appendix C: Interview Questions

Introduction

Hello and thank you for taking the time to contribute to my research. Before we begin the interview I would like to briefly review some of the most important parts of your consent form. This interview is a part of my Master of Teaching research project, and it will be recorded. Your identity and information will be kept confidential through the use of a pseudonym. You have the contact information for my course instructor, my research supervisor and myself. If you have any questions or concerns, please do not hesitate to contact us.

Section 1: Background Information

1. How did you enter the field of education?
2. For how long have you been teaching?
   a. For how long have you been teaching gifted students?
   b. How did you get involved with teaching gifted students?
   c. Have you received any specific training or support for teaching gifted students?
3. What subject(s) and grade level(s) are you currently teaching?
4. What are the demographics of your gifted classes?
   a. What is the gender ratio?
   b. What cultural backgrounds are represented?
   c. What socioeconomic classes are represented?
      d. Roughly how many students do you have in each class?
      e. In the past have your gifted classes been similar or different in these respects?

Section 2: Beliefs and Experiences

5. What does giftedness mean to you?
   a. Do you consider giftedness an innate characteristic of a student?
   b. Can giftedness be developed with practice?
6. In your experience, what are some unique aspects of a gifted class compared to a mainstream class?
   a. What are some experiences that stand out to you?
   b. Who are some of the students who stand out to you?
   c. Have you noticed any unique characteristics in the students?
7. What are some of the challenges you have encountered in teaching gifted students?
8. What is the community like in your gifted classroom?
   a. Do students compare their abilities or achievements to those of other students?
b. Do students share grades or discuss their performance on tasks?

9. What does competition mean to you in a general educational context?
   a. What do you think of competition in relation to academic achievement? In relation to social development?
   b. What specific experiences stand out for you about competition in gifted classrooms?

Section 3: Practices
10. Do you do anything differently when you teach a gifted class versus a mainstream class?
    a. What are some of the biggest differences in what you do when you teach a gifted class?
    b. Why is it important for you to do these things?
11. Have you sought any support, resources, or professional development to help you in teaching your gifted classes?
12. What kind of language is used to refer to students in gifted classes and those in mainstream classes?
    a. How do you approach delivering praise and support for gifted students?
    b. How do you approach delivering criticism for gifted students?
    c. How do students comment on each other’s work?
13. What types of instruction involving social interaction, if any, do you use in your teaching for gifted classes?
    a. Do you use cooperative learning or any type of group work?
14. What is your general impression of academic competition within the gifted classroom?
    a. What specific experiences stand out to you regarding academic competition among gifted students?
    b. Have you ever made any teaching decisions with academic competition specifically in mind?
15. What practices have you found work best for regulating the competitive aspects of a gifted classroom?
    a. How do you know these strategies work?
    b. Why have you chosen to implement these strategies?

Section 4: Next Steps
16. What are your future goals as a teacher of gifted classrooms?
    a. How do you plan on achieving these goals?
17. What advice would you give other teachers, in particular beginning teachers, on teaching gifted classrooms?
Appendix D: Code List

The following families of codes were used in the analysis of the interview transcripts.

**Competitive behaviour**
- other-referenced competition
- task-oriented competition
- mastery goal orientation
- performance goal orientation
- structural competition
- intentional competition
- comparing achievements/grades
- language reflects competition
- positive effect of competition
- negative effect of competition

**Social environment**
- valuing academic achievement
- exclusion/cliques
- inclusive community
- conflict with mainstream students
- little-fish-big-pond effect
- close-knit community

**Student qualities**
- maturity
- self-esteem
- academic anxiety
- motivation
- support from family
- enthusiasm for academics
- humor
- energy
- challenge-seeking
- creativity
- respectfulness
- humility

**Teacher practices**
- grade disclosure
- grading
• language used toward students
• pedagogical choices
• group work
• feedback to students

**General**
• contrast gifted vs mainstream
• school setting
• teacher experience
• student demographics
• cultural background
• socioeconomic class
• gender
• demographics general