Developing Appropriate Challenge and Rigor in the Classroom: Perceptions of Gifted Middle Schoolers

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College of Education
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Developing Appropriate Challenge and Rigor in the Classroom:
       Perceptions of Gifted Middle Schoolers

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Dissertation submitted to the Faculty of the College of Education
in partial fulfillment of the requirements for the degree of
Doctor of Education in
Teacher Leadership

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Abstract
Gifted education is often overlooked in schools. Reasons for the lack of programming include standardized testing causing teachers to teach to the middle, untrained and underprepared teachers, mistaken ideas of equality, and a lack of funding. Even in schools which offer gifted programming, the education offered gifted students often does not meet the educational needs of the gifted student. Although much literature exists regarding the lack of rigor afforded gifted students, the students themselves are often left out of the reporting of results. This is especially true at the middle school level. Utilizing the perceptions of students, this study examined the level of challenge gifted students felt in honors-level classes, specifically focusing on which elements of the class most contributed to or detracted from experiencing an appropriate level of challenge. The 18 students observed in this study were simultaneously enrolled in a gifted and talented elective course, as well as honors-level math and language arts classes. Participants were questioned in a series of interviews in order to determine individual perspectives regarding middle school gifted programming at one selected school site. The findings of the study revealed all students had a desire to be challenged in their academic programming yet were not experiencing challenge, even within most of the gifted programming offered. Students noted teacher understanding, utilization of specific instructional techniques, and depth of content increased challenge while district or state policies, teacher misunderstanding, and a lack of academic rigor decreased challenge.

Keywords: gifted, talented, perceptions, challenge, middle school
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Chapter 1: Introduction

What is honored in a country will be cultivated there.

– Plato, Republic, Book VIII

Introduction to the Problem

Picture the typical classroom. An amalgam of students of various levels and abilities sit around a room while a teacher attempts to balance each child’s needs. Survey the room and attempt to determine which child is least engaged in the learning process and will have learned the least from the day’s lesson. You may consider the child in the front row who is visibly struggling to complete the worksheet in front of him. Or your eyes may wander to the student with the learning disability who is struggling to keep up with her peers. However, you might be surprised by the truth. Research suggests the child learning the least may actually be the gifted student (Davidson & Davidson, 2004).

In the United States, there has been an acknowledged need for gifted education since the middle of the 1800s. In 1868, the first programs specifically designed to educate gifted students were begun in St. Louis public schools (National Association for Gifted Children [NAGC], 2016). In 1901, Worcester, Massachusetts, opened the first school designed specifically for gifted children (NAGC, 2016). Yet despite these early efforts to meet the educational needs of exceptional students, the question remains as to whether those needs are indeed being met in the modern educational setting. Many researchers today argue these efforts have not succeeded and gifted children are being left behind in the classroom (Davidson & Davidson, 2004; DeLisle, 2014; Finn, 2014; Loveless, 2008).

While gifted literature and research certainly exists, the preponderance of attention is directed to identifying the gifted, especially focusing on minority groups based on race, gender,
or socio-economic status (Jolly & Kettler, 2008). Research is limited in regard to how gifted students feel about the education they receive and whether it is meeting their educational needs. Additionally, a large number of studies have been conducted at the elementary and high school levels, leaving a gap in the research conducted in the middle grades. This study seeks to fill gaps in the body of knowledge regarding the perceptions gifted middle schoolers have regarding the challenge and rigor provided in the educational experience.

In those studies that have sought out the voice of students, gifted students call out for a more rewarding academic experience. “No, it is not challenging,” stated one student, “because all we do is take notes, memorize, then regurgitate information for a test” (Gallagher, Harradine, & Coleman, 1997). Another student was quoted as saying, “I learn the day’s lesson quickly, do my work once I’m assigned it, and sit bored during class. No challenges are there to . . . challenge me” (Gallagher et al., 1997). As high performing students, these are the individuals who will likely go on to impact the future fields of medicine, technology, engineering, or the arts. To fail them is to fail society.

Background, Context, History, and Conceptual Framework for the Problem

To understand the context of the study, one must understand the circumstances that have created the problem. With that in mind, let it be stated that gifted education has not been completely ignored over the course of modern history. As noted by Armstrong (1989), focus has shifted over the years “from curricular content to instruction process to student needs,” especially in regard to identification of minority populations (p. 278). Publication of the Marland Report in 1971 brought the issue of gifted education back to the nation’s attention, calling on schools to find and nurture the talents of bright students in many domains. Gifted students were defined as “children who require differentiated educational programs and/or services beyond those normally
provided by the regular school program in order to realize their contribution to self and society” (Marland, 1971, p. 8). In 1983, “A Nation at Risk” was published, becoming one of the first studies to bring international accountability to the fore through the comparison of each nation’s brightest students (Jolly & Kettler, 2008). The National Commission on Excellence in Education warned that “the educational foundations of our society are presently being eroded by a rising tide of mediocrity that threatens our very future as a Nation and a people” (as cited in Behrend, 2012, p. 3). Additionally, the report “warned that children were being dulled into complacency, and no one cared about the needs of the high achievers” (Davidson & Davidson, 2004, p. 15).

A mere decade later, “National Excellence: A Case for Developing America’s Talent” reiterated the need for improved education for America’s gifted and provided programming recommendations for gifted programs across the nation (Behrend, 2012; Davidson & Davidson, 2004; Jolly & Kettler, 2008). Gifted students were not being challenged and mediocrity was replacing excellence. The report decried a “squandering of one of its most precious resources – the gifts, talents, and high interests of many of its students” (U.S. Department of Education, as cited in Jolly & Kettler, 2008). Even at the start of a new millennium, No Child Left Behind legislation still called for tough measures to ensure all students’ needs were being met.

Yet despite each of these calls to heed the needs of gifted education, the nation has continued to invest few resources toward improving the education of this population of students. This has been largely due to a misplaced emphasis on equality, a lack of teacher training, misappropriated goals of testing, and reductions in funding. Despite research which proves its benefits, school districts are hesitant to provide specialized courses or homogeneous grouping options if the school district may be called out as being elitist or unfair (Adams-Byers, Whitsell, & Moon, 2004; Behrend, 2012; Finn, 2012, Gallagher, 1997). Classroom teachers are often
unprepared and untrained to address the unique educational needs of the gifted child despite evidence indicating gifted students do not truly excel without proper guidance (Behrend, 2012; Marland, 1971; Willis, 2007; Young & Balli, 2014). The goal of leaving no child behind has caused educators to admittedly focus on raising the scores of those not meeting the standards rather than academically pushing those who have already mastered the standards (Davidson & Davidson, 2004; Loveless, 2008; Moon, Brighton, & Callahan, 2003). With no federal requirements mandated for gifted education, funding is often lacking to develop or maintain gifted programming (Callahan, Moon, & Oh, 2014; Davidson & Davidson, 2004; Hargrove, 2012) Such oversight results in classes where gifted students are largely left to fend for themselves or review content long since mastered. Understanding the framework of this problem may allow educators to remedy the situation and improve the gifted student’s educational experience.

**The ethics of equity.** The issue of equity in education is a valid one and must be addressed. Educators on both sides of the issue are often quite passionate in their stance. George, Stevenson, Thomason, and Beane (as cited in Tomlinson, 1994) explained in literature regarding middle school education, “there is persistent encouragement for elimination of tracking and between-class ability grouping, promotion of cooperative learning, and other experiences likely to broaden the range of students experiencing success in the average middle school” (p. 1). Indeed, researchers have indicated there is some success for low-achieving students when placed in heterogeneous groupings (Plucker, Burroughs, & Song, 2010; Plucker, Hardesty, & Burroughs, 2013; Loveless, 2008). Such students benefit from interaction with students already accomplished in tasks and standards. However, those same researchers indicate the benefits for
higher achieving students within those same groupings are not commensurate with the benefits for those on the lower end of the grading spectrum.

Differentiation is often given as the means by which both high- and low-achieving students can learn effectively within the same classroom. Differentiation, in its ideal, allows all levels of students to work with curricular and instructional components suited to their individual learning levels while still within the same classroom. Critics may argue that when gifted student needs are being met within the classroom, there is no need for additional gifted programming. However, the reality often tells a different story. Researchers have shown that even when teachers had received training, differentiation does not truly occur or does occur to such a minimal level that the gifted were still left learning materials already mastered (Jacobs, 2010; Schmoker, 2010). Differentiation is often not the panacea to the problem of reaching gifted students. In fact, when the term was first coined in 1961, it referred to “differential education of the gifted,” and was intended to be applied to gifted students who were in classes with other gifted students, not in the near-impossible situation of a classroom “where students’ abilities ran the gamut from below average to superior. . . a colossal and virtually impossible task” (DeLisle, 2014, p. 100).

Educating the gifted in such a way as to reach their advanced level of competence and accomplishment calls for equity rather than equality of education – an environment in which student needs are known and curricular and instructional decisions are applied to creating an environment wherein even the brightest learners may learn. In assessing 2015 TIMSS results, Plucker (2016) confirms his original analysis of the detriments of attempting to educate all students “equally,” noting one can argue “we’ve actively lowered the quality of education for our best students by removing ability grouping, overvaluing “differentiation” as a miracle
intervention, and making advanced performance irrelevant to school and district ratings in most state accountability systems” (p. 4). Differentiated instruction “work[s] in a setting of intellectual and academic homogeneity” (DeLisle, 2014, p. 101). Placing non-gifted students in heterogeneous situations with the gifted can raise the scores of lower-performing students and serves as a sociological answer to the issue of equality. However, Meckstroth and Kearney (2013) admonish schools “don’t have the moral right to hold one child back to make another child feel better” (p. 63). Allowing the gifted to receive an equitable education through a variety of grouping strategies can satisfy those on both ends of the ethics spectrum.

**Statement of the Problem**

Gifted students often do not receive an appropriate level of challenge within their gifted and honors-level courses (Clementson, 1998; Davidson & Davidson, 2004; Fredericks, Alfred, & Eccles, 2010; Glass, 2004). Too often, gifted students complain of boredom and a lack of engagement (Davidson and Davidson, 2004). Test scores support the claim that gifted students are not achieving to their potential (NAGC, 2015a; Loveless, 2008; Moon et al., 2003). In a nation that has passed legislation to leave no child behind, it should be particularly concerning that the gifted population is seemingly left behind. “Economists and social scientists have been concerned for years about evidence that the American education system is falling behind those of other developed countries—particularly with regard to the way we hone and train our ablest young people” (Finn, 2014, p. 51).

A lack of research complicates the problem of gifted students not experiencing a challenging and rigorous educational environment. While literature is replete with quotes of students bemoaning a lack of challenge, research delving into the causes behind this lack or the means by which to remedy the situation is limited. Gifted literature often focuses on
identification of students, especially increasing the numbers identified from minority populations. Even among the literature that does exist, there is often a scarcity of materials focused on the middle grades. Additionally, after an influx of research and materials on gifted education in the 1990s, current research and literature is difficult to find. Each of these issues exacerbates the problem of educators being able to provide an educational experience with appropriate challenge for the gifted student.

**Purpose of the Study**

This study was conducted to determine whether gifted students perceived themselves receiving an appropriate level of challenge from their gifted and honors-level courses. The literature regarding gifted students is lacking in student voice (Adams-Byers et al., 2004; Callahan, et al., 2014; Gallagher et al., 1997). Additionally, the preponderance of gifted literature focuses on students at the elementary and high school levels, while largely leaving out the gifted young adolescent population whose cognitive changes make the middle school years a critical time (Barnes & Urbanowski, 2014; Lines, 1994; Lounsbury, 1992; Moon et al., 2003). This study allowed the middle school voice to be heard through interviews designed to draw out student perceptions. Conducting such a study adds a key element to gifted literature and begins to fill a gap in the available research.

**Research Questions**

This study addressed one research question with two sub-questions.

**Research question.** How do gifted students experience the gifted curriculum?

**Research sub-question one.** What do gifted middle school students perceive as the methods or elements contributing to a challenging educational experience?
Research sub-question two. What do gifted middle school students perceive as the methods or elements detracting from a challenging educational experience?

Rationale, Relevance, and Significance of the Study

Gifted students in America constitute roughly six to 10% of America’s student population (NAGC, 2015). With such a small population, is the study of gifted education really an important one to spend time and resources on? It can be argued that yes, it is. There is a dearth of research on the perceptions gifted students have of their own education. Gifted students have great potential as the harbingers of change in the future. Additionally, great effort and money is spent to provide a worthwhile education for students at the lower end of the spectrum, a group that also constitutes roughly 10% of the population.

There is a lack of research on gifted education. Jolly and Kettler (2008) conducted a historical investigation through a meta-analysis of the literature on gifted education. The authors collected gifted literature from three well-renowned publications over the 10-year period following the publication of *National Excellence: A Case for Developing America's Talent*. Although these journals are not the only ones reporting on gifted education, the authors determined them to be highly representative of literature on gifted education. Jolly and Kettler’s (2004) analysis determined the preponderance of gifted literature focused on defining giftedness, student identification, and inclusion of students from diverse backgrounds. The fourth most important topic, determined by frequency of key words, was teaching and instruction, which constituted less than one third of the category topics; curriculum ranked at eighth out of 10 (Jolly & Kettler, 2004). Though *National Excellence* itself served as a clarion for the benefits of intervention studies to improve practice in gifted education, such studies are negligible in actual gifted education research. Jolly and Kettler (2004) made a striking analogy:
A comparative example using the field of medicine would yield a plethora of research studies regarding symptoms of cancer patients, but little or no research on effective methods of treatment for the disease. If the practice of gifted education is to improve, the research base must shift from describing the phenomena of giftedness to identifying and verifying the best practices for gifted education. (p. 441)

In conclusion, Jolly and Kettler (2004) determined a discrepancy existed between what studies such as *National Excellence* had recommended be researched (areas of achievement and excellence) and what is currently being studied (equity and social issues).

Other studies have likewise lamented the lack of research in gifted studies (Adams-Byers et al., 2004; Behrend, 2012; Gallagher, Harradine, & Coleman, 1997; Kettler, 2014). Specifically, Gallagher et al. (1997) and Kettler (2014) cited the need to glean information from gifted students themselves. Note that Kettler (2014) conducted his research 17 years after Gallagher et al. (1997), yet still drew the same conclusion that research in gifted education was lacking. Gallagher et al. (1997) criticized that little effort had been made to ask students directly how they felt their academic and intellectual needs were being met “or whether they [were] receiving challenging work commensurate with their ability level” (p. 132).

The state of gifted education research can be summed up by noting that “there is consensus that more research must take place in order for the problem to be solved” (Behrend, 2010, p. 40). Despite gifted education being on the national consciousness for considerable time, the dominant area of inquiry is still the phenomena of giftedness (Jolly & Kettler, 2008). “Yet student perceptions should be of special interest to those educators who aspire to excite curiosity and the high level thinking of [gifted] students” (Gallagher et al., 1997). More research must be
conducted on gifted education with a focus on those who are directly affected by educational reform efforts – the students themselves.

**Definition of Terms**

*Gifted and talented* children are those who have been identified “by professionally qualified persons who by virtue of outstanding abilities are capable of high performance” and who, because of these differences, “require differentiated educational programs and/or services beyond those normally provided by the regular school program” (Marland, 1971, p. 8).

However, those students qualifying as gifted and talented may differ based on state or district mandates. At the research site, gifted and talented students were those who achieved a score at or above the 97th percentile on one or more domains as measured by the CogAT. A second component of the gifted label notes “advanced learners demonstrate a strong, interest-based intrinsic motivation; a capacity for understanding abstract concepts; and an ability to transfer knowledge from one learning situation to another” (Manning, Stanford, & Reeves, 2010, p. 145).

With that in mind, an additional requirement for participants in the study was to be concurrently enrolled in the school’s honors-level mathematics and language arts courses. Enrollment in honors-level courses was determined by scores on district interim assessments and teacher recommendation. The dual requirement was implemented to ensure study participants were not only excelling academically, but also were students most likely to be seeking a challenging course of academic study.

*Gifted programs* are defined as programs “with a specific process for the identification of a group of students who were provided with educational options in ways that differ from regular classroom curricula and/or instructional practices” (Callahan et al., 2014, p. 1). Programs may exist as pull-out sessions students attend at specified times in lieu of regular classroom
instruction, homogeneous instructional arrangements, extra-curricular camps or sessions, or a variety of other formats. The study site implemented a two-pronged approach to gifted programming. The first element consisted of an elective course solely for those students who passed the CogAT test at the 97th percentile or higher. The elective course met daily and was instructed by a teacher certified in gifted education. The second component of the school’s gifted programming involved honors-level courses in math and language arts. Any student achieving one of the top 60 scores on a district assessment qualified for placement in the honors courses, not just those identified as gifted. Honors-level courses were designed to be taught at a faster pace, incorporating standards from the grade level above, and investigating concepts at greater complexity.

Two final terms which must be addressed are the concepts of challenge and rigor. These terms are not as uniformly defined as others and may have different meanings based on an individual’s perceptions. However, the study addressed the perceptions of students regarding challenge and rigor in the classroom, so some clarity must be brought to these concepts. The outcome of providing a challenging curriculum should be that “students with gifts and talents demonstrate advanced and complex learning” while also “demonstrat[ing] growth commensurate with aptitude during the school year” (NAGC, 2010, pp. 9-10). Research indicates such outcomes can be achieved by “providing adequate learning opportunities commensurate with student needs through differentiation, enrichment, and/or acceleration” (Callahan, et al., 2014, p. 6). These methods are in contrast to “the tasks that require recall and repetition with limited opportunities for autonomy [which] are still the most common instructional method in most classrooms” (Fredericks et al., 2010, p. 54). The optimal environment for the gifted is one in which instruction and content is provided at levels that stimulate and enhance academic growth.
Limitations and Delimitations

Limitations of the study are brought about by those factors outside a researcher’s control. These include sampling and time constraints. As the only middle school in the area with a dedicated daily gifted elective combined with an honors language arts and math program, the school was the optimal setting for understanding perceptions of the gifted in multiple courses and instructional methods. However, the sampled population was thereby limited to those students currently enrolled in the program. Because the research study was conducted within the time frame of the school calendar, the selected population may not have been balanced in regard to gender or ethnicity. Although these variables are not the subject of the current study, the lack of variety could have impacted the findings.

Delimitations of the study included the population selected. The study only incorporated middle school students from a single site. These students were dually enrolled in the gifted program elective, as well as honors language arts and math courses. Additionally, participants must have been involved in the gifted program for at least one school year in order to enhance understanding of the program and its level of requirement. Additionally, all interviewing occurred on site. Due to the use of minors as participants, the on-site location alleviated any transportation issues and allowed all eligible students to participate.

Summary

Chester Finn, former United States Assistant Secretary of Education, cautioned that the United States is failing to produce the number of high-achieving students the country needs in order to sustain its ability to compete internationally over the upcoming years. “It is important to note, however, that our problem is not that we lack smart children; it’s that gifted students are not being given the tools they need to realize their potential and compete” (Finn, 2014, p. 51).
Providing gifted students with the challenging academic environment they not only seek, but deserve, would be a first step in ensuring the gifted can reach their potential. Due to a misplaced focus on providing an “equal” education, the lack of funding and trained teachers, and an emphasis on raising the test scores of low-achievers at the cost of the high-achievers, today’s gifted students often lack a challenging educational curriculum which will push them to excel.

Throughout existing gifted literature, student voice is often lacking. Additionally, the middle grades are often overlooked in place of research done at the elementary or high school levels. Conducting a phenomenological research study analyzing student perceptions at the middle school helps fill a niche in gifted research that is currently limited. As students are interviewed regarding their perceptions of gifted education and their engagement and participation is observed in their gifted and honors-level courses, it can be seen whether gifted students do perceive a lack of challenge provided by their educational experience. The elements of instruction and curriculum which best complement or most hinder an appropriate level of challenge for the gifted learner can then be extrapolated from this data in an effort to provide a better educational experience for gifted students.
Chapter 2: Literature Review

Gifted education is largely haphazard, ineffective, and underfunded; it is more style than substance and rarely provides what gifted kids truly need: work that challenges them to the extent of their abilities in an environment with other kids who love to learn. (Davidson and Davidson, 2004, p. 33)

Introduction to the Literature Review

A review of the literature suggests that in spite of the United States’ commitment to leave no child behind, it is quite possible the opposite is true. Despite seeming success in the classroom, gifted students may very well be left behind by the United States’ educational system. The U.S. Department of Education defined gifted children as those “with the potential for performing at remarkably high levels of accomplishment when compared with others of their age, experience, or environment” (Hertzog, 2005, p. 213). Even with a definition that clearly marks this population of students as different from others, many gifted students face an education that is largely the same as that of their peers.

A study of current literature suggests gifted students are not receiving enough attention at appropriate levels to be academically stimulated and challenged. McCollister and Sayler (2010) advised that the “optimal school learning environments for gifted students are ones where scholastic rigor is standard. This rigor is needed both to stimulate the students intellectually and enhance their academic growth” (p. 46). Yet despite the goals spelled out by such organizations as the National Association for Gifted Children and the California Association for the Gifted, parents, students, and teachers have noted a lack of challenge and rigor in curriculum presented to gifted students. Studies utilizing interviews and observations of students, parents, and teachers consistently express a perception of a lack of challenge in the academic setting for
gifted students. Because gifted students have “the potential for performing at remarkably high levels of accomplishment when compared with others of their age, experience, or environment” (U.S. Department of Education, as cited in Hertzog, 2005, p. 213), it is imperative gifted students receive an education commensurate with their needs.

Gifted education has not been entirely ignored over the course of modern history. From the Marland Report of the 1970s to the new millennium’s call to leave no child behind, legislation has been passed and reports have been written to heed the needs of all the nation’s students. Yet despite each of these calls to regard the needs of gifted education, the nation has continued to neglect the gifted population. This has been largely due to the misconstrued goals of testing legislation, a misplaced emphasis on equality, and a lack of teacher training and funding. Legislation designed to focus on “standards-based education with the goal of raising challenges and improving student achievement” (Hargrove, 2012, p. 72), has more often resulted in a focus on select groups of students who are not yet meeting the mark, rather than those who have already mastered the standards. Providing students with equal access to education has been of increasing concern in the nation, but frequently only in regard to students seen as disadvantaged due to race, socio-economic level or handicap. Davidson and Davidson (2004) explained that “our anti-intellectual culture tries to dumb down [the] bright students. An obsession with everyone doing the same thing leads to inequality for students who have different needs from the norm” (p. 159). Additionally, teachers are often not adequately trained in how to reach gifted students during their teacher preparation courses or later during in-service training. States have cut funding for gifted programs, compounding the lack of training and resources for reaching this population of students.
The question may still remain as to why, if there are only three to five million gifted students, further research needs to be conducted regarding how best to serve this population. Besides the fact the nation has pledged to leave no child behind, Jerome (2010) presented a simple but powerful argument: “Forecasters [of the global economy] tell us that our most able students must be more creative, more globally competent, more innovative, and more motivated—and that our national lifestyle and leadership is dependent on it” (p. 91). Yet a lack of research has plagued the field of gifted education. As noted by Jolly and Kettler (2008) in a meta-analysis of gifted literature, defining giftedness and identification of minority populations have predominated as the focus of gifted literature. Teaching, instruction, and curriculum do not appear as frequently and the literature often does not take into consideration the perceptions of gifted students themselves. However, researchers such as Hertzog (2005), Dixon (2002), and Behrend (2012) indicate gifted students not only prefer but also perform at higher levels when curriculum utilizes critical thinking, authentic experiences and assessments, and homogeneous learning opportunities.

From the literature, one may conclude gifted students are not challenged by the level of academic rigor in their classes. This study will be used to determine whether that is the perception of gifted students in the middle school setting. Additionally, student perceptions may be used to determine the elements of gifted programming that do indeed provide the experience gifted students desire, as well as recommendations on how to improve gifted programming.

The literature review backs the need for improving the level of challenge and rigor for gifted students, along with well-researched suggestions for doing so. This is presented through a conceptual framework that further looks at the implications of increased testing, student grouping options, and the lack of teacher preparedness. The methodology of specific studies in
evaluating gifted instruction was reviewed and analyzed for the studies’ impact on gifted instruction, as well as issues that arose from the data and results derived from the studies. Finally, the research was critiqued for its influence on improving gifted education.

**Conceptual Framework**

Researchers suggest gifted students do indeed feel a lack of challenge from their educational coursework (Clementson and Wegner, 1998; Fredricks et al., 2010; Hertzog, 2005). Instead of being pushed to excel, the gifted are often left to fend for themselves in a classroom or to review content they have previously mastered. In order to understand why this is, as well as possibly remedy the situation, one must understand the framework of the problem and why, when teachers and students were asked, such an oversight has occurred. The following components are linchpins in determining why gifted students often miss out on a challenging education.

**Middle school and the gifted mind.** Because this study focused on gifted middle schoolers, it is important to examine the characteristics of students at this particular age level. Barnes and Urbanowski (2014) described middle schoolers as experiencing “a wide variety of changes related to their cognitive capabilities, social and emotional well-being, and use of self-regulation strategies” (p. 17). Lines (1994) noted the “vibrancy” of this crucial life stage, where students are “going through some of the most profound physical, emotional, social, and intellectual changes that they will ever experience” (p. 39). No matter how it is worded, it is important to note the needs of the nearly three million gifted students at the middle school level need addressed.

Barnes and Urbanowski (2014) explained that middle schoolers often experience a decrease in academic performance and motivation in the school environment, which may
consequently lead not only to lower scores, but also to decreased self-concept and higher at-risk behavior. The same may be true for gifted students as their experiences of change during this transitionary period are compounded by a lack of engagement and challenge within the classroom. Tomlinson (1994) cautioned:

Gifted middle school learners are at a special risk in the absence of appropriately challenging instruction . . . To delay presentation of complex and demanding ideas and to defer development of habits of scholarship for highly able learners until high school may result in diminished potential to develop their capacities as producers of knowledge. (p. 179).

With that in mind, the need for a rigorous curriculum at the middle school level cannot be neglected. Casey (2000) called the idea that gifted children can make it on their own without directed attention and curricular constructs a “fallacy,” warning “a serious developmental penalty may be imposed when gifted children are deemed to need less and are given less, an all too common occurrence” (p. 229).

Curricular relevance, school environment, self-esteem, instructional processes, and developmental readiness, all hallmarks of the middle school transition years (Barnes & Urbanowski, 1994), need consideration in regard to the gifted at this age level. Alexander and George (as cited in Bonner, 2005) highlighted the needs of middle school education:

Children of middle school age have their unique characteristics and needs which cannot be subordinated to the impact of the elementary school or to the demands of the high school. An effective middle school must not only build upon the program of earlier childhood and anticipate the program of secondary education to follow, but it must be directly concerned with the here-and-now problems and interests of the students (p. 20).
Schools may provide this needed support through flexible grouping options, pull-out programs, or differentiated curricula and instructional strategies. Providing an appropriate level of challenge and rigor can meet both the emotional and academic needs of students at this key stage.

**Effects of teaching to the middle.** The National Association for Gifted Children (2015a) cautioned that due to legislation, states have addressed their efforts toward closing achievement gaps. Thus, they teach to the middle population of students. “In most of this work, the principal focus has been on minimum competency: closing achievement gaps by bringing a larger proportion of students in underperforming groups . . . to a basic level of educational achievement” (NAGC, 2015a, p. 1). However, such an approach is grossly negligent to those students who are not functioning below the proficiency level.

Loveless (2008) and Moon et al. (2003) concluded testing substantially affected the methods and curriculum teachers used. The more teachers felt pressured to increase test scores, “they [made] specific choices to accomplish this goal, for the betterment or detriment of sound instructional practices for gifted and talented students” (Moon et al., p. 51). Despite knowing the benefits of problem solving and critical thinking, teachers used more worksheets and skills practice prior to the test. Students are left sitting bored, unengaged, and learning little while teachers direct instruction to the middle, seeking to increase the test results that matter for scoring increases. “Teachers acknowledge students’ frustration but fail to respond to it,” for fear of “wasting time” (Moon et al., 2003). As Davidson and Davidson (2004) explained:

> For a nation that likes to be the best in everything, we are awfully ambivalent about intellectual achievement. The regular school curriculum matches the needs of 50 percent or so of children. It will be too difficult for a quarter of the students and too easy for the
other quarter . . . The top percentiles, where the disconnect is worst, are on their own in trying to carve out an optimal match. (p. 159)

McCollister and Sayler (2010) cautioned that the advanced development of the gifted is often higher even than teachers expect. If that is true, it is no wonder studies cite student boredom arising from a lack of challenge (Clementson, 1998; Davidson & Davidson, 2004; Fredricks, 2010; Glass, 2004). Schools facing weak incentives to focus on the higher end of student learning where students are already proficient, will naturally fall into directing attention toward those who can be appreciably moved from one level to the next.

Underachievement is a similarly deleterious effect. Fredricks et al. (2010) reported gifted students have a “rage to master,” meaning they can be intensely motivated, sharply focused, and highly engaged when the learning is meaningful. However, a lack of engaging students in such a manner may lead students to disengage and underperform. Gifted students have often mastered the majority of the grade-level content before even beginning a school year (Manning et al., 2010). Davidson and Davidson (2004) and Behrend (2012) both underscore the number of students who fail to live up to their academic potential due to an unengaging academic environment. Glass (2004) weighed in, warning “our school systems are giving tacit approval to creating underachievement in one group so that the needs of the other ability group can be served” (p. 27).

**Untrained and unprepared teachers.** Contrary to popular belief, gifted students cannot generally excel without guidance (Behrend, 2012; Marland, 1971; Willis, 2007; Young & Balli, 2014). This makes it imperative teachers be trained in recognizing the needs of gifted students and in instructional methods to meet those needs. After all, teachers are the ones directly responsible for educating students. Therefore, if gifted children are failing to excel and be
academically challenged it seems it must be the teacher’s fault. However, there is more to the picture. Many teachers enter the field of education untrained and unprepared for dealing with gifted students, at no fault of their own. Gallagher et al. (1997) concurred, observing “unless prepared to teach gifted students, most teachers have had little or no background on strategies to cope with these creative and fertile minds” (p. 136). Consider this statistic. The 2015 State of the States report on Gifted Education found that in the majority of states, less than 10% of teachers had training in teaching the gifted (NAGC, 2015). Of the largest schools of education that responded, none required gifted courses and few offered courses in gifted education (Davidson & Davidson, 2004).

Nevertheless, training and preparation is essential. Glass (2004) advised that “one of the most often-presented strategies for educational improvement for gifted students is the sophisticated personnel preparation” (p. 28), giving special training so teachers can prepare appropriate curriculum and better recognize attributes of giftedness in students. Backing this assumption, Davidson and Davidson (2004) cited a study which found gifted teachers to be significantly more effective in creating a positive classroom experience and rigorous curriculum with just three to five graduate courses in gifted education than were peers who had no specialized training. Glass (1997) explained the gifted teacher must “have further developed skills than his or her regular classroom counterparts” (p. 28). Too often, however, they do not.

Only one state, Nevada, requires pre-service teachers to take separate coursework in gifted education (NAGC, 2015b). Most states, instead, address gifted education as part of a required course on special education, meaning new teachers have little, if any, instruction on how to identify gifted students or meet their curricular needs (Davidson & Davidson, 2004; NAGC, 2014). DeLisle (2014) was quite pointed when he asked if one could imagine the outcry
if a calculus teacher was found to not have a math background. In contrast, gifted populations are often serviced by those who do not understand how to address their unique needs.

**Mistaken ideas of equality and heterogeneous grouping.** Schools and school districts are at times hesitant to provide funding or programming options for gifted students for fear of being seen as elitist. Yet which of these schools would similarly deny specialized education opportunities for students with learning disabilities or physical handicaps? The answer is none; programming and instructional modification is demanded by law for such students. DeLisle (2014) has dubbed this dilemma the battle for equity over excellence.

Those with an egalitarian view of education oppose homogeneous grouping, seeing these classes as elitist and mistakenly assuming gifted students can make it on their own without needing additional educational assistance (Adams-Byers et al., 2004). However, studies show homogeneous groupings to provide not only educational benefits, but also social and emotional benefits, as well (Adams-Byers et al., 2004; Behrend, 2012; Finn, 2012; Gallagher, 1997; Manning et al., 2010; Young & Balli, 2014). When clustered together, bright students push and challenge each other academically (Davidson & Davidson, 2004; Gallagher, 1997), as well as provide each other with a safe haven in which to experiment and not be judged (Adams-Byers et al., 2004; Clementson et al., 1998; DeLisle, 2014). Rather than holding back learners so all students proceed equally at the same pace with the same topics, it is important to understand that “in education, the guiding concept of fairness means that everyone receives what is needed and not necessarily that everyone receives the same instruction” (Manning et al., 2010, p. 146). With that in mind, Finn (2012) makes a call to educators everywhere: “It’s time to end the bias against gifted and talented education and quit assuming that every school must be all things to all students” (p. 3).
Lack of funding. The lack of training and the lack of gifted teachers is reflective of another problem concerning education of the gifted – a lack of funding. The Jacob Javits Gifted and Talented Children and Youth Education Act of 1988 assessed a need for special programs for the gifted, yet even the funding provided through this legislation only made up 1/33 of 1% of dollars budgeted by the federal government (Callahan, et al., 2014). During 2007, a year with one of the highest apportioning for gifted education, gifted education was notably underfunded (Table 1). In 2011, allocated funding dropped to $0 for programs through the Javits Act (Callahan, et al., 2014).

Table 1

<table>
<thead>
<tr>
<th>2007 Federal Education Budget: Program Allocation for Every $100 Spent</th>
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<tbody>
<tr>
<td>Federal Program</td>
</tr>
<tr>
<td>Drug Abuse Prevention</td>
</tr>
<tr>
<td>Reading First</td>
</tr>
<tr>
<td>Children with Disabilities</td>
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<td>No Child Left Behind</td>
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No Child Left Behind legislation has likewise negatively affected funding of gifted programs. From 2001 to 2006, the first five years of NCLB legislation, funding decreased by a third (Hargrove, 2012). In America, there are no federal requirements for gifted education and the federal government provides only minimal financial support for gifted programming, if any. Because of that, state and local school district are left to bear the bulk of funding such programs; yet only 29 states, barely over half, fund gifted education programs (Davidson & Davidson, 2004). Funding is what powers programs and improvement, as well as making a powerful statement of what is valued by schools and society. When funding cuts must be made, seemingly
superfluous programs such as those for the gifted are often first to be cut, thereby increasing the excellence gaps between students (Plucker et al., 2010).

Review of Research and Methodological Literature

The United States Department of Education has defined gifted programming as that which has “a specific program for the identification of a group of students who are provided educational options in ways that differ from regular classroom curricula and/or instructional practices” (Callahan, Moon, & Oh, 2014, p. 1). If gifted students are different from the regular population, it follows that the students need a different learning experience. However, in spite of a definition that focuses on the differences, the federal government often fails to provide for those differences. Unlike federal policy which provides detailed specifics for how to educate other special needs students and students with disabilities, “the federal government does not legislate a definition of giftedness that must be adopted by states or local education agencies, nor does it provide specific requirements for services” (Callahan et al., 2014, p. 2). Therefore, gifted education and programming opportunities are often lacking in schools, to the detriment of students. As DeLisle (2014) explained, “more than any other area of special education, gifted child education has been seen as expendable, not essential” (p. 8). One may conclude from the literature and research that true gifted education programming and experiences are often lacking in schools.

Review of research literature. In 2010, the United States Department of Education commissioned a study to address concerns about the lack of specific data regarding gifted programs in American schools (Callahan et al., 2014). The study’s authors noted 84% of middle schools did indeed have gifted programming which “offer[ed] a program with a specific process for the identification of a group of students who were provided with educational options in ways
that differ from regular classroom curricula and/or instructional processes” (Callahan et al., 2014, p 3). The question then remains as to whether creating a gifted program is enough. The studies noted in the literature would suggest it is not.

**Lack of increase.** Gifted students are often performing at proficiency standards rather than excelling. This is demonstrated by a lack of increase in assessment scores showing academic growth. The Marland Report of 1971 indicated 50% of gifted children were failing to “perform at levels equal to their intelligence,” with 1983’s A Nation at Risk report concurring that “more than half of all gifted students do not match their tested ability in school performance” (DeLisle, 2014, p. 9). The California Association for the Gifted (CAG) cautioned “there is convincing evidence that many students do not perform at the upper achievement levels because, in part, they don’t have the opportunity to participate in a challenging curriculum” (CAG, 1994, P. 6).

Recent legislation has focused attention on lower-performing students, while those in the top tiers are not making significant growth (Loveless, 2008; Plucker, et al., 2010; Plucker, et al., 2013). Neal and Schanzenbach (2007) concurred, explaining this often occurs because schools are forced to focus on lower-performing students as a “proficiency count system does not reward schools for improving student performance unless the improvements bring the students up to a specific proficiency standard” (p. 4). Because gifted students often already perform at those levels of proficiency, their need for growth is frequently overlooked. Nevertheless, the fact remains that all students should be growing intellectually throughout the year.

The data for lack of achievement is reflected on an international scale, as well. According to statistics, the United States is falling behind other countries in regard to the brightest students. The Organization for Economic Cooperation and Development (OECD),
through its Programme for International Student Assessment (PISA), administers tests to 15-year-olds in an effort to provide comparative data on nations around the globe. In an analysis of the 2009 graduating class, it was determined that 30 of the 56 other participating countries had higher percentages of students scoring at the advanced level on the PISA math assessment than the United States, which only had six percent scoring at this level (Finn, 2014). In comparison, 28% of students in Taiwan scored at the advanced level, as did 20% of students in Hong Kong, Korea, and Finland; twelve other countries had more than twice the number of students at the advanced level than the United States (Finn, 2014). DeLisle’s (2014) study indicated that in 19 academic measures ranking the United States in comparison with other nations, not once did the United States score in first or second place.

Loveless (2008) and Plucker et al. (2010) likewise acknowledged United States test scores are reflective of a lack of performance among the top tiers of students. National Assessment of Educational Progress (NAEP) data shows that while students at the low-achieving end of the spectrum have made gains between 2000 and 2007, the performance at the top end of the spectrum showed minimal gains (Loveless, 2008). The discrepancy in gains between high and low performers can be associated with accountability measures such as No Child Left Behind legislation (Behrend, 2012; Glass, 2004; Hargrove, 2012; Jerome; 2010; Loveless, 2008; Moon, Brighton, & Callahan; 2003; Neal & Schanzenbach, 2007; Plucker et al., 2010). While Loveless (2008) cautioned that a direct causal link cannot be made between NCLB and the stagnation of scores by top performers any more than the rise in lower scores, credit is often given to NCLB for causing scores of the lowest performers to rise. As the nation shifts to Common Core State Standards (CCSS) and its attendant assessment tools, more research will
need to be conducted to determine whether the shift to CCSS will improve the likelihood gifted students will receive more attention and more rigorous coursework (Kettler, 2014).

Test scores, such as those collected from PISA and NAEP, reflect a growing gap between the achievements of students at the lower end of the grading spectrum as compared to higher-achievers. This is true at both the national and international level. However, as Finn (2014) explained, “it is important to note . . . that our problem is not that we lack smart children; it’s that gifted students are not being given the tools they need to realize their potential and compete” (p. 51).

**Lack of programming.** Gifted programming is often lacking at the state or district level. The majority of respondents to a survey submitted by Callahan et al. (2014) indicated a wide variation between state guidelines for gifted programming while those state guidelines in existence highlighted defining giftedness, identifying gifted students, and teacher credentials. Curriculum, strategies, and program overviews were not included. Many schools do not recognize the benefits of homogeneous grouping (Adams-Byers, 2004; Behrend, 2012; Young & Balli, 2014) and thereby prevent gifted students from receiving both the challenge and support offered by their intellectual peers. Even when programming does exist for gifted students, it is often inadequate. Glass (2004) observed only approximately 5% of the students in the United States are enrolled in gifted programs. This statistic expresses little change from the Marland Report’s 1971 claim that of the nearly two million gifted students in the United States, only a small fraction were being serviced by gifted programs (DeLisle, 2014).

The lack of teacher training also ties in with the deficit in gifted programming. The Marland Report recorded that more than half of teachers interviewed spontaneously mentioned a need for improved teacher training and 25% desired more teacher training through in-service and
preservice methods (Marland, 1971). Callahan et al. (2014) noted approximately three-fourths of teacher respondents explained no additional certifications were requisite to teach gifted students other than the state credentials already issued to them. Instruction in teaching the gifted and talented, if it occurs at all in college courses, usually exists as a brief subset of a special education course and is often a discussion that lasts only an hour or two (Behrend; 2012; Davidson & Davidson, 2004). Teachers who lack specific training in reaching the gifted similarly lack the tools and techniques to target the unique needs gifted students offer. The NAGC (2014) notes that without the tools provided through teacher education and certification programs, the curriculum is likely to be less challenging than it could be, and less challenging than gifted students deserve.

Parents interviewed for a study conducted by Young and Balli (2014) indicated those teachers with in-depth gifted and talented training were the best equipped to teach gifted students and improve these students’ overall school experience. Study by Davidson and Davidson (2004) revealed teachers of the gifted who had three to five courses in gifted education “were significantly more effective in instruction, and in creating a positive classroom environment, than teachers with no specialized coursework” (p. 67). Yet of 43 states reporting to a study conducted by Young and Balli (2014), only five states required teachers to annually attend professional development on gifted education. As noted by Behrend (2012), gifted students require “instruction that is commensurate with their talents” (p. 24). Without improved training for pre- and in-service teachers, this level of instruction will be nearly impossible.

A lack of programming also correlates with a lack of funding. Though the detriments of NCLB legislation have already been described, it should be additionally documented that in the first five years of NCLB legislation, the funding for gifted education, already at a minimal level,
decreased by one third (Hargrove, 2012, p. 72). Meanwhile, that same legislation increased educational spending for those on the lower end of the achievement scale (Davidson & Davidson, 2004; Jerome, 2010). A study conducted on the implementation of two separate accountability systems on approximately 2,000 fifth graders in the Chicago Public Schools showed that in the efforts to raise scores, “schools may also find it optimal to limit services for gifted children who are likely already proficient” (Neal & Schanzenbach, 2007, p. 15). Plucker et al. (2010) indicated correlation between the decentralization of gifted program funding and the excellence gaps noted formerly. Spending is at the discretion of individual school districts; those districts having more money, which Plucker et al. (2010) noted tend to be more affluent and white, are more likely to spend money on gifted programs as opposed to poorer districts. This discrepancy in spending increases the excellence gap. Moreover, in school districts around America, when funding cuts must be made, seemingly extraneous programs such as those for the gifted are often the first to be cut (Young & Balli, 2014). This lack of funding costs gifted students in both literal and figurative ways.

**Lack of challenge.** Gifted programs often lack adequate challenge. While so-called gifted programs do actually exist in many school districts across the nation, Finn (2014) noted “the few evaluations done thus far of gifted-education programs . . . raise questions about their effectiveness” (p. 58). Loveless (2008), who conducted studies showing the stagnation of test scores among the top percentiles of students, also discovered 40% of surveyed teachers asserted the content of honors and accelerated classes often is watered down and lacks rigor. Students were also asked about their perceptions. One gifted student interviewed by Clementson and Wenger (1998) put it quite bluntly: “Too many students coast through [school] without being challenged. Mediocrity is becoming the norm” (p. 208). Another stated, “The difficulty of most
of the classes is far below the level of the majority of students. Raising the difficulty of these classes would challenge a student’s intellect” (Clementson & Wenger, 1998, p. 208). Hargrove (2012) put it more subtly, backing student comments with his observation that “in the drive to bring all students to a level of mediocrity, gifted students are often neglected. What this means is that they are all too often frustrated, bored, constantly reviewing what they already know” (p. 72).

Dixon (2002) advised gifted students have the ability to work at advanced levels of thinking, while McCollister and Sayler (2010) cautioned teachers that this advanced intellectual ability is often even higher than teachers suspect. Studies utilizing interviews and observations of students, parents, and teachers consistently express a perception of a lack of challenge in the academic setting for gifted students (Adams et al., 2004; Clementson & Wenger, 1998; Fredricks et al., 2010; Gallagher, Harradine, & Coleman, 1997; Loveless, 2008). Additionally, Hertzog (2005) and Young and Balli (2014) cited a need for increased academic challenge that decreases the underachievement and lack of motivation often triggered by an unchallenging curricular experience.

The CAG (1994) suggested using a curriculum that focuses on high standards, critical thinking, and authentic assessment techniques, explaining “the number of programs for gifted learners that foster these themes is limited, and they meet the needs of only a small fraction of those for whom they were intended” (p. 11). McCollister and Sayler (2010), Dixon (2002), and Kettler (2014) highlighted the need for advanced critical thinking as a means of stimulating academic growth to analyze, make connections, and apply knowledge in authentic ways. Manning et al. (2010) posited the way to “value” the advanced learner is through strategic differentiation that focuses on student interest and ability, even if this is done only in a general
education classroom (Hertzog, 2005). As Davidson and Davidson (2004) enumerated, while many students have special needs, “the brighter the child, the more likely he or she will suffer in a school that teaches to the middle” (p. 19). Challenge must be included in the gifted curriculum so as to engage the minds of the nation’s brightest students.

**Review of methodological literature.** In 2008, Jolly and Kettler conducted a historical study into gifted education research and the research’s effects on the field of gifted education. The authors sampled three well-read and peer-reviewed, scholarly journals representative of gifted education to determine the prevalence of key words and ideas in gifted literature. Jolly and Kettler’s (2008) findings indicated that, based on frequency counts, the most prominent topic in gifted education was special populations (49%), specifically in regard to gender or ethnicity. This was followed by psychosocial needs (37%). The category of teaching and instruction was only the fourth most prominent topic, which Jolly and Kettler (2008) specified accounted for less than one third of the catalogued topics.

The lack of research on teaching and instruction is in direct contrast to the stated goals for improving gifted programming. Jolly and Kettler (2008) specifically selected for their study the time frame from 1994 to 2003, the 10 years following publication of the National Excellence report which sounded the warning that America was “squandering one of its most precious resources – the gifts, talents, and high interests of many of its students” (U.S. Department of Education, 1993, p. 3). In addition, the report’s authors made recommendations on how to improve the educational opportunities of the gifted and talented, as well as areas that needed increased research and programming (Table 2). However, Jolly and Kettler (2008) indicated research in areas commensurate with the goals was still “negligible.” The authors suggested “perhaps the lack of research on teaching and instruction is indicative of a growing divide
between those who conduct research in gifted education and practitioners who work daily in classrooms with gifted students” (Jolly & Kettler, 2008, p. 440). Such comments indicate a need for further research in gifted programming and curriculum while making the research that is indeed out there even more important.

Table 2


<table>
<thead>
<tr>
<th>Improvement of Educational Opportunities for Gifted Students</th>
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<tbody>
<tr>
<td>Set challenging curriculum standards</td>
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<tr>
<td>Provide more challenging learning opportunities</td>
</tr>
<tr>
<td>Increase access to early childhood education</td>
</tr>
<tr>
<td>Increase learning opportunities for disadvantaged and minority children with outstanding talents</td>
</tr>
<tr>
<td>Broaden definitions of giftedness</td>
</tr>
<tr>
<td>Emphasize teacher development</td>
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<td>Match world performance</td>
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Student perceptions and the lack of challenge. Gifted students often report a lack of challenge in their curriculum. Gallagher et al. (1997) studied 871 students, ranging from elementary to high school levels, from nine North Carolina school districts. The students were identified using data from achievement tests and IQ tests as gifted and each responded anonymously to a questionnaire that asked students to explain whether they found classes challenging. To increase validity and reliability, Gallagher et al. (1997) selected schools from both urban and rural populations and utilized an outside, objective organization, the Statewide Technical Assistance for Gifted Education (STAGE) to help plan and conduct the survey. Results of the surveys indicated students in classes that offered some differentiation were apt to
find the curriculum nominally more challenging, but overall students were left unchallenged by the curriculum. Recurring complaints included having to wait for other students to catch up, having to sit through already mastered content, and teachers who did not allow students to work ahead (Gallagher et al., 1997).

Armstrong (1989) made similar conclusions regarding the lack of challenge in gifted programming. The 57 sixth grade subjects in the sample had been identified as gifted through test scores and/or teacher recommendation and had been involved in either a pull-out program once a week or a full time gifted program. Students were asked to rank order a set of statements regarding their opinion on a given topic printed on cards. Q methodology was used “because of its strength in comparing an individual’s self-reported opinions with those of others who cluster together on some other measures presumably related to values or attitudes being studied” (Armstrong, 1989, p. 280). To reduce bias, Armstrong (1989) used questions based on research by the Knowledge Production and Utilization Task Force of the Association for the Gifted. The statements were first tested on a group of fifth graders to determine their ability to understand the statements, with changes in wording being made based on the fifth grader’s abilities. To strengthen reliability and validity, Armstrong (1989) analyzed the data using a CONCOURSE computer program which performed factor analysis. The study determined sixth grade students could indeed describe their learning needs consistently with the literature on appropriate strategies for the gifted and could also describe their ideal models of programs in ways that were not limited by their own experiences. In summary, the students in the Armstrong (1989) study acknowledged a need for programming that “emphasized accelerated advanced content” (p. 284), inclusion of student interests studied at greater depth, and use of critical and creative processes.
Therefore, asking for student perceptions of their programming is a valid means of determining needs for gifted programming.

Expanding on the concepts of Armstrong (1989) and Gallagher et al. (1997), Fredricks et al. (2010) conducted a longitudinal study to determine perceptions of gifted students over eight waves of data collection between elementary and high school years. Students were divided into a gifted population sample and a talented population sample in order to collect comparative data regarding the fostering of passion and motivation in programs targeted to these individuals. The 25 members of the gifted sample had been identified in elementary school as gifted based upon test scores and/or grade point averages.

Students were asked about perceptions of their education, as well as involvement in gifted programs. Transcripts were made of all interviews and analyzed using induction, deduction, and verification techniques, then exchanged with another team member to verify conclusions. In seeking out levels of passion and motivation, Fredricks et al. (2010) “looked for a qualitative difference in the way youth talked about their involvement in activities” (p. 23). Findings demonstrated less passion and motivation among the gifted population than the talent population. Fredricks et al. (2010) attributed the lack of passion among the gifted population to a lack of challenge in the curriculum, teachers who targeted instruction toward students with lower abilities, and schools not structured to foster a passion for learning. Respondents did cite a preference for gifted courses which were more challenging and had a more innovative curriculum.

Similarly, Young and Balli (2014) conducted a qualitative study to explore both student and parent perspectives on how well gifted programs met the needs of gifted students. Questions were structured around Renzulli’s three-ring concept of giftedness which defines gifted as those
with above-average ability, high task commitment, and high levels of creativity (Renzulli, 2002). Interviews were conducted with 57 student and parent participants of diverse ethnic backgrounds from a variety of program styles. Interviews were transcribed verbatim and followed up with critical incidence reports allowing parents to clarify or expand on answers. Critical incident report data “can help corroborate interview data and uncover perceptions that might not have been revealed through initial interviews” (Bloomberg and Volpe, as cited in Balli and Young, 2014, p. 238). To lessen the influence of bias, an NVivo computer program was used to sort and code responses. Student and parent responses indicated a lack of challenge and denoted a need for teachers to assign activities to foster above-average ability and deeper knowledge of concepts through more differentiation, accelerated pacing, and teacher development. Students in gifted magnet schools were more satisfied with programming than were those in regular education programs.

**Effects of legislation.** Researchers have shown that NCLB legislation has had a detrimental effect on gifted education (Loveless, 2008; Moon et al., 2003; Neal & Schanzenbach, 2007). Loveless (2008) and Neal and Schanzenbach (2007) both conducted quantitative data analysis of scores to determine that while lower-performing student scores were increasing, scores of higher-performing students were stagnating or only minimally increasing. Using data from Chicago Public Schools, Neal and Schanzenbach (2007) measured changes in the achievement of students. Two district-wide accountability systems were implemented, and data from pre- and post-implementation was reviewed using the same set of students to maintain reliability of data. Neal and Schanzenbach (2007) acknowledged “schools face weak incentives to devote extra attention to students who are either already proficient or who have little chance of becoming proficient in the near term” (pp. 4-5). The collected data from assessment scores
supported this assessment, as the students in the middle of the distribution scored significantly higher, while those on either end of the spectrum failed to make significant moves. “Achievement gains are larger among students whose gains are likely to make the greatest marginal contribution to their school’s overall proficiency rating” (Neal & Schanzenbach, 2007, p. 9). Because of this, schools often limit their services and funding for gifted children who are already scoring at proficient levels.

Loveless (2008) supported Neal and Schanzenbach’s (2007) findings stating that “while the nation’s lowest-achieving youngsters made rapid gains from 2000 to 2007, the performance of students at the top was languid” (p. 2). Loveless (2008) conducted a research investigation of the state of high-achieving students in the wake of NCLB legislation and standards-based reform using National Assessment of Educational Progress (NAEP) data because of its cross-sectional representation across states and percentile ratings. Despite the use of valid data, Loveless (2008) cautioned that the data cannot provide a direct causal link between NCLB and stagnation of student scores in the top percentiles, but that there is indication the two are related, especially as achievement gains by lower-performing students have accelerated after NCLB’s attention to this population.

Unlike Neal and Schanzenbach (2007), Loveless (2008) took the research farther than solely looking at quantitative scores and asked teachers to provide perceptions of the influence of high-stakes test legislation on classroom instruction. A random sampling of 900 public school teachers was conducted in an effort to assemble qualitative data indicative of teacher perceptions on the education of the gifted within their schools. More than 60% of teachers indicated academically struggling students were their highest priority while 81% indicated low-achieving students were the ones most likely to receive their attention; only 5% indicated advanced
students as a high priority (Loveless, 2008). Seventy-three percent indicated that the brightest students are often bored and under-challenged, due to a school and district push to increase the number of students performing at proficiency levels on state-mandated tests. In summary, Loveless (2008) revealed teachers “face pressure to raise the test scores of low-achieving students and that their own preparation programs provided inadequate training on how to work with advanced students” (p. 61).

Moon et al. (2003) likewise studied the detrimental effects of state-mandated testing programs on the gifted population. Utilizing a mixed-methods approach, the researchers conducted a two-phase study. Survey methodology was used in Phase One to provide a 1% stratified random national sample of elementary teachers with gifted students. Data was aggregated by state, grade level, metropolitan status, and poverty level. Questionnaire results were categorized and factor analysis used to group responses regarding general educational levels of classes. In Phase Two, the researchers employed a qualitative analysis of teacher and student perceptions on the influence of state testing. Researchers conducted focus groups with students and teachers in three states with well-delineated definitions of giftedness. Moon et al. (2003) advised that although it is improper in a qualitative study “to make generalizations beyond the specific context studied, the stratified design allowed the development of assertions about the effects of state-mandated testing on teachers and students, which could be triangulated with the more generalizable quantitative findings” (p. 52). Inductive analysis was used on field notes and transcriptions to develop coding categories and maintain credibility and transferability throughout the analysis. Regardless of the class’s ability level, teachers reported spending substantial amounts of time on test preparation activities, even going so far as to comment that they avoided activities and lessons that looked interesting or beneficial to students because of the
focus on test preparation and the pressure to get students to perform (Moon et al., 2003).

“Teachers seem to recognize the ill fit of these approaches for their brightest learners,” advised Moon et al. (2003), “yet feel powerless to change directions” (p. 54). This further indicates gifted students are not receiving the appropriate level of instruction and challenge in their classrooms.

**Instructional techniques.** While Moon et al. (2003) explained test preparation may be one reason teachers are not utilizing the best instructional techniques for gifted students, it is important to understand what techniques may best suit the needs of this population. Studies have shown that homogeneous grouping (Adams et al., 2004), authentic assessments (Moon et al., 2005), and critical thinking activities (Kettler, 2014; Dixon, 2002) are all highly beneficial for the gifted. These activities and lessons also tie in with the goals of the NAGC (2010) which called for gifted students to demonstrate advanced and complex learning commensurate with their aptitude through the use of critical-thinking, creative-thinking, problem-solving, and inquiry methods.

Dixon (2002) and Kettler (2014) both conducted studies determining the effect of critical thinking activities on gifted learner achievement. Dixon (2002) focused specifically on a verbally gifted population in designing a study to use critical thinking as a means of increasing synthesizing skills. Dixon (2002) sought to support the claim that verbally gifted students have an ability to work at higher levels of thinking if teachers consistently develop activities to challenge students to use these higher levels skills. Using case study methodology, Dixon (2002) observed the implementation of critical thinking activities within the language arts classroom and student response to these activities. Activities eliciting the best student responses were those in
which “the content [was] challenging and provide[d] many synthesis opportunities for discussion and writing activities” (Dixon, 2002, p. 82).

Also focusing on the critical thinking aspect, Kettler (2014) studied 45 gifted and 163 non-gifted fourth grade students from three Texas elementary schools. Gifted students had been identified by state testing and were participants in a weekly pull-out program as well as involved in differentiated cluster groups within the regular classroom. Two critical thinking tests were administered, with half the students taking each test first in order to eliminate any practice effect. In the study, gifted students demonstrated advanced critical thinking skills in comparison to the general population, leading Kettler (2014) to conclude “the evidence that gifted students demonstrate more developed critical thinking skills. . . suggests that strength in critical thinking could be a strong and desirable characteristic of gifted students. This finding supports the inclusion of developing critical thinking as a gifted education program goal” (Kettler, 2014, p. 133). Kettler (2014) intimated that to further validate the findings, replicating the study with other populations such as those at the middle school level would be valuable.

Authentic activities and assessments which include real-world application can also be beneficial to the gifted population (Moon et al., 2005). However, state-mandated tests focus on rote skills and memorization to the exclusion of the type of multi-faceted thinking required for complex problem solving. Moon et al. (2005) advised such skills are particularly pertinent for middle school students because the use of conceptual methods of instruction engage the brains of learners at this age. Research was conducted in seventh grade heterogeneous classrooms where traditional testing usually occurred. Assessments and scoring rubrics were developed by the researchers and reviewed by a panel of 46 experts in gifted education and/or curriculum to assess degree of relevance and potential bias with modifications being made before implementation.
The nation often seeks quantifiable data from tests scores, but qualitative data provided from performance assessments can also be a valuable. As noted by Moon et al. (2005), the results of the study “begin to provide evidence that differentiated authentic assessments for classroom purposes can be developed to find consistent information about student learning” (p. 129). However, a larger sample size and usage of assessments with rubrics must be utilized to provide stronger results.

In addition to critical thinking and authentic learning experiences, homogeneous grouping provides benefits for gifted students (Behrend, 2004; Fredricks, 2010; Gallagher, 1997; Glass, 2004; Young and Balli, 2014). Adams-Byers et al. (2004) interviewed 44 students from fifth through eleventh grade enrolled in a gifted summer camp regarding their perceptions of the pros and cons of heterogeneous and homogeneous groupings. Participants were interviewed using a pre-designed open-ended protocol format or given a questionnaire. Researchers determined no difference in the depth or breadth of responses collected through both formats and thus combined the two for analysis. Data concluded that, by three to one, perceived academic advantages were greater for homogeneous groupings than for heterogeneous ones (Adams-Byers et al., 2004). The fast pace, the high challenge level, the lack of repetition, and the ability to work with like-minded peers were cited as reasons for this preference. While one quarter of respondents listed no negative effects of such groupings, others did note they were no longer at the top of their class, the increased competitiveness, and high expectations (Adams-Byers et al., 2004). Because of the limitations of the sample size, the voluntary nature of respondents, and the open-ended questions, the findings cannot be generalized across all populations, but do support the overall concept that gifted students benefit from and enjoy being matched with others of similar intellectual capability.
Achievement of specific gifted populations. Additional studies among the gifted have focused on specific populations among the gifted such as low-income, minority students (Swanson, 2006), underachievers (Behrend, 2012), and African-Americans (Hertzog, 2005). Swanson’s (2006) demonstration project used a rich and rigorous curriculum piloted by the Center for Gifted Education at three high-poverty, high-minority schools to collect both quantitative and qualitative data on students and teachers over a three-year period. Quantitative data was collected from state-approved standardized tests and qualitative data was collected from observations, teacher logs, questionnaires, and interviews. Significant academic gains, as well as teacher perceptions of which students were capable of excelling under an advanced curriculum, were found to be markedly changed over the course of the study (Swanson, 2006).

Hertzog (2005), too, noted the effects of a challenging curriculum on a minority population, specifically African-Americans. Hertzog (2005) studied how project-based learning, and its application to authentic experiences, increased levels of potential and teacher ability to recognize gifted potential in an underrepresented minority. Conducting a qualitative study, the author initiated a project based curriculum between kindergarten and fifth grade in a single school of 350 students, the majority of whom were on free or reduced lunch and were African-American. Teachers were provided professional development on implementation and the researcher conducted interviews and observations throughout the three-year implementation process. Qualitative research benefits from prolonged engagement, persistent observation, and triangulation, all of which were present in the study. Findings concluded teachers had increased expectations for student performance and teachers, while differentiation allowed gifted students to excel and other to be identified as potentially gifted (Hertzog, 2005).
In a phenomenological study, Behrend (2012) focused solely on underachieving students who, like some of Hertzog’s (2005) subjects, were considered underperforming students in an unchallenging environment. Four research questions regarding curriculum challenge and performance were administered to 10 gifted students from two schools in a series of open-ended and in-depth interviews, with results transcribed afterward. Results were coded based on theme and provided evidence that inclusion within homogeneous groupings often offers a more challenging environment which motivates students to succeed. A challenging and advanced curriculum motivated most students, whereas boredom ensuing from classes lacking rigor led to underachievement. This makes Swanson’s (2006) conclusion particularly challenging, noting that gifted students from all backgrounds exhibit marked achievement when they are exposed to advanced instructional strategies and curriculum. With that in mind, neglect of the gifted by schools across the nation has a particularly deleterious effect on the future of individual students and the nation itself.

**Review of Methodological Issues**

The supposition that gifted students are generally left unchallenged by the curriculum and content offered by schools is reinforced through the literature’s findings. However, one might argue this is not true for all gifted students in all schools, and one would be correct in proffering this claim. One must then examine the methodology of the literature to determine whether there is enough veracity within the studies to make the claim worthy of attention. Four concerns may be addressed in the methodology of studies conducted on the level of rigor for gifted students: sample size, the use of student voice, differences between students, and student ability to reason.

**Sample size and make-up.** Sample size will often be an issue in researching the gifted and talented. The U.S. Department of Education defined gifted as “children and youth with
outstanding talent [who] perform or show the potential for performing at remarkably high levels of accomplishment when compared with others of their age, experience, and environment” (Davidson & Davidson, 2004, p. 19). Because of this delineation, the gifted population by definition cannot include all students. The grouping becomes specific and limits the numbers involved, as well as the diversity of the subjects.

**Limited numbers.** Sample sizes may affect results. Adams-Byers et al. (2004) sampled 44 students at a gifted residential summer camp for fifth through eleventh graders. While the numbers were small, the overall sampling reflected students from diverse educational backgrounds. Backgrounds varied from homeschooling and full-time gifted schools, to those who had schools with pull-out gifted programs or no gifted programming at all. Adams-Byers et al. (2004) felt the sample population to be a particularly desirable one, despite its seemingly small size. The wide variety of programming options in student backgrounds “covered a broad spectrum of classroom environments, teaching styles, programming options, and geographical and cultural idiosyncrasies” (Adams-Byers et al., 2004, p. 9). Because of the wide variety of student backgrounds, the researchers found conclusions regarding student preference for homogeneous groupings over heterogeneous ones to be valid.

Likewise, Young and Balli (2014) conducted a study of 52 parent and student participants. As in the Adams-Byers et al. (2004) study, while the numbers may have been small (27 students), the student population reflected students from a variety of cultural backgrounds and educational experiences ranging from neighborhood elementary schools to GATE magnet schools. Using interview techniques based on three research questions, the authors concluded both students and parents determined homogeneous grouping to be beneficial for increasing academic challenge and differentiation was a key component of gifted curriculum regardless the
grouping structure. Additionally, teacher preparedness was an essential component in providing a rigorous academic environment.

In two studies, gifted populations were compared with a population not identified as gifted (Fredricks et al., 2010; Kettler, 2014). In both cases the non-gifted population was double or triple the size of the gifted population. This supports the original contention that gifted populations are often limited in size by the nature of defined giftedness. Fredricks et al. (2010) interviewed students from both populations (25 from a gifted sample; 41 from a talent sample) determining gifted students were more likely to call for academic challenge as a pre-requisite for developing academic passion. Kettler (2014), who compared 45 gifted students to 163 general education students, likewise determined increased academic rigor, in this case through advanced critical thinking, was a key element in gifted engagement.

Finally, three studies looked at much larger sample sizes (Moon et al., 2003; Gallagher et al., 1997; Hertzog, 2005). Moon et al. (2003) analyzed data from over 1,000 surveys in Phase One of the study before delimiting the samples to 21 focus groups of three to five students for the more intimate interviewing of Phase Two. Gallagher et al. (1997) sampled 871 students from nine separate districts regarding student perceptions of school experience. Hertzog (2005) sampled 350 students from a single school to determine the effects of implementing a new curriculum based on more challenging problem-solving. In conclusion, regardless the population size, similar results were found in all studies. Students, parents, and teachers did not perceive gifted students to be receiving a challenging enough education.

**Limited diversity.** Besides sample size being reflective of a limited number of students, sample size may also affect the diversity of subjects involved in a study. One recurring theme in gifted education is the need for more cultural and socio-economic diversity (California
Association for the Gifted, 1994; Hertzog, 2005; Plucker et al., 2010; Swanson, 2006). It must be recognized that sample populations are not always reflective of larger populations in general, even among a more selective subset such as gifted and talented students. Studies often focus on schools or districts that are known for providing specific attention to gifted (Gallagher et al., 1997), schools where a specific need has been noted (Hertzog, 2005), or schools that are convenient to the author based on work proximity (Behrend, 2012).

Authors often acknowledge these limitations. Adams-Byers et al. (2004) recognized the sample population of their study—students at a residential summer camp—was not reflective of the average student lacking the means or access to such a program. However, the sample did allow the researchers to draw on students from a variety of programming formats, which provided diversification “rather than a single, common gifted education background as it might be found in a sample taken from a single school system” (Adams-Byers et al., 2004, p. 9). In contrast, the study conducted by Hertzog (2005) included more than 350 students, which constituted a far larger sampling than other studies. However, all the students attended a single school, one described by the author as containing large numbers of African-Americans and students on free- or reduced-lunch programs. Regardless the efforts to diversify responses among ethnic groups, socio-economic levels, or program backgrounds, one cannot escape the fact that research concerning the gifted population is limited by the subjects’ requirement to meet the established definitions of giftedness.

Use of student voice. A second issue arising from the methodology of the studies involved is the use of student voice. Adams-Byers et al. (2004) noted ample literature regarding scholarly theories, opinions and recommendations for gifted programming while at the same time noting the literature failed to truly take into account student voice. Conducting research
involving the specific opinions and perceptions of gifted students allows student voices to be heard. After all, if the aim of studying the gifted is to provide a better educational experience for gifted students, who better to ask what measures to take?

However, there must be a note of caution in listening to the perceptions of students. The methods employed by the researcher or interviewer must be careful not to lead students down pre-determined paths of inquiry or to particularly desired answers. In order for student voice to be heard and for the overall study to maintain validity, the researcher is cautioned against letting bias influence answers. Researchers such as Adams-Byers et al. (2004) and Young and Balli (2014) countered this potential for bias by constructing specific research questions before beginning their interviews in order to direct questions and deflect researcher bias. Armstrong (1989) cited using Q methodology to conduct comparative data analysis between interviewees’ answers. Additionally, surveys were constructed by outside, objective sources (Gallagher et al., 1997) and, in other cases, objective measurement tools were used to identify improvements (Kettler, 2014; Swanson, 2006). Each research effort was designed to increase the validity of respondent answers.

**Differences in learners.** Even within the gifted community, not all learners are the same. This understanding means that while a study’s sample might find conclusive evidence supporting a particular perception or technique, it does not necessarily hold true for all gifted students. In the Adams-Byers et al. (2004) study, student responses were more than three to one in favor of homogeneous groupings as academically advantageous for high-ability students. However, this percentage meant 22% of students preferred mixed ability grouping. Reasons for the disparate answer regarding homogeneous grouping varied, but included the increased stress of homogeneous grouping, the inability to remain at the top of the class, heavier workloads and
high expectations. None of these reasons directly refute the idea that homogeneous groupings provide higher levels of rigor, simply that some students are uncomfortable within that context.

Additionally, students who are profoundly gifted will often respond differently than others within the gifted population. Davidson and Davidson (2004) explained few schools, “even well-funded suburban ones, offer highly gifted children an appropriate education, even within their gifted programs” (p. 19). Behrend (2012) determined this to be true in her limited study of 10 respondents. Behrend (2012), whose phenomenological study was conducted on the smallest population study within the reviewed literature, conducted in-depth interviews and observations in an effort to determine perceptions of underachievers within the gifted population. One respondent, who was determined to be profoundly gifted (an IQ of 185 in the first grade), faced many more challenges in maintaining engagement and alleviating depression stemming from boredom, than did his counterparts in the study.

Finally, Swanson (2006) used a demonstration project to show the effects of teacher and staff perceptions on the gifted population. Swanson (2006) determined higher levels of curriculum, specifically developed for high-ability students, can serve as a breakthrough in positively affecting student achievement, especially among minority populations that may not be otherwise identified. The study was conducted only in high-minority, high-poverty schools with a commensurate high level of commitment to innovative change methods. Quantitative score data enabled staff to distinguish previously unidentified gifted students, while qualitative data sources reflected changes in teacher perception.

As Adams-Byer et al. (2004) cautioned, “gifted education, like regular education, must move beyond the one-size-fits-all mentality” (p. 17). Therefore, while a study may reveal an overall trend within gifted populations, it is important to remember each gifted learner is
different. Though students in each study expressed a preference for homogeneous groupings, true homogeneity is nearly impossible to achieve due to individual learner differences. Parents and students both expressed an overall dissatisfaction with gifted programming and challenging curriculum at regular schools, yet some individual students differed in stating they did not wish a more challenging education or that they were already suitably challenged (Moon et al., 2003). Even within the gifted population, attention must be paid to individual learning preferences, making generalization in a study of the gifted just as cautionary as with any other population.

**Real versus reasoned.** A final concern in the methodology of the studies reviewed concerns student responses. Many of the studies reviewed used a phenomenological or case study method (Adams-Byers et al., 2004; Behrend, 2012; Dixon, 2002; Hertzog, 2005; Moon et al., 2003; Young & Balli, 2014). Such methodology relies heavily on the input of the subjects. Therefore, it must be determined that students can appropriately analyze their experiences.

An important element of the methodology asked students to explain whether their responses and perceptions came from actual experience or from a hypothetical application of the question. This expresses the real versus reasoned dichotomy. In some cases, students were asked about programming formats or curricular offerings they had never been exposed to. Armstrong (1989) strongly concluded the subjects interviewed from elementary gifted programs “demonstrated they could describe their opinions about preferred educational practices” (p. 279). Despite their youth, they were able to clearly and concisely state identifiable educational desires and needs. Reminding the reader of the aforementioned differences even between gifted students, Armstrong (1989) repeated that though the study demonstrated preferences for specific educational techniques, those preferences were by no means unanimous.
Researchers, such as Adams-Byers et al. (2004), interviewed gifted students who had not experienced any gifted programming and noted students’ overall perception that the curriculum was unchallenging still validated the notion of gifted students not receiving the educational supports needed. Additionally, Moon et al. (2005) observed that while there seems to be a demand for the quantifiable data provided by assessments, students themselves often offer “high quality information about student learning so that the instructional process is better informed” (p. 129). If gifted students possess unique traits, as Young and Balli (2014) declared, how much more important to get the student perspective on meeting these unique needs? Armstrong (1989) summarized the conclusions of the studies which sought out student perspectives by determining students were indeed “able to describe their ideal gifted programs in ways that are not limited by their experience in such programs” (p. 288). Allowing student voice to clarify perceptions of the education they seek is an important component of bettering gifted education.

**Synthesis of Research Findings**

Researchers consistently suggest the needs of many, if not most, gifted students are not being met in the classrooms and academic programs offered in schools. In reviewing the literature, one must ask what lessons can be taken away from the current literature. The answer seems to suggest curricular challenge must be increased, a focus must be put on gifted education, and more research must be conducted to best show how improvements can be made.

**Lesson one: Curricular challenge must be increased.** Gifted students are not satisfied with the level of challenge provided within the curriculum. In instances where gifted students have been interviewed about their academic experience, the persistent answer comes back that the gifted feel a lack of challenge in the courses they are offered (Adams-Byers et al., 2004; Clementson & Wegner, 1998; Davidson & Davidson, 2004; Fredricks et al., 2010; Gallagher et
al., 1997; Hertzog, 2005; McCollister & Sayler, 2010; Young and Balli, 2014). This lack of challenge leads to boredom, underachievement, and wasted talent. In contrast, motivation increases in classrooms where students are given the opportunity to “make real choices, with decisions based on effort and ability, and where they are given the opportunity to develop responsibility and independence,” in contrast to the majority of classrooms which focus on “recall and repetition” (Fredricks et al., 2010, p. 20).

McCollister and Sayler (2010) explained the optimal learning environment for the gifted student is one “where scholastic rigor is the standard. The rigor is needed both to stimulate the students intellectually and enhance their academic growth” (p. 46). This coincides with the goals of the NAGC (2010) and CAG (1994), which highlight real-life skills, academic independence, and critical thinking across content areas, all of which allow students to grow academically over the course of a school year. Respondents to an Adams-Byers et al. (2004) study likewise cited a preference for instruction with a fast pace, high level of challenge, and content that is not repeatedly reviewed.

Specific techniques have been found beneficial in addressing the academic needs of the gifted. Studies show gifted students excel at critical thinking and need continued practice in improving this skill (Dixon, 2002; Kettler, 2014; Fredricks et al., 2010; McCollister & Sayler, 2010). Homogeneous grouping allows the gifted to work with others who are at a similar pace and level (Adams-Byers et al., 2004; Behrend, 2012; Gallagher et al., 1997; Young & Balli, 2014). Curricular options such as problem-based learning (Hertzog, 2005; Young & Balli, 2014) and multidisciplinary studies (CAG, 1994; McCollister & Sayler, 2010; Moon et al., 2002) can provide increased rigor and meaning for the gifted. Authentically assessing students incorporates real-world skills students will need to excel in the future, as well as provides
meaningful interaction with current content (Dixon, 2002; McCollister & Sayler, 2010; Moon et al., 2005).

The survey of responses from gifted students in the Gallagher et al. (1997) study proved students are bored, need more complex instruction and materials, and academic interaction with peers who are similarly paced. Yet even within the gifted population there is a reminder that a “one-size fits all” approach will not meet the needs of all gifted students (Adams-Byers et al., 2004; CAG, 1994). To make gifted instruction truly commensurate with the needs of the gifted, differentiation must occur even within the levels of gifted students lest the highly gifted still remain unchallenged.

**Lesson two: Schools must consider the gifted population as important.** Curricular decisions, both by the nation as a whole, as well as individual schools, are doing a disservice to America’s gifted. Colangelo, Assouline, and Gross (as cited in Hargrove, 2012) explained, “America’s school system keeps bright students in line by forcing them to learn in a lock-step manner with their classmates. Teachers and principals disregard students’ desires to learn more—much more—than they are being taught” (p. 72). The gifted are considered a distinct population, yet there are neither legal requirements nor funding obligations to educate the gifted in a manner other than that given to any other student in the school environment.

Legislative focus on raising the scores of lower-ability learners has done just that—at a cost of failing to push higher-ability learners to increased levels of accomplishment. Teachers report bowing to pressure to focus on those students in the middle who have the biggest chance of raising test scores for a school or district (Loveless, 2008; Moon et al., 2003; Neal &Schanzenbach, 2007). One teacher, in a study conducted by Manning et al. (2010) declared “teachers in regular classrooms are in a constant state of review, remediating for students that are
weak. Higher-achieving students are lost in the shuffle and bored out of their minds” (p. 145). The concept of teaching to the middle is confirmed by the Marland Report of 1971 and continues through more recent research by Loveless (2008), Plucker (2013), and the NAGC (2015a). As Finn (2012) noted, while the nation has concentrated on raising the floor below low-achieving students, “we’ve failed to raise the ceiling for those already well above the floor” (p. 1).

The lack of training required for those who teach the gifted also implies a lack of priority for gifted education. While research shows teachers can best help gifted students by differentiating curriculum (Dixon, 2002; Willis, 2007), research also shows many teachers lack the training to adequately address the needs of the gifted (Callahan et al., 2014; Davidson & Davidson, 2004; Dixon, 2002; Glass, 2004). The lack of qualified teachers and educational leaders discovered by Callahan et al. (2014) “adds challenges in the development of high-quality educational programs that support gifted students’ learning” (p. 4). If teachers must challenge gifted students in order to alleviate the boredom so often found in their educational experience, as Dixon (2002) posited, then teachers must be trained in proper methodology to provide that level of rigor. The NAGC (2014) noted it is imperative that teachers be prepared in such a way as to “maximize the potential of all students, including those with gifts and talents” (p. 1).

A mistaken focus on providing students an equal education has similarly relegated gifted students to sit in classrooms where identical content is administered in an identical way, regardless whether a student can show mastery or not (Adams-Byers et al., 2004; Behrend, 2012; Finn, 2014). Education is not equal. Those with severe learning needs are provided Individualized Education Plans which mandate teachers differentiate for students with special needs. However, students who are already meeting standards and showing skill proficiency have no similar mandate to ensure they, too, receive an education commensurate with their learning
needs. Manning et al. (2010) cautioned that the idea of equal education “is a euphemism for
teacher-centered instruction that is obliged to cover as much information as possible with
minimal variation. Further, this system mocks real learning and is injudicious for students at
every level of cognitive development” (p. 148). Instead, equality should be perceived more as
equity—and the right of every child to actually be educated at school (Davidson & Davidson,
2004; DeLisle, 2014).

Lesson three: More research must be conducted. More research must be conducted to
determine what it takes to provide gifted students with a rigorous and challenging academic
experience. Jolly and Kettler (2008), in a quantitative study of gifted literature and research,
discovered a lack of research on the specifics of gifted programming and curriculum. The wealth
of materials regarding gifted identification and subpopulations needs amplified by equal research
in the areas of teaching and instruction. Gallagher et al. (1997) cautioned that if teachers are to
improve their preparedness for teaching the gifted, research and study must exist on how to
provide appropriate intellectual stimulation. This research must be specific in determining what
gifted students seek in an education, as well as how to go about achieving that level of rigor
(Moon et al., 2003; Plucker et al., 2013; Kettler, 2014). A clear call for continued investigation
comes from Callahan et al. (2014):

We are in a time in this country where the practices of gifted education should be leading
the way in educating all our youth. Yet, based on the survey responses, in many school
districts, practices are at the same level they were 30 or more years ago. It is time for a
national dialogue focused on shaping the future of gifted education for the 21st century.

(p. 10)

Continuing research in gifted education can help supplement that dialogue.
Critique of Previous Research

It behooves a researcher to consider the published research. In critiquing the literature in such a manner, an author is able to scrutinize the strengths and weakness of those who have made similar prior examinations. Through this process, one can build upon the strengths in the research and methodology of others, while at the same time avoiding pitfalls. Research findings are made stronger through this process. In examining prior research on gifted education, this author has organized areas of critique based on the following categories: a lack of research, qualitative methodology, sample sizes, and use of test scores.

Lack of research. There is a lack of well-rounded research in regard to gifted education. A great deal of literature was published on gifted education in the 1990’s. However, there has not been as much published during the ensuing years, a fact which often makes it hard to find the most current and up-to-date findings. Much of the literature regarding gifted education is focused on identification of the gifted, especially identification of minority groups based on race, gender, or socio-economic levels. Several authors themselves highlighted the lack of research and the need for additional work to be done. Jolly and Kettler’s (2008) research study was designed to examine the state of gifted literature in an effort to determine whether there was a disconnect between the priorities as stated by gifted organizations and the actual practices as delimited by the literature being published. After methodical consideration of articles on gifted education appearing in well-respected journals, the authors determined the top four recurring key words were gender, ethnicity, self-concept, and identification. Topics categorized under the heading “Teaching and Instruction,” those themes which would tie in with the perceived lack of challenge, appeared much farther down the list. Studies often fixate on the phenomena
associated with being gifted, but as Jolly and Kettler (2008) asked, what impact do such inquiries have on the practice of gifted education?

Additionally, the existing literature often focuses on gifted students at the elementary or high school level, yet Barnes and Urbanowski (2014), Lines (1994), Lounsberry (1992), Maksimowicz (1993), and Moon et al. (2002) each emphasize the importance of the cognitive changes which occur at the middle school age level as a critical time to engage minds. Barnes and Urbanowski (2014) specifically noted the myriad changes students undergo at the middle school level lead to a decrease in performance and motivation. Fredricks et al. (2010) evaluated the effects of engaging curriculum as compared to a passion for learning with gifted high schoolers, but did not address the connection at the middle school level. Perhaps because middle school is a smaller time frame - from two to three years, depending on the school district—as compared to the four years of high school and the six to seven years at elementary school, it is less studied. Yet as Lines (1994) explained, the “vibrancy” of this age group mandates developmentally appropriate curriculum and assessment.

A further critique is that student voices are not often heard in the research. Gallagher et al. (1997) specifically called out the need to address students in future research to find out their specific perceptions and ideas regarding the level of challenge they wish to receive. Behrend (2012) likewise highlighted the lack of research on the insights, beliefs, and perceptions of gifted students regarding the bettering of their educational process. With this lack in mind, Callahan et al. (2014) called for opening dialogue regarding gifted education that will better prepare gifted students for a 21st century education. Further research and studies regarding gifted education will help do this. By focusing on the middle school population and engaging gifted learners as
first-hand sources regarding their perceptions, a key element may be added to the body of gifted literature.

**Qualitative research data.** While authors such as Gallagher et al. (1997) and Kettler (2014) call for the additional use of student voice in gifted research, others may criticize the subjectivity such an approach brings. Test scores and comparative studies of data are useful in examining certain phenomena and making broad comparisons. However, in determining the specific needs of gifted students and the perceptions high-achieving students have regarding the quality of their education, the intimacy of qualitative approaches such as interviews, observations, and case studies perhaps better address the need.

Behrend (2012) defended the use of a phenomenological methodology by explaining phenomenology as the method of choice “if attempting to discover the subjective experience of the participants, and the meaning, to those participants, of the elements that make up that experience” (p. 51). Whether a student feels challenged or not is indeed subjective. Therefore, the study requires an approach that allows a student’s individual voice and experience to be heard. In such cases, universal meanings can develop from individual descriptions through the patterns that emerge.

**Sample sizes.** A third critique of the gifted literature pertains to the size of populations sampled. Large studies, such as those done by Loveless (2008), Moon et al. (2003), Neal and Schanzenbach (2007), and Plucker et al. (2010) often utilize larger samplings of students. Such population sizes work well with the quantitative number-crunching employed in each author’s study. Loveless (2008), Neal and Schanzenbach (2007), and Plucker et al. (2010) evaluated data collected from state reporting agencies to determine the effects of testing trends on student scores.
and teachers’ self-reported classroom focus on curriculum content and student populations. Comparison of large numbers of data can be effectively done with this size of population.

In contrast, studies that rely on case studies, interviews, and observations, by necessity employ a smaller sampling. Such qualitative studies ranged from a study population of 10 (Behrend, 2012) to 52 (Young and Balli, 2014). Even those studies employing mixed methods practices (Gallagher et al., 1997; Moon et al., 2003) narrowed down the larger overall population consulted for test or survey results to a smaller sample for the interview or observation stage. The nature of listening to individuals or small groups means a researcher or research team cannot cull data from excessively large populations. However, the interview and observation methodology allow for a more intimate view into the educational experience of the gifted student. This situation means data may not be as representative of the gifted population as a whole. However, researchers such as Young and Balli (2014) and Adams-Byers et al. (2004) were careful to ensure the populations, though limited in size, were reflective of gender and/or ethnic trends. Because of the more select nature of the gifted population, limited by test scores or state definition, the sample size will frequently be smaller in size than many other types of studies. Working to include diversity within a population sample, regardless of overall size, is key to maintaining validity and transference of findings.

**Test scores.** A final critique addresses the applicability of test scores. Loveless (2008), Moon et al. (2003), Neal and Schanzenbach (2007) and Plucker et al. (2010, 2013) utilized test scores to decry the lack of attention paid to gifted students in an NCLB-era focused on lower-achieving students. However, the question remains as to whether such data truly reflects what the authors hope to show, namely that gifted children are indeed being left behind.
Loveless (2008) justified the use of NAEP scores explaining the test is the only one given to a nationally representative sample each time given. However, the NAEP assessment only covers mathematics and language arts content and is only administered at the fourth and eighth grades. This leaves plenty of student populations uncovered. Additionally, comparisons of scores both pre-and post-NCLB often offer mixed results. Both Loveless (2008) and Neal and Schanzenbach (2007) addressed this concern without providing a conclusive answer. However, it is important to note that teachers in both the Moon et al. (2003) and Loveless (2008) studies reported feeling pressure to raise the scores of lower-achieving students at an admitted reduction in attention to higher-performing students who already mastered standards.

Plucker et al. (2013) highlighted the disparity between the nation’s top scorers and those in other countries, as reported by such bodies as PISA. This has led to the rise of the “excellence gap” touted by the NAGC (2015a), Plucker et al. (2010, 2013), and Neal and Schanzenbach (2007). While differences are less pronounced at younger grades, the data by eighth grade presents a stark contrast between top performing nations, data which makes additional study at the middle school level more imperative. Regardless the direct effects of state-mandated testing, few states include “indicators of advanced achievement” in their reporting, leading Plucker et al. (2013) to conclude “this omission sends the implicit message that advanced achievement is neither important nor a goal, and as a result, the vast majority of other education policies, systems and interventions align with the indicators that focus attention elsewhere” (p. 24).

Summary

In summary, a common perception is that gifted students are receiving an adequate education in the school environment. After all, gifted students’ scores often place these students at the top of the class and accentuate the positive trends of a school or district. However,
Davidson and Davidson (2004) argued that despite the nation’s commitment to educate all, “when it comes to leaving no child behind, highly gifted students are the most likely to fall through the cracks” (p. 2). The researchers cited within this literature review support this assessment.

History has shown inattention to gifted populations is not a new phenomenon. The Marland Report of 1971 submitted to the United States that many gifted and talented were performing below the levels they were capable of and warned the nation not to squander the potential within these students. The 1980’s saw a repeat warning in the “A Nation at Risk” publication highlighting discrepancies between the performances of the United States in comparison with other countries. Mediocrity was becoming the status quo as high achievers were neglected. A decade later the trend continued, as pointed out by the National Excellence report reiterating a need for improved education for America’s gifted and talented. No Child Left Behind has exacerbated the lack of attention on top performers, focusing instead on those children who have not yet met the standards.

In the current state of affairs, the National Association for Gifted Children (2015b), reviewed the state of gifted education in each state, concluding that “while there are individual areas of progress, our nation has yet to comprehensively address the educational needs of top learners in PK-12 schools” (p. 8). Despite improvements in identifying gifted students, creation of gifted summer programs, and increased dual enrollment opportunities, “it is still not possible to say that all our gifted and talented students are receiving the education they need and deserve” (NAGC, 2015b, p. 8).

Several factors contribute to the continued lack of attention directed to the gifted population. Funding is often minimal and states do not mandate services for the gifted in the
same way they do for other special needs populations. Teacher training is lacking, again often due to an absence of requirements demanded by states for those involved in instruction of the gifted. Legislative decisions focused on state-mandated assessments and their accountability measures have focused attention on bringing up the scores of those not meeting the standards. Meanwhile those who have already mastered content are left to continue to succeed at their current levels while failing to excel as they likely would with continued academic focus. Additionally, a misplaced vision of equality within the educational system has prevented such students from participating in academic environments which better cater to the needs of the high-achiever. As DeLisle (2014) explained, equity “comes about when we recognize that it takes different steps and strategies for kids of varying abilities to reach their goals” (p. 11).

Additionally, research has been lacking in regard to gifted education. Much of the literature on gifted education focuses on the identification of the gifted, especially on the need for higher identification of minority populations based on race, gender, or socio-economic level. Less common are studies focusing on the efficacy of curricular methods or strategic instruction. Of particular concern should be how gifted students themselves feel about their education. They are perhaps the best source on what gifted children need in order to make school challenging and engaging for such advanced minds. However, few existing studies focus on the perceptions of gifted students themselves in regard to the quality and betterment of their educational experience.

Despite an overall lack, some researchers have brought attention to best practices which contribute to a better educational experience for gifted children, thereby providing the intellectual challenge and rigor such students not only need, but seek out. Best practices include homogeneous classroom configurations which allow gifted students the ability to exercise their brains with peers at a similar level. Such configurations also allow gifted students a social outlet
which allows them membership in a community of like-minded students, along with the support that provides. Beyond grouping students together, the gifted benefit from a curriculum that actively engages their minds in critical thinking activities. Because gifted students have increased cognitive abilities, critical thinking allows them to stretch and exercise their mental capacity. Authentic learning experiences and assessment methods, designed to situate learning within the context of real-world applications, best allow the gifted to prepare for the world they will engage in.

Regardless the current attention placed on gifted education in today’s schools, the fact remains that gifted students are important to our nation’s future. Excellence gaps have been noted and likely exacerbated by legislation that has caused schools and teachers to focus on the middle. While that focus is good for students in the middle, it comes at a cost for the long-term competitiveness of the United States – in science, economics, politics, and technology. The NAGC (2015a), focusing on the excellence gap at just the fourth grade level, asked their audience to “extrapolate these numbers to every grade, and [realize] the increased number of students realizing their full potential would put the nation back on the path to global leadership” (p. 2). In conclusion, the Davidsons (2004) posited this analogy:

We’d be appalled at any agricultural policy that let food spoil in silos while people around the world were hungry. Failing to develop the talents of America’s brightest students while they are young enough to stretch and grow their brains is no different. Since we know how much better gifted students learn in accelerated classes and how much they need intellectual peers, failing to provide an educational system committed to meeting these needs is like locking that silo door. (p. 160).
By understanding what gifted students need in order to receive a challenging and engaging academic experience, we can begin to unlock the silo doors.
Chapter 3: Methodology

Combining excellence and equity in education means a commitment to the idea that all children deserve to learn. All children deserve an education that challenges them to the extent of their abilities; this includes children who have been left behind and children who want to surge ahead. (DeLisle, 2014, p. 161)

Introduction to the Methodology

The purpose of this qualitative study was to explore the perceptions of gifted middle school students regarding their experiences with challenge within a gifted education program. The goal was to use student voice to evaluate which elements of curriculum and instruction contributed to the sense of challenge for what was already a very high-performing group of students. By determining which elements of the classroom experience contribute to or detract from a high level of rigor, one can bring changes to gifted programming in general in order to provide gifted children with the level of education such students both need and deserve.

Researchers suggest gifted students are not challenged by the level of academic rigor in their classes (California Association for the Gifted, 1994; Davidson & Davidson, 2004; DeLisle, 2014; Young & Balli, 2014). In fact, Davidson and Davidson (2004) cited the gifted as “the population that traditional schools serve least, the population that is least likely to learn and achieve its potential” (p. 2). Effects of a lack of consistent academic focus on gifted students include underachievement in the classroom (Adams-Byers, et al., 2004; Glass, 2004; Swanson, 2006), lack of motivation (Clementson & Wenger, 1998; Fredricks et al., 2010; Willis, 2007), and reduction in global competitiveness (Davidson & Davidson, 2004; DeLisle, 2014; Finn, 2014). Each element is of concern in a nation that is dedicated to leaving no child behind and which seeks to be competitive in a global market.
While researchers suggest gifted students are indeed being left behind in the nation’s academic efforts (Callahan et al., 2014; Finn, 2014; Loveless, 2008), what do gifted children say regarding their educational experience? This study utilized the perspective of gifted students as a determinant of the challenge gifted students feel in the academic environment. Student voice within gifted research is lacking (Adams-Byers et al, 2004; Armstrong, 1989; Behrend, 2012), with an additional lack of research focused on gifted students at the middle school level (Jolly & Kettler, 2008; Kettler, 2014). The needs of gifted middle schoolers were addressed by focusing on the students’ perspectives as voiced through the interview process. Because the middle school years are a key transitional time in a child’s life and because research at this age level is lacking, this study may add key information to the body of knowledge surrounding gifted students. Such information can only serve to benefit and improve the level of instruction being offered gifted students.

In this chapter, a detailed account of the methods and procedures used in determining the level to which gifted middle school students feel challenged by gifted programs is provided. Additionally, the study’s purpose, research questions, sample population, and data analysis tools and procedures are specified.

**Research Questions**

Researchers have indicated a lack of rigor and challenge within the curriculum offered gifted students (Adams-Byers et al., 2004; Clementson, 1998; Fredricks, 2010; Young & Balli, 2014). Literature on gifted research often lacks student voice, thereby eliminating a first-hand perspective on the level of challenge in gifted courses and the causes for that lack of challenge. Additionally, while researchers have focused on students at the elementary (Armstrong, 1989; Hertzog, 2005; Kettler, 2014; Moon et al., 2003; Swanson, 2006) or high school level (Behrend,
2012; Clementson, 1998; Fredricks, 2010), data regarding the perspectives of middle schoolers has been neglected. The research questions used in this study were designed to obtain data specifically regarding the perceptions of gifted students at the middle school level as to how students regard the level of challenge provided in their courses.

The following research questions guided this study:

**Research question.** How do gifted students experience the gifted curriculum?

In addition to the claims made in the literature, personal experience has shown gifted students are frequently dissatisfied with the level of challenge and academic rigor provided in school. This is often true even of classes specifically designed for gifted students, such as Gifted and Talented Education (GATE) classes or honors-level classes in core subjects. For education to meet the needs of students at the gifted level, educators must understand how such students perceive the curriculum and instruction received.

**Research sub-question one.** What do gifted middle school students perceive as the methods or elements contributing to a challenging educational experience?

Educators must understand what gifted students perceive as the elements of instruction which best allow students to engage with the learning experience at a level commensurate with student academic abilities. This understanding must come from the perspective of the actual students in order to be truly effective. When working with gifted students, instructors can be guided in their planning by identifying components of the curriculum or methods of instruction which best challenge gifted students. In doing so, gifted students may receive the quality of education they seek.

**Research sub-question two.** What do gifted middle school students perceive as the methods or elements detracting from a challenging educational experience?
While it is essential to know what instructional methods work best in challenging gifted students, it is equally critical to understand those methods which fail to adequately engage the gifted mind. Such information must again come from the perspective of the student. As noted by McCollister and Sayler (2010) the level of gifted development is often even higher than teachers suspect. Such misunderstanding makes it even more imperative to hear the voice of the student. By determining educational components which fail to challenge gifted students, instructors may make conscientious instructional decisions to avoid instructional practices which do not lead gifted students to excel.

**Purpose and Design of the Study**

The purpose of this qualitative study was to investigate the perceptions of gifted middle school students as to how students regard the level of challenge within a gifted education program. To investigate student perceptions, a phenomenological approach was used. Phenomenological research is used to describe the meaning of a lived experience in regard to a certain concept or phenomenon (Creswell, 2007). Moustakas (1994) explained that phenomenological research aims:

- to determine what an experience means for the persons who have had the experience and are able to provide a comprehensive description of it. From the individual descriptions general universal meanings are derived, in other words the essences or structures of experience. (p. 13)

Individuals’ descriptions help provide a composite picture of the overall phenomenon as experienced by the collection of persons from which the data is collected (Creswell, 2007; Moustakas, 1994).
Phenomenology is the method of choice when a researcher endeavors to ascertain an understanding of the subjective experience as lived by the participants, as well as the meaning made of that experience by those same participants (Creswell, 2007). In this study, the phenomenon in question was the perception of gifted students in regard to the level of challenge experienced in their middle school gifted classes. The researcher sought to understand whether gifted students felt challenged by the gifted programming, as well as which components of instructional practice added to or detracted from that experience. This research correlated with the idea that phenomenology is more than merely a descriptive process, but rather “an interpretive process in which the researcher makes an interpretation . . . of the meaning of lived experiences” (Creswell, 2007, p. 59).

Throughout the study, I compiled data from gifted middle schoolers at the school site. Personal interviews with gifted students were used as the main form of data gathering. While an interview protocol was established utilizing open-ended questions and dialogue (Appendix B), the nature of responsive interviews demanded the interviewer continue to devise questions throughout the interview in an effort to gain both depth and detail (Rubin & Rubin, 2012). Rubin and Rubin (2012) acknowledged a responsive interview must maintain a continuous, flexible and adaptable design whereby a study may be redesigned throughout the project, new information can be explored based on interviewer insights, and is adaptable to the responses given.

Student interviews were listened to and video recorded, with the researcher discussing student insights and understandings. Transcripts were then created from the recorded interviews with the goal of analyzing the transcripts for recurring themes and constructs which lent themselves to a clear understanding of the student experience. Such in-depth analysis of the
students’ words allowed the researcher to get closer to the “essence” of the phenomenon as described by Moustakas (1994).

**Research Population and Sampling Method**

Participants included 18 students or former students identified as gifted who had been enrolled in the gifted program at the middle school level. Students at the school were identified as gifted after passing the CogAT at the 97th percentile or higher in one or more of the three categories: verbal, quantitative, or non-verbal. Criteria for identifying students as gifted were clearly delineated in school district guidelines.

Students were chosen purposively. The students were selected on the basis of their identification as gifted, rather than included at random (Bloomberg & Volpe, 2008). Bloomberg and Volpe (2008) explained such a criterion sampling strategy is based on “all participants [meeting] one or more criteria as predetermined by the researcher” (p. 191). In addition to participants having been identified as gifted, students were additionally selected based on the number of years in the gifted program, as well as the number of honors classes being taken. Although the school serviced students in the sixth through eighth grades, the sampling criteria meant no students were selected from the sixth grade due to the fact they were just entering the gifted program at the middle school level and lacked experience with its norms and constructs. Instead, to better round out the population, additional students were sampled from those students who had just exited the gifted middle school program and were entering their first year in high school.

The students ranged in age from 12 to 15 (Table 3). All but the three seventh grade students had participated in the gifted program for all three years of their middle school education. The two seventh graders were enrolled in their second year of the gifted program.
throughout the course of this study. Two of the students (one male and one female) had skipped a grade at the elementary level. All participants were simultaneously enrolled in the school’s honors-level language arts class, as well as an advanced math class (algebra at the eighth grade level; eighth grade math for those enrolled in seventh grade). Four of the participants were male, while the remaining 14 were female. Seventy-seven percent of the students identified as Caucasian.

Table 3

<table>
<thead>
<tr>
<th>Age</th>
<th>Male</th>
<th>Female</th>
<th>Honors ELA Enrollment</th>
<th>Honors Math Enrollment</th>
<th>Algebra Enrollment</th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
<td>1</td>
<td>3</td>
<td>4</td>
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<td>1</td>
</tr>
<tr>
<td>13</td>
<td>3</td>
<td>5</td>
<td>8</td>
<td>0</td>
<td>8</td>
</tr>
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<td>14</td>
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<td>3</td>
<td>0</td>
<td>3</td>
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<tr>
<td>15</td>
<td>0</td>
<td>3</td>
<td>3</td>
<td>0</td>
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<td>4</td>
<td>14</td>
<td>18</td>
<td>3</td>
<td>15</td>
</tr>
</tbody>
</table>

The research site was made up of approximately 550 students in the sixth through eighth grades and was located in a semi-rural district on the western border of Arizona. Over the preceding five years, the school had made increased efforts to meet the needs of academically advanced students. Gifted programming had originally been provided on-site by a certified teacher who traveled from school to school, offering gifted programming for an hour once a week. At the time of the study, identified gifted students were offered enrollment in a full-time gifted class operated as a daily elective. The gifted teacher had completed a certification program in gifted education, as well as having conducted graduate-level research in the area of gifted education. The gifted teacher had taught gifted education at the site for 13 years.
Additionally, two honors language arts and math classes were offered at each grade level. Students were enrolled in the honors classes based on data from the state’s and/or district’s standardized tests. Students with the top 60 scores were automatically placed in these two periods, with the highest 30 grouped together in one period and the lower 30 grouped in a second period. Due to scheduling issues, students needed only to qualify in one area to be enrolled in both honors classes. For example, students who only qualified in one area (math or language arts) were still enrolled in both honors classes, even if the student score was lower in the second subject. Teachers of the honors classes held a degree in their content area, but did not have any additional training or qualifications for teaching gifted or advanced students.

Gallagher (1997) explained “even good school systems need to review whether they are really providing their brightest students with academic and intellectual challenge and what better way of finding out than by asking students themselves” (p. 136)? Such comments indicate why the research site was ideal for conducting such a study. The school had endeavored to raise expectations and opportunities for students. The creation of honors classes and a dedicated gifted program were not the only indications of such a goal. Within the same time frame as the inclusion of these classes, the school initiated a National Junior Honor Society, created additional service organizations, and began participation in science and math Olympiads. Students enrolled in the gifted/honors track received approximately 234 minutes of advanced-level curriculum and instruction per day. This constituted almost half (45%) of the day’s instructional time. Research from this study can be useful in continuing to provide feedback for improvement of opportunities for advanced learners at this school.
**Instrumentation**

Interviews were used throughout this phenomenological research study in order to determine student perceptions. An interview protocol was used in interviewing all students (Appendix B). The primary focus was to discover the student’s overall perception of the amount of challenge provided within gifted classes. Additional questions and discussion elicited responses that helped provide an understanding of which classes provided the most challenge, as well as factors that contributed to the advancement of challenge or the lack thereof. While the interview protocol served as the basis of the interview, a responsive interviewing process continued depth of exploration. Rubin and Rubin (2012) explained “the essence of responsive interviewing is picking people to talk to who are knowledgeable, listening to what they have to say, and asking new questions based on the answers they provide” (p. 5). Such flexibility of design allowed the interviewer to develop questions based on what was being expressed by the students in regard to classroom experiences.

Initial interviews were conducted in small focus groups. Moon et al. (2003) explained focus group interviews “are appropriate when insights are needed, when there is a communication or understanding gap between groups or categories of people, or when one is interested in uncovering factors relating to complex behavior or motivation” (p. 52). In addition to interviews, Smith, Flowers, and Larkin (2009) noted the use of focus groups is just one method by which a researcher may gain the “rich data” offered when participants “have been granted an opportunity to tell their stories, speak freely, and reflectively, and to develop their ideas and express their concerns at some length” (p. 55).

Although perhaps not considered a traditional method, Jayanthi and Nelson (2001) observed focus groups increasingly being utilized by schools because such groups are seen as
“an effective means of collecting qualitative information that can be used to guide improvement planning and efforts” (p. 2). Additionally, Smith, et al. (2009), noted that although one-on-one interviews have tended to be the preferred method for collecting qualitative data, interpretative phenomenological analysis allows “great room for imaginative work in collecting data” (p. 56). Smith, et al. (2009) explain:

If your research question has . . . a requirement to hear the concerns of larger numbers of participants, then focus groups may be helpful. For example, you might ask, ‘What could be done to improve the service we provide to group X?’ You might want to know more about the experiences and concerns of group X, in order to help you to develop this. (p. 57)

Focus groups were particularly selected for the first round of interviews in this study because of the applicability to the middle school student. Middle schoolers are often hesitant to open up in a formal setting, such as an interview. Students at this age often need someone to “prime the pump,” in a sense, with a more bold student speaking up first and breaking the ice. Jayanthi and Nelson (2001) pointed to this triggering of comments as just one advantage of using a focus group (Table 4) with school groups.

It was believed conducting the initial interviews with small groups of students (three to four) would increase the level of comfort students felt with the process and allow students to initially feed off the answers of other students. Additionally, moderators must be “comfortable speaking with students, have a high level of rapport with participants, and are people with whom students are likely to feel they can be open and honest” (Achieve, 2015, p. 2). As a classroom instructor and someone with whom the students were familiar, I filled this role and added an additional level of comfort to the discussions.
Table 4

Advantages of Using Focus Groups in the School Setting

<table>
<thead>
<tr>
<th>Advantages</th>
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<tbody>
<tr>
<td>Provides a sense of anonymity/security for the participants which helps facilitate candor in participants’ responses</td>
</tr>
<tr>
<td>Stimulates the participants so that one person’s comment triggers additional spontaneous comments from others</td>
</tr>
<tr>
<td>Facilitates direct contact with participants which helps others vicariously experience what the participants have experienced</td>
</tr>
<tr>
<td>Allows moderator to immediately get to the “Why?” behind the participants’ comments</td>
</tr>
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</table>


Using a semi-structured interview protocol, interviewees were asked the same questions, although student responses did change the order in which questions are asked (Moon et al., 2003). To ensure students were not merely parroting the responses of others, and that the phenomenon being described was authentic, supplementary interviews were conducted individually. Students were allowed to revise or amend their answers from the first round of interviews. This allowed for member checking and increased authenticity in the answers provided during the focus group rounds. Additional questions probed each student’s individual experience with the phenomenon of being gifted and seeking a level of challenge within the curriculum and instruction offered at the school. It was understood that one student may express a feeling of challenge from a given classroom experience while another may not, even though enrolled in the same class and receiving the same instruction. Rubin and Rubin (2012) acknowledged such contradictions exist and are “intriguing [in] that both interviewees could be speaking the truth as they see it, and then would try to explore what [it] meant to each of the
speakers” (p. 16). Using follow-up interviews in a more individualized setting allowed such potential contradictions to be more fully explored and analyzed.

Observations of gifted and honors-level classes were conducted, as well (Appendix C). Using a semi-structured observation protocol allowed observation of modes of instruction, levels of student engagement, and curricular decisions targeting gifted students. Such observations served as a point of reference during the interviews, allowing a better understanding of what students had referenced.

**Data Collection**

Before conducting research, approval was obtained from the Institutional Review Board (IRB) of the university. Because human participants were involved, it was important to protect such participants. The authorization of school authorities was obtained, as well. A letter of permission was sent to the site principal. The letter detailed the goals of the study and included the interview and observation protocols which were used. No follow-up letters or meetings were necessary to further clarify intents and procedures, as approval was readily given. Upon district and site approval for the research study, parents were contacted via e-mail to explore initial interest in study participation. Positive responses were followed up with receipt of consent and assent forms (Appendix A) for parents and students to sign.

Once consent forms were obtained for all participants, an initial round of observations was conducted in the seventh and eighth grade honors classes, as well as in the gifted classroom itself. This initial observation, using the observation protocol, provided understanding of the procedures and instructional techniques that would potentially be discussed during the interview process. Additionally, observations included the level of teacher and student engagement.
Observations were followed by a first round of student interviews. These initial interviews were conducted in focus groups of three to four students. For those students on campus, interviews were conducted on campus during the school day and lasted between 18 and 30 minutes. For those students in the ninth grade, times were arranged to conduct interviews on site after school hours had ended. All interviews loosely follow the interview protocol. Additionally, all interviews were video recorded and transcribed by the researcher. During and after the interviews, notes were taken in both written and verbally recorded formats.

A second round of observations occurred after the first interviews had been transcribed. The second round of observations allowed for a more intent focus on behaviors, instructional activities and curricular components as discussed by students within the initial interviews. The observations were followed by a second round of interviews. The second round of interviews took place within the same settings, but were conducted with individuals rather than as focus groups. Rubin and Rubin (2012) explained that first interviews are used to “examine what you learned. . . and draw out the principles that would be of interest if they held more generally. Then, you reason about what underlying factors might have caused what you have discovered” (p. 55). While the first round of interviews focused on the phenomenon of being gifted in regard to the level of challenge experienced by such students in their gifted classes, the second round of interviews more deliberatively focused on which elements of a classroom’s curriculum and instruction best bring challenge. The second interviews were recorded and transcribed in the same manner as the first round interviews. A third round of interviews was conducted as necessary with individual students to clear up any remaining questions after interviews had been transcribed. Students were provided opportunity to review interview transcripts and make clarifications or corrections if needed.
Identification of Attributes

In a study examining the perceptions of gifted students, it is first important to determine the nature of giftedness itself. All children in this study were identified as gifted. For the purposes of the school district wherein the research took place, this meant all students were administered the CogAT and achieved a score at the 97th percentile or higher. The CogAT measures ability in the three domains of verbal, non-verbal, and quantitative skills. Students had all scored at the 97th percentile or higher in one of the three categories in order to be labeled gifted in this school district and be enrolled in the gifted education program.

Giftedness is often identified based on a higher test score or IQ level. The U.S. Department of Education describes the gifted population as those who have “the potential for performing at remarkably high levels of accomplishment when compared with others of their age, experience, or environment” (as cited in Hertzog, 2005, p. 213). However, giftedness is also evidenced through other characteristics such as high motivation and independence, elevated levels of introversion and introspection, and extreme curiosity and creativity (Glass, 2004). The Marland Report (1971) cited additional characteristics such as being task-oriented, intellectually and creatively talented, and desirous of academic stimulation. While each of these characteristics is harder to objectively identify or measure in the way academic aptitude is, each characteristic is equally important in identifying and developing gifted students.

Gifted programs are defined as “program[s] with a specific process for the identification of a group of students who are provided educational options in ways that differ from regular classroom curricula and/or instructional practices” (Callahan et al., 2014). The gifted program at the study site consisted of two components: a dedicated elective class solely for identified gifted students and advanced-level mathematics and language arts classes for top performing students.
across the school population. Because the gifted class encompassed students across the middle school grade band (sixth through eighth graders), the gifted elective course provided a homogeneous grouping for students identified as gifted wherein they worked with students who more closely resembled intellectual peers rather than solely working with age-level peers. Honors classes were conducted at grade level with students who had been labeled gifted, as well as other students from the general population whose high test scores showed an increased ability in the content areas of math and language arts. Students labeled as gifted but who did not achieve one of the top 60 scores in language arts or math on district benchmark assessments or standardized tests were not enrolled in the honors classes. However, only students identified as gifted and also enrolled in honors classes were used for research and interview. The dual enrollment in advanced-level content area and elective courses better represented the vision of gifted programming as that with “an advanced curriculum to match [student] abilities and the opportunity to explore topics in depth while surrounded by academic peers” (Davidson & Davidson, 2004, p. 36).

**Data Analysis Procedures**

Data analysis began after all interviews had been transcribed. Rubin and Rubin (2012) ideated a seven-step process for the analysis of responsive interviews (Table 5). This procedure moves the researcher from the basic transcription of interviews, through a sorting process into categories using apparent themes, to a final step of considering generalizations to populations or situations beyond the interviewees.
### Table 5

**Steps of the Responsive Interviewing Technique**

<table>
<thead>
<tr>
<th>Step</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td><em>Transcribe</em> and summarize all interviews</td>
</tr>
<tr>
<td>2</td>
<td><em>Code</em> interviews by defining, finding, and marking excerpts with pertinent concepts, themes, events, examples, names, places, or dates</td>
</tr>
<tr>
<td>3</td>
<td><em>Sort</em> interviews by finding excerpts marked with same code, across all interviews, placing them within a single category data file. Summarize the results of each category sort.</td>
</tr>
<tr>
<td>4</td>
<td><em>Resort</em> the information within each file, comparing between subgroups. Summarize the results.</td>
</tr>
<tr>
<td>5</td>
<td><em>Integrate</em> descriptions from various interviewees to create a complete picture of identified category.</td>
</tr>
<tr>
<td>6</td>
<td><em>Combine</em> concepts and themes across categories to generate a theory to explain the descriptions presented.</td>
</tr>
<tr>
<td>7</td>
<td><em>Generalize</em> beyond the individuals and cases presented, if applicable.</td>
</tr>
</tbody>
</table>


As explained by Creswell (2007), data analysis is a spiraling process wherein data collection, analysis, and writing are simultaneously conducted throughout the research with the researcher often returning to a previous step as new information is gathered and sorted. Coding is a key step in the sorting and analysis of data. Rubin and Rubin (2012) explain coding as a literal marking of interview transcripts with a word or phrase representing a passage’s meaning. “Systematic coding forces you to look not just at what you remember from interviews, but also at the passages that might modify your ideas or indicate when or how your ideas might be true or not true” (Rubin & Rubin, 2012, p. 192).
After transcripts of all interviews had been completed, transcripts were re-read for the purpose of identifying concepts, themes, and examples to mark. Because students had been asked about their perceptions regarding challenge in their gifted and honors classes, as well as to examine what elements of curriculum and instruction added to or detracted from the concept of challenge, possible markers included the separate classes, specific instructional strategies, or defined curricular components. Such emerging markers became the categories on which databases were constructed. Transcribed passages were coded under more than one label if multiple themes occurred.

All items coded for a given concept were transferred into a database containing all items coded for that marker. Notation was made to indicate from which interviewee the information was culled. Once all content for a particular marker was located in a single database, the gathered material was summarized to give a sense of what the interviewees had stated regarding that concept, with interpretation then beginning in order to interpret what had been stated, “making sense of the data, [or] the ‘lessons learned’” (Creswell, 2007, p. 154). Coding persisted as continued collection of data through interviews occurred. The final phase involved determining explanations for the phenomenon that had been described. As Rubin and Rubin (2012) explained, the researcher is to be “looking for a set of related concepts and themes that together answer [the] research question. In doing so, you examine the coded themes to see how they might be linked” (p. 206). The coded themes presented a picture of the level to which gifted students felt challenged by their gifted classes, as well as the students’ perceptions as to what elements of curriculum or instruction contributed to a sense of challenge.
Limitations and Delimitations of the Research Design

Limitations of the study included sampling and time constraints. Although other schools within the neighboring community had gifted programs of some degree, the chosen site was the only one with a dedicated daily gifted elective combined with honors-level classes in the subjects of language arts and math. Additionally, this program had been running in this format for approximately six years, providing a level of experience and stability which was of benefit to the study’s goals of determining how gifted students perceived the level of challenge provided by their gifted classes and what aspects of curriculum and instruction best contributed to this.

The study was also limited by time constraints, as all research was conducted within the time frame of the school calendar, as well as the school day. Research was conducted on site during the school day, negating the need for parents to transport students for after-school interviews. Additionally, the research was conducted during the months within which school was in session. Most of the research was conducted during the second semester of the school year, which allowed students to better reflect on their experiences up to that point, with a sense of immediacy to their experiences that research beginning the first days of the school year would not have afforded.

Delimitations of the study include the population selected. The population was selected from a middle school with a defined gifted elective, as well as an honors track of classes in language arts and math. Rubin and Rubin (2012) note there is no defined number of subjects which must be included in a phenomenological study “to demonstrate balance and thoroughness so long as you have explored alternate points of view and evaluated them carefully” (p. 63). However, the access to numerous students at varied grade levels, as well as access to the site, made it an opportune location for conducting the study.
Creswell (2007) advised “the participants in the study need to be carefully chosen to be individuals who have all experienced the phenomenon in question, so that the researcher, in the end, can forge a common understanding” (p. 62). With this understanding, the study was limited to those students had a minimum of two years in the middle school gifted program. This, by necessity, eliminated any current sixth graders from the study. However, the ninth graders who had just exited the program were included as a means of providing a well-rounded picture of the phenomenon of gifted education at the study’s site through those who had experienced it for two to three years.

Because the chosen site was the only one within the district to run a dedicated gifted program elective course combined with honors-levels classes in mathematics and language arts, the available population was constrained to those students available. The current sampling contained a smaller number of male students than female students. While this may not provide as broad a sampling as desired, it should be noted there was a male student at each grade level (seventh, eighth, and ninth) included. Determining whether gender impacts perceptions of challenge could be a topic for further study, but was not a primary focus of this research.

Additionally, interviews were conducted on site. Since the study was conducted using minors, this alleviated transportation issues. Students could have felt constrained by the formality of the educational setting and perhaps be hesitant in fully disclosing answers at first. However, the goal was to create “conversational partnerships” as described by Rubin and Rubin (2012), which put interviewees at ease and ensured they were being fully listened to. Likewise, the subjects were already familiar with the researcher through her instructional role within the school’s setting.
Validation

Credibility addresses whether the researcher has “accurately represented what the participants think, feel and do” (Bloomberg & Volpe, 2008, p. 77). Measures to ensure credibility were taken in this study. As advised by Rubin and Rubin (2012), those who seek to heighten credibility must “choose interviewees who are knowledgeable, while building into the interviews a variety of checks for candor, memory, and consistency” (p. 60). Credibility was enhanced through the selection of those students who had the most experience with the gifted program. Credibility was maintained through a faithful word-by-word transcription of each interview to maintain the interviewee’s original thoughts. Additionally, those students selected for the research were encouraged in member-checking in order to reread their transcripts and the study’s findings as a means of assuring their comments had been successfully interpreted.

Dependability addresses the reliability that the data is consistent. Throughout the research, a transparent process allowed the reader to see what steps had been taken in collecting, processing, and analyzing the data. All interview recordings and transcriptions were maintained, as were coding databases wherein data was sorted and processed. Additionally, consistency of data was benefitted from long-term interaction between me and the research subjects within the instructional setting. Finally, Rubin and Rubin (2012) explain it is crucial to create a rich and detailed picture of the phenomenon being studied, which is facilitated through the responsive interviewing technique. A responsive interview allowed the researcher and her subjects to immediately delve into topics which needed further elucidation, with the goal “that the additional examples will highlight a distinct aspect of what is being discussed” (Rubin & Rubin, 2012, p. 69). Combining such strategies helped improve the reliability of the collected data and ensuing results.
Expected Findings

As previously noted in the literature review, a great number of gifted students do not find themselves challenged by the curriculum and instruction in their gifted or honors-level class. While this is by no means a valid statement for every gifted child, it does hold true for the majority of gifted students (Clementson & Wenger, 1998; Fredricks, 2010; Gallagher et al., 1997; Hertzog, 2005; McCollister & Sayler, 2010). With the bulk of the researchers’ literature supporting this assessment, similar findings were expected among the student population interviewed in this study.

In regard to these findings, I looked for evidence to confirm or deny specific conclusions in regard to providing an appropriate level of challenge for gifted students. The CAG (1994) made the call for improving the level of challenge provided the gifted by focusing on a quality curriculum which delivered critical thinking, real-world connections, and held high standards for students. Dixon (2002), McCollister and Sayler (2010), and Kettler (2014) each extended research into the positive effects of critical thinking in reaching gifted students, noting that student who use critical thinking as they “interrelate ideas within and among the disciplines leading to increased academic rigor and greater depth of understanding for them” (McCollister & Sayler, 2010, p. 42). Experiences related to the real world and evaluated using authentic assessments that mimic those which students will employ later on the job, similarly increase the level of challenge students feel. Rather than the passive involvement of the typical testing instrument, authentic assessments drive higher-order thinking and force the making of connections between disciplines and topics (Moon et al., 2005). Homogeneity likewise contributes to the experience gifted students have with the level of challenge in classes. Adams-Byers et al. (2004), Glass (2004), and Young and Balli (2014) each reported on marked
differences between student perceptions of challenge in a homogenized group setting over those in mixed-ability classrooms. And finally, one cannot discount the effect the teacher has on the classroom, both through the level of experience and training he or she has with the gifted (NAGC, 2014; Willis, 2007) and the level of expectations put on student work and effort (Loveless, 2008; McCollister & Sayler, 2010).

The students to be interviewed for this study were taken from a population receiving instruction in both an elective class dedicated solely to gifted children, as well as honors-level classes constituting the highest test-scorers on district assessments. These differences meant students would better be able to evaluate why one class provided a more challenging experience than another. In holding with the research, I expected to find students felt a higher level of challenge in classes which had a more homogeneous structure and which employed such curricular tasks as critical thinking and real-world activities which utilized authentic assessments. Likewise, those classes with teachers more highly trained in meeting the needs of the gifted, as well as holding high standards for their students, were expected to provide a higher level of challenge for the students therein. Such findings support the previous literature focused on elementary and high school populations, while adding to the body of evidence regarding middle school learners.

It must be remembered that each child is unique and therefore his or her experiences, expectations, and needs vary among individuals, making a single conclusion unlikely. However, generalizations can be made from student responses which can aid and guide decisions at the study site, as well as other schools, to better reach and meet the needs of their own gifted populations.
Ethical Issues

There were no anticipated risks to participants in this study. The study received approval from the Institutional Review Board before any phase of research was conducted, “ensuring that the participants understand the nature of the research, are aware of risks it poses, and are not forced either covertly or overtly to participate” (Rubin & Rubin, 2012). While the study involved the use of minors, no deception was involved. Students were included in the study on a voluntary basis. Anonymity was maintained throughout reporting by removing student names and replacing the name with “Student A” and so on. Because minors were used, both students and parents signed consent and assent forms (Appendix A) indicating understanding of the intended research and the student’s role in it before any research was begun. Additionally, after interviews took place, students were able to read a transcript of the interview to assure what was being reported was what they intended.

Rubin and Rubin (2012) caution interviewees “should be no worse off, and ideally should be better off, for having taken the time to talk with you” (p. 89). This was an important component of the study to share with the students and parents. Middle schoolers reach an age where they become more self-aware, seek more independence, and begin to look ahead to future plans. A study focusing on the middle grade student and his or her needs was ideally suited to this transitional age. Explaining that the study was seeking to better serve gifted students in providing an improved education piqued student curiosity. Indeed, initial conversations with the students regarding the fact their teacher’s dissertation would focus on them and their needs as students elicited excitement and interest in the study before it even began.

Throughout the course of the research, I filled the roles of researcher and author, as well as the gifted instructor whose students were used in the study. As the purpose of this study was
to evaluate whether gifted students felt challenged in their gifted and honors classes, the findings directly related to and reflected upon my own teaching. This opened potential for bias within the research. It was extremely important to maintain objectivity throughout the interview process and to engage in reflective analysis in looking at the study’s findings. As a gifted teacher, as well as a former gifted student, I admit to a deep level of passion for this population of students and a strong desire to see the gifted receive the best education possible within the school system. That was likewise the purpose of this study. With that in mind, I actually looked forward to findings that could potentially reflect negatively on practices used within my school and within my own classroom. Exposing weaknesses in the curriculum and instruction offered to gifted students at the school opens the possibility to benefit the gifted population when changes are made. Because these revelations have come from the students rather than merely an outside observer, they become even more important in identifying weaknesses in how to reach the gifted and what steps can be made to rectify the situation.

No monetary compensation was provided for conducting this study.

Summary

This phenomenological study was conducted to analyze the perceptions of gifted students as to whether they felt challenged by their gifted and honors-level classes. The goal was to determine which aspects of curriculum and instruction added to or detracted from a rigorous classroom experience that truly challenged the gifted student. Because so many students report a lack of challenge being provided by the curriculum (Clementson & Wenger, 1998; Davidson & Davidson, 2004; DeLisle, 2014; Fredricks, 2010; Gallagher et al., 1997; Hertzog, 2005; McCollister & Sayler, 2010), this study is important in helping educators and schools better
serve the gifted population. The fact these reflections come straight from gifted students rather than outside observers or educators makes the findings even more authoritative.

Steps in this process included interviewing 18 gifted students at the middle school level. This student population consisted of students who had passed the CogAT test at a minimum of the 97th percentile and registered in the school’s gifted elective class, while also scoring high enough on district assessments to be enrolled in honors-level language arts and math courses, as well. After receiving permission from the IRB and receiving signed consent forms, interviews took place on site at the students’ school. Data was collected through interviews which were recorded and transcribed. Transcriptions were analyzed to determine themes, especially those pertaining to the research questions which addressed whether gifted students felt challenged and which elements of curriculum and instruction added to or detracted from the level of challenge perceived by gifted students. Student perceptions supported the findings of prior researchers that gifted students feel a stronger sense of challenge and rigor in those classes which engage students in a curriculum utilizing critical thinking and authentic assessment experiences, have homogenized grouping, and are taught by instructors who have experience and training in working with gifted students. The data is to be used to improve the school’s educational offerings for gifted students, as well as add to the limited body of research which reports findings in the students’ own voice or pertains specifically to the gifted middle schooler.
Chapter 4: Data Analysis and Results

The fact is, the gifted…the brilliant… are the ones who need the closest attention of the skillful mechanic. (Jones, 1911, p. 90)

Introduction to the Data Analysis and Results

An interview process was used to examine the perceptions of gifted middle schoolers regarding their experiences with challenge in a gifted education program. Students were asked how gifted students experience the gifted curriculum. The research sub-questions focused on which methods or elements most contributed to or detracted from a challenging educational experience. A phenomenological approach was used to determine what the gifted experience means for those who have lived it.

Data was obtained through classroom observations and student interviews. Classroom observations took place in Honors Math, Honors Language Arts, and the GATE classroom at the research site. A protocol was used to guide observations of general activity in each classroom, as well as engagement of gifted students in classroom activities. Observations were used to understand what students were referring to in their subsequent interviews.

In addition to observations, interviews were conducted. Student voice, through responsive interviews, was used to evaluate which aspects of a curriculum most contribute to or detract from the level of challenge experienced by gifted middle school students. The preliminary round of interviews was conducted as small focus groups of three to four students. Because this study was conducted with middle schoolers, the focus group design was used to set students at ease and allow them to feed off each other’s ideas during the first round. The second round of interviews was conducted individually so as to allow students the privacy of individual answers and the ability to revise or add to previous comments. A third round of interviews was
conducted with select students to clarify points from a previous interview or to expand on an answer in order to reach saturation for certain points of focus.

Interviews were transcribed word-for-word and an evaluative coding method was utilized to determine themes and perceptions among students as to the level of challenge they perceived and which elements of instruction supported or hindered maintaining a challenging classroom environment. Data analysis showed students unanimously desired a challenging learning environment while they felt individual classrooms achieved that to varying degrees of success. Evaluative comments regarding each honors class showed students were able to delineate which aspects of instruction they perceived as most contributing to or taking away from the challenging classroom environment most desired.

As sole researcher, I conducted all interviews and observations, while additionally transcribing the recorded interviews. As the Gifted and Talented teacher for the school, improving not only the GATE program, but the overall experience of high-achievers and advanced learners, is of particular concern in making sure an equitable learning experience is provided for all students at the site. The school research site has made efforts over the past years to develop an Honors Program that incorporates classroom experiences, as well as extracurricular activities including Mathlympics and National Junior Honor Society which can meet the needs of such students. Data from the research conducted may be used to improve school programs and student experiences.

In this chapter, the population of the study and the research methodology are defined and a summary of the findings is presented.
Description of the Sample

The sample for this research study consisted of 18 students. Students were chosen first based on district identification as a gifted student by scoring at the 97th percentile or higher on the CogAT in one or more of the three categories tested: verbal, quantitative, or non-verbal. Only students who had passed the CogAT and were enrolled in the GATE class were considered for the study.

In addition to district identification as a gifted student based on test scores, students had to be concurrently enrolled in the GATE class, as well as honors-level math and language arts classes. Enrollment in honors-level classes was based on data from the state’s and/or district’s standardized tests. Students with the top 60 scores were selected for inclusion in the honors classes. Honors classes consisted of an Honors Language Arts class at both the seventh and eighth grade levels, Algebra for eighth graders, and Honors Math for seventh graders. Because the study focused on the level of challenge gifted students felt, only students enrolled in all three elements of the Honors Program were utilized, as they could best comparatively assess which components of instruction hindered and supported challenge in the classroom.

Students had to be enrolled in the aforementioned course of study for more than a year to be considered for the study. Although the school site did enroll students in the sixth through eighth grades, it was determined that those students in the sixth grade would just be entering the school’s honors and gifted programs and would therefore not have enough experience with the program and courses to make as sound, comparative judgments on their experiences as those who had been in the program for a more extended time. To increase the sample population, students who had just exited the program and were currently ninth graders were asked to participate based on their middle school experiences.
Of the 18 students interviewed for the study, three of the students were seventh graders, eight were eighth graders, and seven were ninth graders. Four participants were male, while the other 14 were female. Two students identified as mixed-race (Hispanic and Caucasian); the remainder identified as Caucasian, with two students further specifying their ethnicity as Middle Eastern. All students were currently or previously enrolled concurrently in Honors Math, Honors Language Arts, and the Gifted and Talented class at the middle school research site. At the time of the interviews, the seventh graders had spent 1.5 years in the honors-level courses, the eighth graders had spent 2.5 years in honors courses, and ninth graders had completed a full three years. Two of the students (one male and one female), had skipped a grade at the elementary level.

Of the 18 students approached for this study, all participants responded in the affirmative to participation and expressed a marked eagerness to participate. No students declined participation in the study. All student names and identities were masked through the use of pseudonyms. Every effort was afforded to prevent deductive disclosure of participants’ identities.

**Research Methodology and Analysis**

Researchers note gifted students feel a lack of challenge in the educational environment (Davidson & Davidson, 2004; DeLisle, 2014; Clementson & Wegner, 1998; Fredericks et al., 2010; Hertzog, 2005). Such a perception, researchers note, can stem from many causes. An effort to close achievement gaps has led many classroom teachers to “clos[e] achievement gaps by bringing a large proportion of students in underperforming groups… to a basic level of educational achievement” (NAGC, 2015a, p. 1). Although teachers are the ones directly responsible for providing instruction, the State of the States report on Gifted Education,
explained less than 10% of teachers had training in teaching gifted (NAGC, 2015). Gifted students make up a portion of the country’s intellectual, scientific, and technological leaders whose minds are important to develop in order to remain internationally competitive (Finn, 2014). Additionally, schools fear being labeled elitist and are often hesitant to provide separate programming for gifted students (DeLisle, 2014; Manning, et. al., 2010). Finally, funding is often lacking to provide gifted students with the services they need (Callahan, 2014; Hargrove, 2012). This study’s research questions addressed whether the research site’s gifted population concurred with the assessment that gifted students often feel a lack of challenge, as well as identifying components of the educational system which supported or detracted from a child’s perception of an appropriate level of rigor.

Methodology. A phenomenological research approach was used in this study. Creswell (2007) advised phenomenology is the choice method when the researcher wishes to understand a subjective experience as it is lived by the participants and then make meaning of that experience. Giftedness can be seen as a phenomenon in which those identified as gifted share certain characteristics and experiences. Van Manen (1990) explained that “lived experience is the starting point and end point of phenomenological research” (p. 36). With that in mind, interviews were conducted to allow students to express their perceptions of the lived experience of being gifted at the middle school level.

Students were selected based on enrollment in a full honors course curriculum consisting of honors-level math and language arts classes, as well as the GATE elective class. Observation and interview protocols were utilized as described (Appendix B and C). Students were observed in honors-level classes to provide a better understanding of the techniques and methods used by site teachers when teaching honors courses, as well as to witness student interaction and
participation in those classes. Observations made it easier to grasp points students made in interviews regarding instructional methods and classroom interactions.

First-round interviews were conducted in small focus groups of three to four students. Jayanthi and Nelson (2001) advocate the use of focus groups because “there is an underlying assumption that participants are usually more willing to express their opinions amongst the security of other people who share some of their concerns and interests,” as well as the focus group atmosphere being one of “sharing and discussing rather than just interviewing” (p. 2). Compounding this need to create a sense of ease within the interview setting was the involvement of middle-schoolers. Students at this age level are often hesitant to open up in a formal one-on-one setting with an adult. Conducting a focus-group interview which engaged the participation of peers created a less formal environment that allowed students to bounce ideas off each other and expand on ideas expressed by a peer. As noted by the National Institute for Urban School Development, the use of focus groups “lead[s] to rich conversation and meaningful insights into issues,” while also permitting the researcher and group to “explore and understand attitudes, opinions, feelings and behaviors” (p. 2).

A second round of interviews was conducted with each student individually. Select questions from the initial round of interviews were repeated, allowing the student to personalize responses regarding the level of challenge felt and describe their own specific experiences with gifted programming at the school. These individual interviews allowed students to clarify answers and also provided security against judgment from peers as the questions became more specific to students’ individual perceptions and classroom experience.
Third round interviews were only conducted with those students the researcher felt had not clearly addressed a point, needed to clarify the meaning of a statement, or to obtain saturation on a topic.

Member checking occurred after each round of interviewing. Glesne (2006) defined member checking as “sharing interview transcripts, analytical thoughts, and/or drafts of the final report with research participants to make sure you are representing them and their ideas accurately” (p. 38). Richards (2003) explained member checking as a form of validation as the researcher seeks “views of members on accuracy of data gathered, descriptions, or even interpretations” (p. 287). Transcripts were typed and provided to each student. Students were asked to read the interviews for overall accuracy of the representation of their thoughts and to determine whether they wished to add refining comments to their statements.

Most of the students were eager to read their transcripts. Four students (three ninth graders and one eighth grader) declined to read the transcript. Some students merely read the interview and made no comments or suggestions. However, most students desired to engage in conversation after reading through the interviews. As Simpson and Quigley (2016) noted in their report on member checking, adolescent participants appreciated having the opportunity to reflect on how they had represented themselves and felt it gave them additional “voice” in the project. Students used the member-checking process to refine their comments, as well as to clarify what they had said if they felt it had not been expressed clearly during the interview. Additionally, after reading Round One interviews, students noticed their own imprecise language or the use of such filler words as “like” and self-corrected when Round Two interviews were conducted, thereby improving the precision of the language.
**Analysis.** Agar (2008), advised a researcher “immerse [himself] in the details, trying to get a sense of the interview as a whole before breaking it into parts” (p. 153). The transcription process helped with this. Each interview was transcribed verbatim from the recordings, allowing the interviewer to re-hear and process the words of the interview. This follows Finlay’s (2014) advice to “immerse” oneself in the data by listening to the recorded interview, paying attention to verbal and non-verbal cues, and re-reading the transcript repeatedly “to get a sense of the whole” (p. 2). Once completed, transcriptions were reread another time for the purposes of editing, again allowing the researcher to further process the statements that had been made. It was during this process that themes began to appear among participant words and concepts.

Once all interviews were transcribed, the coding of student comments began. Charmaz (2001) described coding as the researcher’s “critical” link between the data the researcher has been collecting and the explanations that are then made of its meaning. In qualitative data analysis, “a code is a researcher-generated construct that symbolizes and thus attributes the interpreted meaning to each individual datum for later purposes of pattern detection, categorization, theory building, and other analytic processes” (Saldaña, 2014).

In this study, a method of evaluation coding was used as a means of sorting and discovering emerging themes in the student data. Rallis and Rossman (in Saldaña, 2013) note evaluation coding “is the application of (primarily) non-quantitative codes to qualitative data that assign judgments about the merit, worth, or significance of programs or policy” (p. 199). The research questions asked students to describe their experience with gifted programming, with sub-questions inquiring as to which elements most contributed to or detracted from a challenging learning environment. Thus, students were asked to be evaluative in their comments. Saldaña (2013) explained evaluation data utilizes description that “focuses on patterned observations or
participant responses of attributes and details that assess quality” while also using comparison which “explores how the program measures up to a standard or ideal” (p. 119).

After repeated reading of transcripts, recurring words and phrases such as “challenge,” “boredom,” or “in the real-world” were marked with highlighters and noted in transcript margins. For example, all words or phrases pertaining to the concept of “challenge” were similarly marked with pink highlighter and later included in the same spreadsheet. An additional reading of coded themes was conducted for the evaluative portion of the research and reporting. A plus sign or a minus sign was placed in front of coded themes to indicate whether a student felt the concept added to or detracted from the perception of challenge in the classroom. For example, where a student who felt critical thinking activities increased challenge, a plus sign was placed in front of the coded theme of “critical thinking” to indicate its effect on a challenging classroom.

Finally, all categories were evaluated in regard to emerging themes. VanManen (1990) explained:

To do human science research is to be involved in the crafting of a text. In order to come to grips with the structure of meaning of the text, it is helpful to think of the phenomena described in the text as approachable in terms of meaning units, structures of meaning, or themes. Reflecting on lived experience then becomes reflectively analyzing the structural or thematic aspects of that experience. (p. 78)

In accordance with this concept, repeating ideas were organized into larger groups containing a similar theme. These themes were then applied to the research questions as the theoretical constructs supporting an answer to the research questions.
One challenge of the study’s design originated from the process of interviewing students and transcribing the data, which was a lengthier and more complex procedure than initially expected. Each of the 18 students participated in at least two interviews, lasting between 18 and 30 minutes. To ensure accuracy, an important part of research, interviews must be transcribed word-for-word and then double-checked for accuracy, making it “painstakingly detailed work” (Rubin & Rubin, 2012). Though painstaking, this process allowed interviewees to be accurately quoted and their message conveyed appropriately.

Acclimating students to the interview process presented a second challenge. Rubin and Rubin (2012) explained that it is important “interviewees know that because you are familiar with their world, superficial answers won’t teach you much” (p.101). It was important to make this concept clear during each student’s first interview. At first, students tended to speak in generalities, assuming their words would be understood because students were talking to individuals familiar with their world and their educational environment. It was important to remind students their words were intended for a larger audience and therefore needed to be understood beyond just the interviewer and interviewee. After being asked “Can you explain that more?” or “Why?” a few times, students quickly caught on to the need to clarify answers and provide more detailed explanations.

Summary of Findings

This study was driven by a desire to determine how gifted middle schoolers perceived the level of challenge provided by their gifted curriculum. The gifted curriculum at the research site consisted of three components: Honors Language Arts, Honors Math for seventh graders or Algebra for eighth graders, and GATE. The Honors Language Arts and Honors Math positions consisted of only the top-scoring students at each grade level on district and state assessments.
Classes were taught by instructors who did not have any specialized training in teaching gifted students. The GATE class consisted of students scoring at or above the 97th percentile on the CogAT test. The GATE class was taught by an instructor credentialed in teaching the gifted and talented.

**Academic challenge.** The goal of this study was to understand the perceptions of gifted students regarding the level of challenge they have experienced within the middle school setting. First round interviews, conducted in focus groups of three to four students, focused on the gifted experience overall. Second round interviews were conducted individually and asked students to evaluate the experience in individual honors-levels classes and what created that perception. Questions centered on determining how challenged students have felt during their overall educational experience, with questions narrowing down to specific classes and strategies used.

**Defining challenge.** Being told that the title of the study was “Developing Appropriate Challenge and Rigor in the Classroom: The Perceptions of Gifted Middle Schoolers,” students were asked to define what academic challenge meant from their perspective. At first, students struggled to form a definition that did not use the word challenge. The majority of student definitions centered on the words “hard,” “pushes,” and “work.” Eight students explained academic challenge meant they are presented with work that is harder than normal, with one student substituting the word “complicated” and another substituting “difficult” to explain the level of work. Although harder work was seen as challenging, student responses were also clear that the work should be “difficult to do, but not impossible” (Student B). Challenging work should build off what is already known. Student G noted that challenge is “taking what you have learned and making it more complicated,” while Student N noted challenging work should be “something you are able to do, but you actually have to try at it.” Six students noted challenging
work “pushes” one to succeed, to go further, or to learn more. Because grades and scores are often highly important to gifted kids, Student A specifically noted that challenging work is the work that “pushes you to get an A.” Such observations likewise connect to those students who noted that “work” is involved when there is challenge. Six students explained that when a class or lesson is academically challenging, the students felt they had to “work” at it or “work” for the grade in a way they did not have to in classes that are not academically challenging. Additional coding showed student responses noted academic challenge makes one “think,” “expands” or “stimulates” the mind, or quite simply, as Student C stated, “it keeps out the boredom.”

**Desiring challenge.** Students were asked to evaluate whether academic challenge was an aspect the students desired in an educational program. Students unanimously stated academic challenge was a desired component of their educational experience. Themes derived from this question broke student responses into five categories: intelligence, preparedness, engagement, goals, and negatives. The preponderance of students indicated a desire for more challenging curriculum simply because students wanted to “get smarter.” Student R explained, “Most [gifted] students don’t want to be just one of the other kids. They want to stand out. They don’t want to be just like another person; they want to be smart.” Seven other students agreed with this assessment, stating some variation on the idea that increased challenge equates to an increase in learning and intelligence, a characteristic they desired.

Six students’ responses thematically fell under the idea of engagement. Many students expressed they were often bored in class. Challenging curriculum was seen as something that engaged the student’s mind and gave purpose to their education. One of the more precocious responses came from Student O who explained, “Yeah, I want it to be more challenging because
I have to be here for seven hours . . . But paying attention for seven hours straight and it’s boring, it has no purpose for me.”

Student responses also indicated the desire for challenge stemmed from the fact students felt more prepared for their future. Some respondents indicated the future as merely the next grade level, while others looked to further levels of learning, such as high school, college, or even an occupation after completing schooling. Student B explained, “I want it to be challenging enough that whenever I go into college . . . I am not totally confused on what is going on.” Students additionally revealed that they were already looking to future careers, noting that a job would expect certain skills or levels of commitment from them which a more challenging environment now would better help prepare them for.

Tying in with the concept that challenge increases preparedness, goals were a fourth theme indicated by five student responses. Students wanted “something to strive for,” to feel like they were learning, and even desired “to stand out.” Students expressed frustration with too often sitting in a class and not learning something new. Student G commented that “all the work is easy and I like things to be more difficult because then it’s like I’m earning the A. And sometimes I feel like I just do nothing and I am not learning anything.”

Two students admitted to seeking challenge, but also expressed some hesitancy in doing so. Gifted students are often involved in many extracurricular activities both inside and outside school. That stereotype held true for most of the students interviewed for this study. With that in mind, students expressed concern that though they wanted challenge, challenge at times interfered with their class grade or with the ability to do activities outside school. “It’s not that I don’t want [challenge], it’s that it sometimes interferes with everything else,” commented Student A, who is actively involved in sports and school clubs. Students were also very
conscious of the importance of a transcript grade and what it says about them to colleges and high schools. When asked if academic challenge was something she liked, one student responded most of the time that was true, but not when it meant not getting an A in the class. When pushed a bit further as to whether the grade was more important to her or whether the learning experience was, Student B acknowledged “the grade kind of comes with the learning experience,” so both had value in her eyes.

Finally, four students recognized a connection between challenge and fun. Student M explained:

Personally, I enjoy academic challenge just because there’s something fun about not knowing what’s going to happen, and something fun about walking into class and I’m actually going to have to try on something. It gets you involved in the class and not just sitting there or even falling asleep—it’s just a lot better!

Others experienced an increased sense of satisfaction from working to learn, which made education fun for them. Learning new facts and skills, a challenging experience, also made education more fun.

*Level of challenge experienced.* Overall, when asked to describe what it was like being a gifted student in middle school and how students have felt about their gifted experience in middle school, students explained that though there were moments when they were suitably challenged, most of their education had lacked that desired component. “If I can zone out the entire class, and still get A’s and B’s, then I think it is a little too easy,” complained Student E. Students admitted to feeling challenged to some degree when first beginning middle school. At the elementary level in the district in which the study took place, the 25 top-scoring students in each grade level were grouped together. Thus, even before entering middle school, students
were conditioned, in a sense, to work at an advanced level in their classes. Despite this instructional model, the transition to middle school still afforded a measure of challenge to transitioning sixth graders. However, many of the students noted this perception quickly faded. “At first it was a challenge like it was supposed to be, obviously,” explained Student D, “but then I started getting used to it.” “In language arts and math, they weren’t as hard as I thought they would be,” agreed Student B. One student who had skipped a grade acknowledged the same sense of experiencing challenge at first because of feeling academically behind the other students, but after quickly catching up, the student still felt a lack of challenge.

Although the district in which the research was conducted made an effort to create classes that target high-performing students, gifted students still felt held back by some of their class members. Student responses mainly fell into two categories: repetition and population. “Each year they repeat the same stuff. And it gets really boring. We like learn it over and over again, so it doesn’t really feel like an honors class because we are learning the same stuff we did last year” (Student G). This was an especially common comment in regard to language arts instruction. A second comment reflected the perception that not all students placed in the honors-level classes truly belonged there and “it would slow everyone else down” (Student F).

Each student mentioned being challenged at some point by the GATE class. “The work is a little harder and it’s like at a level where everyone can do it, but you have to focus on it harder than you would have to do in other classes,” explained Student A. In contrast, students expressed frustration with the honors-level classes. “I just thought it was a label,” acknowledged Student C, noting that other classes seemed to be taught the same content in the same way. Student comments did show understanding of the difficulty in teaching classes with varying
levels of students. “Even in honors classes, not everyone is gifted, so you can’t really teach everyone individually,” conceded Student B.

**Level of over-challenge.** Only two students granted they had ever felt *too* challenged. Several acknowledged they may have felt too challenged at a specific moment or with a specific assignment, but looking back on it, that had not truly been the case. “At points in GATE I’ve felt too challenged, but looking back on them, I don’t really think I was. It was just kind of frustration getting at me” (Student M). Student I agreed. “There have been times where I felt too challenged, but then I figured it out and I realized that it’s just helping me get better and it was good.” Those students who did acknowledge feeling overly challenged at certain points only confessed to such feelings in GATE class and never in their Honors Language Arts or Honors Math. Additionally, students’ comments regarding over-challenge usually reflected a time management issue rather than difficulty with content.

**Teacher understanding.** Gifted students expressed the idea they do not feel understood by their teachers. Some acknowledged they could sense that certain teachers made an effort to understand gifted students and meet the needs of gifted students, but only succeeded to varying degrees. However, the majority of teachers were perceived as not understanding gifted students, their academic needs, or how to meet those needs. “I think that they understand that as gifted kids we are going to want more than they have to offer, but I don’t think they fully know how to offer it,” conceded Student M. Student O expressed it this way:

When teachers come up to you and [say], “Oh, you’re going to go far in life,” I’m like, thank you, but you don’t understand that if I want to go far in life, I need to know these things. And I need to go in depth. . . . They don’t understand that we know—this is going to sound so conceited—we know that we’re smarter . . . But exactly that we are smarter
than them, *that’s* why we need more. I feel that [the teachers] understand that part, but they don’t understand what we need. They understand that we’re smarter, but they don’t understand how to accommodate us.

Even when students felt a teacher may have some understanding of giftedness, the overall sense was that the teacher still taught the gifted students the same as the other students in the class. One example a student offered as proof they felt understood by the teacher was that after an extended absence, the teacher did not assign every missed assignment as make-up work; the teacher assigned just one to check the student’s skills and comprehension because “she knew that I would still understand everything that they had learned” (Student I). Additional proof of understanding came through increased teacher expectations. Teachers often held gifted students to higher work standards and at times graded gifted students differently.

Although students desired teachers to hold gifted students to higher expectations regarding work, the same students expressed frustration when the higher expectations were translated to student behavior. “We still are the same kids as if we were just average students, the same people, just not the same intelligence,” Student M explained. Some students felt teachers expected them to be significantly more mature than their peers, but wanted teachers to realize they were still middle school students just like their peers.

**Teacher influence on challenge.** During the research phase of this study, observations were made in each of the seventh and eighth grade honors-level classes. Although these observations focused on student engagement and activity in the classroom, the observations also afforded the opportunity to witness teacher interaction and techniques. Because research questions asked students to evaluate which aspects of their classroom experience were most and least conducive to creating an environment with academic challenge, observations were
important in understanding student comments on particular instructional techniques. Second round interview questions asked students to pinpoint which elements of their honors-level classes provided or took away from the creation of a challenging academic environment. This second round also asked students for recommendations in improving instruction (Appendix B).

**Increasing challenge.** All students interviewed expressed a desire for a challenging academic environment. Three themes emerged from coding of student interviews which helped increase the level of challenge students felt in their honors classes: content of instruction, instructional strategies, and teacher expectations.

**Content.** The fact that students were enrolled in advanced courses should imply the level of content to also be more advanced. Yet students still longed for content that went more in depth or was more complex. Texts did not meet the levels students expected or desired. “With reading stories or passages,” explained Student P, “I actually read a lot more advanced books or stories [on my own] . . . I don’t want to read the third grader books, which is all just pictures or simpler words. I like more challenging words.” Additionally, rather than work that made students go more in depth, students reported they were often given more work, such as a greater number of problems or more questions to answer.

GATE was cited as an example of content that was more challenging because of the variety of topics and the inclusion of subjects not covered in traditional classes. Student E alluded to the fact that in sixth grade she was learning about Newton’s laws of physics, a topic not usually covered until eighth grade science. Student Q explained the only thing she felt was done consistently each day was the bellwork (an introductory question) and then students had a brief introduction or review before working on the current project. In contrast, Student N felt units were structured similarly, but the product was constantly changing, which required students
to learn and work in new ways. Students explained projects forced students to investigate or do research and each project had multiple components which also increased the level of challenge. Honors Math and Algebra did provide challenge at times, again due to the newness of the content being covered, but the challenge level was diminished when topics were repeated or instruction on a single topic extended over too long a time frame. Student A suggested teachers did not always understand when students found a concept to be challenging or not; the same amount of instructional time was often spent on both. The uniformity of instruction also presented students with a feeling that challenge was lacking. “Every day [we do] a sheet. And then the next day, we’ll do the same thing over again . . . We’ll have one day where we do notes and . . . one day where we do a sheet of paper,” explained student Q. “Even if it’s a different topic, it feels the same.”

Although Honors Language Arts students acknowledged teachers used different texts at times for the honors classes, overall they desired more complex texts in language arts. “You learn the concepts,” explained Student Q, “but they’re still kind of old concepts.” Students noted questions could have been tougher and force students to go more in depth in the texts being read. Three of the high school students mentioned they felt underprepared for their Honors Language Arts class at the freshman level because their junior high texts and text questions were not complex enough. Additionally, students frequently cited station work as being very basic and lacking in challenge. Station work included computer-based vocabulary and grammar exercises, as well as small writing exercises, which students noted did not take them very long to finish. These station activities were the same at both the honors and regular levels of class. Students lamented a lack of projects in language arts class and stated most class time was spent reading texts with little complexity or answering questions which did not require complex thought.
Instructional strategies. Students were able to assess their learning and acknowledge that instructional techniques had a bearing on the level of challenge perceived by students. “I think the strategies are the most challenging because a teacher, when they decide to teach something, the material could be really easy, but the way they teach it could have an impact on the way the students learn it” explained Student D. Although students did not have the academic vocabulary to identify the strategies in educational terminology, descriptions indicated students found an accelerated pace, cooperative learning structures, authentic learning assessments, and critical thinking to be conducive to providing academic challenge.

Every student interviewed acknowledged the benefits of working at an accelerated pace in increasing challenge. “I think that’s effective,” explained Student O:

We take too long on things. I feel like it takes an average person in my class a day or two to understand it . . . because first you have to get your mind used to it . . . and then the next day work on it, and then you’re like, “Oh! I get it!” When I got into [Honors], that’s what me and my mom talked about. That’s what it said. We’d be learning at an accelerated pace compared to the other classes. That’s what we were expecting.

The desire for an accelerated pace was especially true when students were being taught the same content or doing the same work as those students not in honors classes. Algebra students noticed this technique did occur in math class at times, explaining that while they had spent two or three weeks learning the Pythagorean Theorem the previous year in pre-Algebra, instruction was condensed to only a day or two in the Algebra class. Student J expressed the value of formative assessments in helping teachers understand where students were at the start in regard to a particular standard or concept “so [the teacher] could keep on going with . . . not exactly how we want to be taught, but at the pace that we need to be taught.”
Although most students determined an accelerated pace to be beneficial, three students cautioned about a possible downside. Student A advised that while quickening the pace is effective, “sometimes you want to slow down a little because you can’t do all that work. Plus you have six different classes that you have to juggle with; so, working fast sometimes works.” Student F admitted working faster can make students feel rushed and thereby commit more errors, but an accelerated pace “could help because it would make things more challenging.” Cooperative learning was identified by all students as an instructional strategy that could increase challenge. Student Q noted in a cooperative setting “you have more responsibility, so you don’t let down your group. You might do something more,” providing an extra level of challenge.

With cooperative grouping, some of the challenges were acknowledged to come from interpersonal relationships more than the content of the activity. Students conceded the challenges of balancing people’s opinions and skills. They also identified the benefit of differing opinions, where “you can see it from other perspectives. You can learn from them and they can learn from you, so it’ll possibly [make] you stronger” (Student J). Student H expressed the similar thought that:

It allows people to not just take control. You have to learn to work with other people, which is really important . . . And depending on what you want to do, it gets everyone involved and your ideas get spread around. Sometimes you have just one mindset, but when you work with other people you get other opinions and you can kind of think about [a topic] in a different way.

Students also acknowledged that when groups were too heterogeneous, rather than producing balance, gifted students were left feeling frustrated as the bulk of the work fell to
them. “I kind of get frustrated when I am having to babysit the kids who don’t understand,” explained Student M. “So I think it helps working with others for experience, but I think when we’re out in groups of people who have their own ideas and have a higher level of intelligence, it helps a lot more.” Even in situations where students felt unequally paired, students identified a positive aspect of the challenge. Cooperative grouping “is effective because you’re going to have to learn to work with people you don’t like in jobs … There are going to be those people and it is going to be really frustrating because they just don’t do their work. But it is going to prepare [us] for the real world” (Student I).

One expressed benefit of cooperative learning was its usefulness in preparing students for their future. A desire to be prepared for the real world, beyond merely the educational setting, indicated students desired authentic learning experiences and assessments. “If I’m going to use it in my real life, I pay attention more than I would if it’s something I know I’m never going to use,” explained Student C. Although students did not express it as authentic learning, the terms “real world” were noted over and over in the coding.

- “If you incorporate something like making a product or selling a product, that’s something we could take on our experience to high school and college and later in the real world.” (Student A)
- “Sometimes teachers in classes, you’re not getting prepared for the real world. You’re just kind of getting by and just trying to get the work done. But for GATE, you had to think about how this would really affect your life outside of school.” (Student H).
- “I think [authentic assessment] is effective because they will prepare the student for what their job can be. Or, if they really liked that assignment, they can know they
might want to be that in the real world when they grow up, so they can work on that.”
(Student I)

• “Doing the real world [activities] has really helped us be more ready for things that
would actually matter.” (Student F)
• “It does give us experience we can use in real life.” (Student M)
• “It gives you experience for the real world.” (Student N)
• “The real world stuff kind of made me think I have to pay attention to everything we
do because if you really want it to, it could apply to [the] real world.” (Student H)
• “It’s going to prepare them for life in the real world.” (Student I)

Even when students did not mention the words “real world,” they frequently cited a skill or activity they viewed as something important in a job or career in the future:

• “GATE really prepares you for later on in life because you do stuff where you
develop skills and you learn what you could do.” (Student Q)
• Authentic assessment activities “give you a . . . feel of how real people do it. And it’s
fun. You get to see how the stages work, like what you do first, what you do second,
and that helps you visualize it and see how it’s really done.” (Student L).
• Authentic assessment activities are “very effective actually because most people . . .
that don’t have GATE, they go into life and they don’t know how to do things for
themselves . . . But in reality you have to do taxes, you have to go shopping . . . you
have to do these things for yourself. And if you’ve been in GATE, you can do it
because you’re like, ‘Oh, I know this now. I will use this for later-in-life kinds of
things.” (Student R)
• “Having a lot of people present is very good because otherwise they’d just be super nervous every time they go up [to present]. A lot of times, if you’re in a business, you have to sell [an idea] by presenting it in front of other people.” (Student E).

Participating in authentic assessment activities that involved creating products, presenting to a class or panel of community members, and acting in the role of a particular profession to solve a problem engaged students who understood this could be applied to their future life and career. Some of the challenge came from being in a situation they were unused to (as in presenting) as well as from being exposed to unfamiliar content and having to understand its complexities in order to solve a problem. Student P warned that “if [teachers] don’t do that, it’s shielding you from what’s actually going to happen and it doesn’t help you in the long run.”

Also tying in with authentic learning assessments and experiences, is student appreciation for the challenges afforded by critical thinking activities. Not only did such activities force students to think more deeply, it also helped students understand that in the real world there is often not merely one set answer to a problem. This did cause frustration for those students placing extra emphasis on a grade because they feared they might not get the “right” answer. In contrast, Student C admitted “that just helped me with a lot of things because I always thought there was just one answer . . . It helped me look at things differently to come up with different outcomes.” Student A advised teachers not to have too many critical thinking activities or problems right in a row because “you should have some answers that come easy to you or you have to think for it a little” as a means of boosting confidence.

One aspect of critical thinking gifted students really noted was how it forced students to “think outside the box,” an aspect they had previously noted as a component of challenge. “If you give a critical thinking activity, then the student gets to figure it out and see how it works for
them… Instead of just the techniques the teacher uses, they can get a better understanding in
more ways” (Student I). Student L concurred, explaining critical thinking and thinking outside
the box “helps you learn in the future. It helps you think in new ways instead of just thinking
straight on.” In all, critical thinking was perceived as a way to allow students to think more
independently and not rely on the teacher. It engaged creativity, independent thinking, and
provided a higher interest level.

Classroom observations showed many of these techniques to be used in the GATE class.
Student interviews indicated that even if not witnessed at the time of observation, each of these
techniques was used on a regular basis. Working at an accelerated pace was observed in the
math classes. None of the other techniques were observed during language arts classroom
observations.

The impact of these instructional strategies will be explored more fully in Chapter 5.

*Teacher expectations.* When students were asked to identify what was most critical to
creating a challenging educational environment, students often answered that increased
complexity of content or a particular instructional method added the most. Though students did
not specifically identify it as the most crucial, student responses indicated they actually felt
teacher expectations to be the most crucial. Teachers should “expect a lot more from us because
obviously we are titled that for a reason, so they shouldn’t be expecting what they expect with
other classes,” observed Student J. Student J was not the only interviewee to mention the
importance of expectations. In fact, each student interviewed used the word expectations (or a
phrase of equivalent meaning) and understood that expectations were higher—or should be—in
honors-level classes.
• “I think the best way to increase the challenge is increasing the expectations . . .
  Increasing the expectations means that the student will learn more and increase their
  own knowledge.” (Student O)

• “I feel like those honors teachers don’t grade as hard as they should. They don’t
  expect as much as they should.” (Student B)

• “Academic challenge is really involving the student and then expecting them to go
  above and beyond.” (Student M).

• “[Teachers] should expect complete sentences, turning in your work on time . . .
  always going that extra step on a problem or worksheet.” (Student A)

• “Don’t expect me to work as hard as I can if you’re not going to expect me to.”
  (Student N)

• “Because I’m at a higher level . . . [the teacher] should grade me harder.” (Student G)

Students most consistently felt the challenge of increased expectations in GATE class. “I
think a teacher has a lot of impact on how hard a class is,” noted Student F, “because I know
[GATE] class was always harder than a lot of other classes, which I think has a lot to do with the
  teaching and the grading.” Teacher expectations were important in increasing challenge through
  grading of assignments, as well as students feeling compelled to go the extra step, answering
  with depth, and looking for and correcting details. Students lamented the fact teachers seemed
  not to grade their papers. A few students speculated teachers saw the name of a gifted student at
  the top of a paper and assumed it would be done well, so teachers did not read through or correct
  the work as intensively. Several mentioned reviewing their own work and finding errors
  teachers had not noted or taken points away for.
Teacher expectations were perceived to increase the level of challenge and make students feel they were actually earning the grade. Students noted in language arts and math they could do the homework in a very brief period of time, or right before class, and still earn an A. Students felt and understood the impact a lack of expectations could have on students and the classroom environment.

The teachers will teach us something, but they only expect what they taught. They don’t expect more. And I feel like if teachers expect more from us than what they taught us, then it will definitely challenge students more. It will challenge them to do more because the teacher expects it and then [they will think], “Okay, I gotta do more work because Miss So-and-So wants it more like this. (Student G)

**Decreasing challenge.** Students acknowledged there were specific elements of instruction which detracted from a challenging learning environment. Student responses were coded under three main themes: teacher instruction, district or school requirements, and instructional techniques.

*Teacher instruction.* A common complaint among interviewees regarded teacher-student interaction throughout instruction. Students noted they were often read to in language arts, with little independent work. This was witnessed during the eighth grade classroom observations. On both occasions, the teacher read the text in its entirety to the students, pausing at times to ask comprehension questions. Student interview comments noted this as common practice, not an aberration singly noted during a random observation. Seventh grade language arts instruction provided more independent student practice as students were reading individually while the teacher provided independent feedback on a previous writing assignment. In Algebra, much of the lesson was conducted as direct instruction with the teacher lecturing on quadratic equations.
while students took notes. Students did work with partners briefly during the guided practice, but there was little teacher-student interaction. In seventh grade math, student-to-student interaction was observed, but most of the period was taught as a whole-class lecture. Observations in GATE showed the teacher provided a brief introduction and instructions at the start of class, and then students were to work individually on a project. Even though work was independent, peer interaction occurred to discuss approaches to the assignment, to bounce ideas off each other, and to provide suggestions. The teacher consistently conferred with students to check progress and answer questions.

Gifted students bemoaned the lack of independence afforded them at most times in their classroom experience. Students observed that teachers who rely on lecture or PowerPoints prevent them from using their mind to think creatively or critically, since they are just being told what to do. The independent work that did occur usually focused around stations with basic skills (in language arts) or solving a worksheet of math problems. GATE was an exception; students felt:

[The teacher] kind of wanted us to be independent on it [in GATE]. And then if we had questions, she would help us on it. But she focused more on us doing it ourselves, which is a bit more challenging because I was always used to teachers helping us a lot. She kind of made us go on our own, which helps now. [In math,] he made it really simple for us and he helped us a lot, so it wasn’t that challenging. (Student C)

Additionally, students desired interaction with the teacher on a more personal basis. “I feel like we never interact with the teachers,” lamented Student G. “It’s not that [the teacher] doesn’t want to talk to us, she’s just more focused on teaching.” Students complained that teachers often do not answer their questions or do not call on them, so they feel passed over.
Other students felt teachers may not know the answer to the question a gifted student will ask, so they choose not to call on them.

*District/school requirements.* Gifted students acknowledged the lack of challenge offered in a class may not solely be the fault of the teacher. A district and school places requirements on teachers that must be followed. This may include the combination of students who are placed in the class, the standards that are taught, or the assessments that are used.

At times, students felt the concept of an honors class was more of a label than a reality. Students noted children were allowed “into the challenging classes and it would slow everyone down” (Student F). Because of that, teachers were not able to fully teach the classes at an honors level. A student who rated his math class at a challenge level of six, just slightly above the middle (on a scale of one to ten), acknowledged, “A lot of kids in my class would rate math at a 10, so I think [honors class] is not what it should be, but I feel like it’s what it has to be” (Student M).

Students noted time and time again that the repetition of content was the single most detrimental aspect of classroom instruction in taking away challenge. “I have had challenge in my classes, but there are some topics that I already know or I got quicker, so then they’ll keep going over it and it won’t be a challenge anymore,” complained Student J. Student I concurred, adding that “what takes away from the challenge is that we’ll learn about new things, but we’ll still end up just doing the same thing [with it].”

Standards for each grade are prescribed by the state. Additionally, the district has made curriculum calendars and calendared out assessments by which time a set of standards must be taught. However, students noted that in both math and language arts, standards were repeated in a way that made them feel as if they were learning the exact same thing. This was especially true
in language arts. “Each year they repeat the same stuff. And it gets really boring. We learn it over and over again, so it doesn’t really feel like an honors class because we are learning the same stuff we did last year” (Student G). Students mentioned feeling they had been taught the exact same thing the prior year, making the current year an easy repetition of the prior year. “She’s probably told to do this, obviously by the district,” rationalized Student J, “but they should see what we have already learned so we can learn something new and more challenging.

GATE was an exception to the complaints regarding repetition. Students noted that each year throughout their three years at the middle school the curriculum and activities were never repeated. “What adds more challenge [is] the things we do are not like the regular things that you do in any other classes. They’re newer. So when I’m brought into something newer, it’s kind of harder because I get the concept of it, but then I’ll end up working for it” (Student J). Even when students may have been repeating a concept or standard from another class, it was presented in a new way whereby students “have to input stuff that we have learned from our other classes into what we are to learn here [in GATE]” (Student E), which made it more challenging. The GATE class does not have a required set of standards or assessments which must be covered.

*Instructional techniques.* Just as instructional techniques were considered a main component in providing academic challenge, other instructional techniques were seen as equally detrimental. Students repeatedly mentioned that math work was largely based on worksheets and language arts combined worksheets with station work. “Don’t give us worksheets!” proclaimed Student F. Students perceived worksheets as simplistic and a way to keep students busy. “If they actually made us work, rather than ‘Here’s a worksheet. Fill it out.’ But no, we just worksheet,” complained Student E. One student noted that often when given worksheets,
I’ll be the first one completed. And I’ll check with other people who are done and I’ll have it all done and correct it with each other and I’ll turn it in and get a 100%.

Everything I get back is about 100% . . . And in language arts we do station work that goes over everything that we have learned that week. We take notes and I get all the stuff done super-fast. I feel like I just don’t have to work for the A. (Student G)

Rather than relying on worksheets and stations, students recommended teachers take “the curriculum that needs to be taught . . . and kind of think, how can I elaborate on this?” (Student P). More projects and hands-on activities were suggested as ways to extend the given curriculum in a more meaningful way.

**Appropriate challenge for next-level preparedness.** All students interviewed expressed a desire for a challenging academic environment. However, students expressed dissatisfaction with the level of challenge afforded by their honors-level classes. Students articulated that though not challenged, they felt an overall preparedness for the next step(s) in their education. Preparedness was an important component because gifted students saw their current education as preparation for their future levels of schooling and the work world.

I would rather have to work for things. [In some classes], I can do something and just get an A, even if I don’t try. And I don’t learn anything, which I don’t necessarily like because I get bored when I just don’t learn anything. Especially in English or math, I want to be challenged so I can actually learn something so I can take it with me. (Student F)

Several of the students had siblings currently or recently in high school. Based on conversations with siblings regarding the level of instruction at the high school stage, students felt what they were currently learning, and the environment in which they were taught, were at
an acceptable level to ensure success in high school. Ninth grade students concurred overall. At the time of the interviews they had just completed the first semester of their freshman year. When asked if they felt their honors-level classes at the middle school level had adequately prepared them for high school, most agreed the work had. “I am not behind on anything now, so I feel like I’ve learned everything I’ve needed to up until this point,” acknowledged Student B.

Dissent was found in the area of language arts. Several students noted they wished the texts had been more complex and the writing standards higher so they would have been better prepared for Honors English at the high school level.

**Presentation of the Data and Results**

This study was driven by a desire to determine whether gifted programming meets the desires and needs of gifted students. With that goal in mind, students were asked to discuss their experience as a gifted middle schooler, especially in regard to the level of challenge they perceived. Research sub-questions focused on the elements which most added to or detracted from a challenging educational experience. Findings have been organized according to application to research questions.

**Research question: How do gifted students experience the gifted curriculum?** Gifted students were asked to consider how they experience the gifted curriculum. Students unanimously responded that while they do desire feeling challenged by their classes, overall they experience a lack of challenge in their honors level classes. Students also do not feel adequately understood by those responsible for their instruction.

**Lack of challenge.** Challenge was a desired component of education for the gifted students interviewed. Although challenge can be defined in many ways (Appendix D), and certainly was by the students, definitions were themed around certain key words: work that is
“harder;” something that feels like you have to “work” at it; classes or work that “push” you, make you “think,” or “expands” your mind.

Students unanimously admitted a desire for a more challenging curriculum and educational experience than they were currently experiencing. Students noted a challenging curriculum is beneficial. Coded themes indicated students believed challenge was beneficial because it enabled students to get smarter, promoted engagement, prepared students for future education and careers, supported student goals, and simply because learning was fun (Appendix G).

While challenge was a desired component, for which students could identify clear benefits, students also admitted challenge was a component of education they had not felt to any great degree throughout their entire educational experience. The two students who had skipped a grade admitted to feeling a level of challenge at first when they were accelerated a grade level. However, that feeling faded as they caught up to their new peers and the new content being taught. Both students admitted that “catching up” did not take very long. Student L admitted to wishing more than one grade had been skipped “because even now, the stuff is boring . . . and I don’t want to do it.” Only two students acknowledged ever feeling overly challenged.

Students rated their experiences with the level of challenge in each of their honors classes (Appendix E). Scores between zero and four correlated with student comments that reflected a noticeable lack of challenge, classes in which students often felt bored and unengaged. Scores between five and seven correlated with student comments that indicated feeling challenged at times, though not consistently. Scores of eight to 10 denoted classes where students felt consistently challenged and engaged at an appropriate level. Keeping in mind that all classes are determined to be honors-level classes, half the students found Honors Language Arts to be
extremely lacking in challenge, with students conceding to never feeling challenged in that class. Only three students found their Honors Math/Algebra to be highly lacking in challenge, with most students admitting to feeling challenged at times by their math class. Fifteen students found their GATE class to be consistently challenging.

When looking at the data, a trend appeared. Using the student rankings, one can evaluate in which classes students felt most challenged (Appendix F). Data clearly noted students felt most challenged in GATE class. Even though three students scored their GATE class in the middle range, denoting a perception of challenge at times but not consistently, GATE was still the most challenging class, with a ranking two, three, or four points higher than their next most challenging class. More students felt challenged in their Honors Math/Algebra class than they did in their Honors Language Arts class. Eleven students rated their math class as the second-most challenging, while seven rated their language arts class in second position. Differences were found between grade levels at this point of analysis. All seventh grade students found language arts class to be more challenging than math. In contrast, only two eighth grade students found language arts more challenging than math.

Although students did not always feel challenged in their honors-level classes, there was still the sense students appreciated having these classes grouped in such a manner. “I really like to have [honors] classes because the kids want to learn and aren’t just there because they have to. It gives them an opportunity to really learn and improve their education,” Student J rationalized. Student I stated, “I think it is good to have GATE class because even though there are [Honors] math and language arts, not all the math and language arts classes push, so GATE really, really does.” Gifted students found the homogeneous nature of such classes beneficial, even though the
honors classes was not completely populated by gifted students and the GATE class was composed of students from three different grade levels.

**Lack of understanding.** A second component of students describing their experience with giftedness at the middle school level was a perception of not being understood. At times, this was expressed in regard to student relationships with peers. “In GATE, we do all this unique stuff,” explained Student L, “and I don’t think they realize what all we did in there. They would just think, ‘Oh yeah, they do harder work in there.’ But it was more than that.” Students felt peers did interact with them differently or single them out at times because they were labeled as gifted. “I think every school should have an honors class,” explained Student M, “but I feel that creates a rift between us where there are a lot of kids who do not enjoy talking to [gifted students] because they kind of consider us the pedigree kind of people.” Students also noted giftedness meant other students relied on them for answers or to bear the weight in completing group activities. While most of the students interviewed tended to hang out with students in their honors classes, others acknowledged they had friends who were not in the honors classes.

Perhaps even more importantly for the purposes of this study was the student perception that teachers did not understand giftedness. This included the teachers who were teaching the honors-level classes. Student O summed it up well, noting teachers “understand we’re smarter, but they don’t understand how to accommodate us.” Student A noted teachers are just “assigned to the smart people,” but he could tell the teacher was not used to having smart kids in her class, based on the basic level of work assigned. Another student admitted the teachers “were teaching everyone the same thing regardless of whether they want something more” (Student B). Other students conceded not even knowing until sometime later in the year they had been placed in an Honors class upon entering sixth grade.
Some students acknowledged the difficulty teachers may face. “Some teachers, if they know a student is gifted, they’ll kind of make it obvious. [The teacher] will kind of push us and give us different materials, but other teachers kind of just treat all the students the same, gifted or not” (Student D). However, students disclosed that throughout their schooling, the majority of teachers did not seem to understand what it meant to be a gifted child. Frequent complaints regarding being misunderstood involved teachers who were frustrated by the level and amount of student questions and teachers who only wanted the minimum asked for. Student A clarified:

I don’t think necessarily all teachers understand what a gifted kid is like . . . All gifted kids, they think different than other kids . . . Gifted kids are used to these hard, challenging things and they go above and beyond. Some teachers don’t want that. But sometimes you have to accept people doing more than what you’re asked to.

Other students explained teachers ignored their questions. “[We] ask so many questions, and sometimes the teacher can’t answer because they don’t know. So you just need to prepare yourself for every single question. Put yourself into different perspectives, like if I was just learning this, what questions would I ask?” Student P advised.

When students perceived a teacher as being more understanding of giftedness they noted the teacher’s intelligence level, whether the teacher was identified as gifted, and the fact that more years of experience had better exposed them to a greater number of gifted students and what these students needed. When students were asked what proof would show them a teacher did understand what gifted kids needed and wanted, the most common answers involved providing more challenging work, increased grading expectations, and the requirement to go to more depth in content and answers.
**Research sub-question one: What do gifted middle school students perceive as the methods or elements contributing to a challenging educational experience?** Round one interviews focused on gifted students’ experience at the middle school level from more of an overall perspective. Round two questions asked students to delve more deeply into their answers regarding the level of challenge they felt. Specifically, they were asked to identify those components of their educational experience that had most contributed to the perception of an increased level of challenge. Answers were thematically coded under three main categories: teacher expectations, instructional strategies, and depth of content.

**Teacher expectations.** Students understood that teacher expectations influenced the level of challenge experienced in class. Student N observed, “I think [what most provides challenge] is what the teacher expects of the students. If you have that set level of what the teacher expects, the students will know how much they have to and don’t have to do.” Many student responses fell under the theme of grading. Students *desired* to see corrections made on their papers and assignments. They felt corrections allowed students to see what mistakes were made in order to improve and make future corrections. Additionally, students perceived that teachers were paying attention to the effort, which increased the opinion students had earned their grade. Gifted students also expressed the belief it was okay for teacher to have different expectations for the gifted students or to grade them harder. “[Teachers should] expect a lot more from us because obviously we are titled that for a reason, so they shouldn’t be expecting what they expect with other classes,” Student J rationalized.

GATE was seen as challenging partly because the teacher consistently had high expectations. “I can be lazy in every other class and get an A,” explained Student A, “but I can’t do that in GATE.” Another student phrased it this way:
Would you rather be the best player on a bad team, or the worst player on a really good team? I think GATE is [like] the worst player on a really good team idea, where you are around people at the same level of intelligence, so they are going to force you to try harder. I think that really helps with [challenge]. (Student M)

Higher expectations came out in the grading of work, in the depth of analysis required in answers, and in the involvement of ideas and concepts required for projects and tasks. “We are expected to know what to do and we have to meet with the expectations, otherwise we can get behind” noted Student N. This correlates with data indicating all students perceived their GATE class to be the most challenging class they had.

Although the Honors Language Arts and Honors Math classes were designed to be taught at a higher level than the non-honors classes, students disagreed regarding the extent to which this actually occurred. “I feel like our teacher… knows we’re in the gifted class, like he knows, but he still treats us the same as all the other kids” (Student R). In language arts, students noted writing expectations and lengths of essays were increased, homework may have different components, and students might be partnered in non-honors classes to make the work easier. Other students disagreed, describing how when talking with peers in other classes, the content and activities were the same.

**Instructional strategies.** Student responses indicated instructional activities were a significant component of a challenging curriculum. Students discussed five instructional strategies or tools in regard to the level of challenge they provided: cooperative grouping activities, authentic learning and assessment, critical thinking, increased pacing, and rubrics. Some students mentioned these techniques on their own, while others were asked specifically about them after other students had brought the topic up. In some cases, students described the
activity rather than mentioning it by name or by the standard educational term. For example, students may have used the term “real-world” or noted an activity was “like what you would do in a job” instead of using the term “authentic learning and assessment.” However, all similar responses were coded under the same theme.

Appendix G indicates students felt these five techniques increased the level of challenge in the classroom. Some students noted both a positive and a negative side to the use of the instructional strategies, or explained that challenge depended on the implementation of the method. This disparity in answers was mostly concentrated in the areas of cooperative grouping, accelerated pacing, and the use of rubrics.

Cooperative grouping was considered both beneficial and detrimental. In classes where students were matched with students of similar educational levels, cooperative grouping was a positive experience. However, when students were not matched with peers, students noted challenge turned into frustration when gifted students ended up assuming the bulk of the responsibility for the assignment. Student O acknowledged:

They may not be the same intellect as me, but if they will work hard, then I am fine with them in my group. Sometimes I know you need a smarter kid and a less [smart kid] grouped together because that’s how it works. But if you have a big group with you being the sole component and the other ones all working below, then it’s just kind of like I’m doing everything.

Students found pros and cons with accelerated pacing. Working at a faster pace forced students to pay better attention and work to acknowledge content faster. An accelerated pace encouraged students to work on time management skills and was seen as better preparing students for future coursework in high school and beyond. Contrasting opinions were spoken by
those who understood moving too quickly can leave students behind and that with a full load of honors classes, a faster pace left some feeling a bit rushed and not fully competent in a skill before moving on. This was especially felt in math, where mastering skills is seen as a building block to the next step.

Finally, students evaluated rubrics as both a positive and negative tool. Many students appreciated the structure a rubric provided in explicating exactly what was expected on an assignment. Gifted students admitted to often only looking at the highest-scoring category on a rubric and immediately beginning to work towards the standards of the criteria. Other students felt a rubric could be limiting as it narrowed the scope of expected content too much or could stifle expressions of creativity if too narrowly constructed. One felt rubrics made it “too easy” to get the high grade when a teacher explained exactly what was wanted.

**Depth of content.** Depth of content was a third important coded theme regarding increasing academic challenge. When content was more complex or teachers asked students to engage with the text in more complex ways, students felt challenged. Students in high school noted junior high texts did not prepare them for high school as much as they had hoped. “For freshman year, we were reading Shakespeare right off the bat. But in middle school, I don’t remember ever reading anything like that” (Student H). In challenging classes, students noted teachers required detail, that all parts of a question were actually answered, and that one must truly put forth effort. “In GATE, we could have the right answer, but we were expected to go into more detail,” making it more challenging, noted Student B.

Longer projects which had more components and required students to think cross-curricularly provided a more challenging depth.
In GATE, [we were given] work part by part and it progressively got bigger or harder, so we usually had an intro and then got deeper. And then eventually, it amounted to a huge project. I feel like that definitely helped . . . You [need to] include different parts of people. Sometimes teachers kind of focus on [one element] . . . But you have to think. You have to feel stuff. You have to go research. You have so many different elements. But sometimes teachers kind of focus on one thing and then you’re done. (Student H)

Students often complained about the use of worksheets, but admitted if teachers asked more analytical questions on said worksheets, it could be challenging because it did not just mean looking for a single fact as an answer.

**Research sub-question two: What do gifted middle school students perceive as the methods or elements detracting from a challenging educational experience?** Although it is important to identify the components of an instructional program that add to the rigor experienced, it is equally important to determine which components detract from the experience. With that in mind, second round interview questions also asked students to identify the elements of their educational program which lessened the level of challenge they experienced. Student responses were coded under four main themes: repetition of content and a slow pace; teacher misunderstanding of giftedness; district and state policies; and a lack of instructional rigor.

**Repetition of content and slow pace.** Students noted content is often repeated and teachers cover content at too slow a pace. Repetition of content was particularly noticed in language arts classes. Common Core State Standards do essentially remain the same in language arts throughout the middle school grade band. Teachers are supposed to teach these standards with more complexity at each grade level, as well as use increasingly more challenging texts to do so. However, students noted in some cases teachers had used the exact same PowerPoint at
more than one grade level. Students also believed teachers belabored certain points or skills rather than assessing whether students had already mastered the concept so the class could move on. Student R explained that in language arts, “You learn the concepts, but they’re still kind of old concepts. We just went over tone and mood, which we also learned in sixth grade and even though it’s [Honors], we’re still going over that.”

A slow pace was noted more in regard to math classes. One student complained that teachers perhaps were focused on the students who still had not mastered a standard rather than helping the ones who had already mastered the standard to move on.

You have to make sure you learned [the content], but sometimes I feel like if someone teaches a subject for too long, or if someone goes over things too much, it’s like, ‘We got it!’ I feel like a faster pace is better because I learned it, I’m done; now go on to the next [topic]. (Student Q)

District and state policies. Policies put in place at the district or state level were seen as a detriment to providing a challenging curriculum at times. As noted regarding repeating content, standards are set by the state. Language arts standards do indeed repeat across the middle school band, with the idea that teachers increase complexity each year. Students noticed the repetition of standards. Student Q remembered going over tone, “which I’m pretty sure we learned at the sixth grade, and even though it’s [honors], we’re still going over it” in a method that is not much different despite now being in eighth grade. Student J commented she feels like “they don’t want you to get too far ahead. I understand that, but sometimes that makes it really easy because I already knew it from last year or the year before.” In contrast, several students noted that in an elective course such as GATE, without required state standards, students were
able to learn concepts and standards much earlier—eighth grade standards when they were still in sixth grade, or high school standards at the junior high level.

The school district created a curriculum calendar which paced out when specific standards were to be taught and when teachers were to move on. The calendar was to be followed for the purposes of testing and ensuring all standards had been covered. “[The teacher] does reteach us the stuff later on the next quarter,” explained Student R, “but we already know it. And I hear every kid like, ‘Uggh! Not this again! I already know this stuff!’ It’s because we do, but we have to [review].” A similar complaint was expressed by Student A, who noted whether students seem challenged by a mathematical concept or not, the class spent a week or two on it before moving on. The pace felt regulated and did not seem to change based on student achievement. Students understood the purpose behind district policies, but still expressed frustration with the outcomes on their educational experience. Student J rationalized it by stating “[the teacher] is probably told to do this, obviously by the district, but they should see what we already have learned so then we can learn something new and more challenging.”

**Teacher misunderstanding.** Giftedness not being understood by teachers was seen as a component which detracted from a challenging learning environment. Not a single student felt understood by the majority of his or her teachers. Student answers indicated rarely feeling understood or only feeling understood by the GATE teacher. Even when students felt a teacher might understand components of their giftedness, students felt most teachers were unable to meet the needs of the gifted. Students E and R both commented those teachers in the profession longer seemed to better comprehend what gifted students needed.

“I feel like we were just given work to give work,” explained Student P. “I feel that’s what most classes do. It’s not like getting more elaborate with [the assignment; it’s just giving us
work to do.” “Some teachers don’t want us to go above and beyond,” complained Student A as proof that teachers often did not understand the gifted student’s drive to learn and do more.

Students M and I appreciated that a few of their teachers “tried” to understand or to provide more complex work, even if the teacher did not succeed in developing lessons at an appropriate level. In contrast, Student R found a few teachers would challenge gifted students by finding their weaknesses and challenging the student specifically in that area. However, most students agreed with Student B who explained, “[The teachers] are teaching everyone the same thing regardless of whether [the students] want something more.”

If teachers did not understand the level at which students were beginning, this made it harder for teachers to then prepare curriculum that matched student levels and encouraged them to rise to the next level.

I feel they don’t understand what we need. We need more complex readings. That would . . . inform me more. And in math, I need and I want to know what the purpose of it is . . . . They understand we are smarter, but they don’t understand how to accommodate us.” (Student O)

This lack of understanding left students feeling bored, frustrated, and yearning for more.

**Lack of instructional rigor.** Teachers not understanding giftedness tied in with the perception of a lack of instructional rigor. Although students were all enrolled in honors-level classes, they did not necessarily feel the class was taught at an honors level or that their curriculum and expectations were any different from those in the non-honors classes. Student F explained, “It seemed like we were doing a lot of the same things as other kids. This was a lot easier for us compared to them. But I don’t know if [the teachers] would be able to pull us aside and have us do anything different.” Several students admitted they did not feel their work was
graded at the level they felt an honors-level class should be. At times, students admitted they did not necessarily want the grading expectations to increase because receiving a high score is very important to them. However, these same students admitted these higher expectations would benefit them in high school and college preparedness. Student H cautioned that “here [in high school], you see people drop out of honors that were in honors all throughout [middle school] because they just weren’t prepared for it” (Student H). Increasing rigor and expectations increased the perception of challenge, whereas a lack of rigor detracted from challenge.

Summary

This study sought to understand gifted students’ perceptions of the gifted curriculum at the middle school level. A phenomenological study was conducted, using observation and responsive interviewing techniques, to get at the essence of the gifted experience. Interviews were transcribed and then coded based on emerging themes.

Data indicated students desired a challenging educational curriculum because of its ability to increase levels of intelligence, engage their minds, and prepare them for their future. Despite that desire, all students indicated they felt the level of challenge to be lacking overall, even within their honors-level classes. Student responses indicated most students found GATE class to be challenging, Honors Math/Algebra to be challenging at times, and Honors Language Arts to be lacking in challenge at most times. Students indicated they have never felt overly challenged and students believed teachers did not adequately understand the nature of giftedness, what gifted students desired from instruction, or how to meet their needs.

In addition to understanding the gifted experience at the middle school level, students were asked to identify which components most added to or detracted from experiencing challenge in honors-level classes. Coding of student responses indicated teacher expectations,
instructional strategies, and depth of content most added to the level of challenge experienced in the classroom. In contrast, coded themes showed slow pacing and repetition of content, district and state policies, teacher misunderstanding, and lack of instructional rigor most hindered the creation of a challenging learning environment.

Chapter Five will further analyze the data in regard to its implications for gifted students and gifted instruction. Results will be summarized and discussed. Specific components which add to or detract from the level of challenge will be discussed in relation to the prevailing literature. Limitations will be clarified and the implications of the study on future practice will be explained.
Chapter 5: Discussion and Conclusion

At the average American school, children will sit at their desks for six hours a day, 180 days a year, for thirteen years, whether they learn anything besides habits of obedience or not. (DeLisle, 2014, p. 161)

Introduction to the Discussion and Conclusion

The study was conducted to determine student perceptions regarding the level of challenge felt in middle school honors-level courses. Eighteen gifted students participated in the study, during which students were observed in honors-level math and language arts classes, as well as in a gifted elective class. Along with classroom observations, all students were interviewed regarding the perception of the level of challenge afforded by each of the honors level classes. In addition to determining the level of challenge students perceived, interview questions were designed to focus on the elements of instruction most adding to or detracting from the level of challenge perceived by the students.

Those who study the gifted often note a lack of challenge in academic programming for such students (Adams-Byers et al., 2004; Davidson & Davidson, 2004; DeLisle, 2014; Young & Balli, 2014). Much of the literature regarding the gifted focuses on those at the elementary or high school levels, leaving out what many consider the critical years of middle school (Barnes & Urbanowski, 2014; Lines, 1994; Lounsbury, 1992; Moon et al., 2003). In this chapter, I will evaluate the findings of a research study conducted with gifted middle schoolers in relation to current literature pertaining to the level of challenge gifted students both need and desire. Additionally, specific instructional strategies will be examined in light of the data collected and the findings of other research. The limitations of the research study will be discussed.
Additionally, the study will be evaluated in regard to the applicability of the research on practice, policy, and theory, and recommendations made for further research.

Summary of Results

The purpose of this phenomenological study was to use student perceptions to gain insight to the level of challenge felt in a middle school honors program. According to Creswell (2007), phenomenology is the method of choice when the goal is to understand the subjective experience as lived by participants and then construct meaning from that experience. Moustakas (1994) additionally noted phenomenology aims “to determine what an experience means for the persons who have had the experience . . . From the individual descriptions universal meanings are derived” (p. 13). In this study, the phenomenon examined was the perception of one school’s gifted students in regard to the level of challenge experienced in the honors-level classes. The study utilized a two-round responsive interviewing method to investigate the phenomenon of challenge as perceived by the gifted students.

Beyond merely identifying whether challenge was perceived, the study was used to determine which specific components of the educational program most contributed to or detracted from a rigorous learning environment. Students were asked the guiding research question, “How do students experience the gifted curriculum?” Two further sub-questions were asked of students in order to delve deeper into the reasons behind student perceptions: “What do gifted middle school students perceive as the methods or elements contributing to a challenging educational experience?” and “What do gifted middle school students perceive as the methods or elements detracting from a challenging educational experience?”

From the literature, one may conclude gifted students are not challenged by the level of academic rigor in their classes (Davidson & Davidson, 2004; DeLisle, 2014; Hertzog, 2005).
The findings of this study confirmed that assertion, with all students stating they rarely felt challenged. Gifted student perceptions also confirmed the use of specific instructional methods as a means by which to provide a more challenging academic environment, thereby supporting the literature. These methods or strategies included critical thinking activities, authentic experiences and assessments, and homogeneous learning opportunities.

Eighteen seventh, eighth, and ninth grade students were interviewed regarding their middle school gifted experience, using a process of focus groups, one-on-one interviews, and responsive interviewing techniques. Students were also observed in their honors-level classes. Interviews were transcribed and an evaluative coding method was used to determine the educational components which added to or detracted from students perceiving challenge in the classroom.

The data led to several findings. All gifted students indicated a desire for academic challenge. Academic challenge was important for gifted students because students felt challenge made students smarter, engaged students as participants in the educational process, prepared students for future education and careers, helped students achieve goals, and simply because challenge made learning fun. Despite desiring challenge, students indicated they rarely felt challenged by the instruction in their classes. GATE class was a notable exception, with most students acknowledging feeling challenged by the GATE class at various times. Classes and activities which provided a more challenging experience were also indicated by students. Challenge was increased when students were engaged in activities and instruction involving critical thinking, authentic learning and assessments, accelerated pacing, and homogeneous grouping. Challenge decreased with the absence of such instructional methods. Additionally,
students expressed the feeling teachers did not understand what gifted students needed or how to address those needs.

**Discussion of the Results**

Three research questions were addressed in this study. Students were asked to describe how they experienced the gifted curriculum. Answers highlighted the fact students do not feel challenged, yet would like to be. In the two sub-questions, students were asked to determine the methods or elements contributing to or detracting from experiencing challenge in their classes. The findings, in relation to the research questions asked, are discussed in the following sections.

**Finding #1: Gifted students desire to be challenged.** Students in the research study overwhelmingly articulated a desire to be challenged, with 100% of those interviewed expressing this sentiment. Students desired to be challenged for a variety of reasons. These reasons included a desire for increased intelligence, wishing to feel engaged in learning, feeling prepared for future education or jobs, accomplishing goals, and for the simple fact that learning is fun.

Two students summarized this yearning well. Student F explained:

> I would rather have to work for things. I have a class that is super-easy. I can . . . just get an A, even if I don’t try. And I don’t learn anything, which I don’t necessarily like because I get bored and I don’t learn anything. Especially in English and math I *want* to be challenged so I can actually learn something and take it somewhere [in the future] with me.

Student M similarly noted:

> Personally, I enjoy academic challenge, just because there’s something fun about not knowing what’s going to happen and something fun about walking into class and I’m
actually going to have to try on something. It gets you involved in the class and not just sitting there or even falling asleep. It’s just a lot better.

The gifted students in this study are not alone in expressing a desire to be challenged. Clementson and Wegner (1998) noted high-ability high school students who were asked what they would change about their school asked for a challenging curriculum and stimulating instruction. In a more recent study, Young & Balli (2014) found “students indicated their frustration with sitting through lessons they had already mastered along with enduring the regular disruptions in the classroom from low-achieving students” (p. 243). This research study found students hold similar beliefs at the middle school level, as well.

At the middle school level, students are experiencing many changes which may distract from their attention. Dr. Christine Deitz, associate director of the Jodie Mahoney Center for Gifted Education, explained “keeping advanced students engaged and making learning gains through the middle school years is critical to preparing them for a bright future” (Faller, 2017, para. 5). Especially in the midst of such physical, social, and emotional turmoil, middle school students seek a purpose for their education. A student who can comment that, “If I can zone out the entire class and still get A’s and B’s, I think it’s a little too easy” (Student E), is certainly in need of a more challenging environment that engages his or her attention. Fredricks et al. (2010) sampled gifted students who found the regular lack of challenge in many of their classes “dampened their interest” with a “curriculum that was uninteresting and not relevant to their lives” (p. 54). Student J explained, “There are assignments that have made me frustrated about work, but it’s really fun at the same time because you’re really testing everything. You have to add more detail and depth into what you’re doing. But I like it!” A challenging curriculum provided a reason to learn, an aspect of learning which gifted students appreciated. Challenge
increased student engagement, helped students set and accomplish goals, prepared students for future schooling or careers, increased intelligence, and was seen as providing an element of fun.

**Finding #2: Gifted students do not feel challenged.** Students in the research study admitted that throughout their education, they have not felt challenged. This was true even in regard to much of the academic programming designed to be at the honors level. The school site had made the effort to create honors-level language arts and math classes, in addition to offering a GATE elective class. However, student perceptions indicated challenge was still lacking in most courses.

Because students did not feel this subjective element called “challenge,” it is important to understand what students meant by that term. Student M summarized it this way: “Academic challenge is really involving the student and then expecting them to go above and beyond. And then if they don’t, push[ing] them to the point where they will go beyond.” Although many students did not feel challenged by the language arts and math classes, students felt significantly different about their GATE elective course. “GATE’s not hard, it’s challenging, if that makes sense,” explained Student G. “Hard is like you haven’t learned it and you’re not able to do it. Challenging is like you’ve learned the basics of it and you have to figure out the advanced stuff.”

“Boredom” was a high-frequency word in student interviews. Works by Moon et al. (2003), Young and Balli (2014), Davidson and Davidson (2004), and DeLisle (2014) also supported the premise that gifted students often find themselves bored by the instruction they receive. Gallagher et al. (1997) noted gifted students frequently found curriculum in their high school classes to be “a crushing bore” (p. 132). Students in the study reported the ability to complete assignments in five minutes and still get an A or brought up the amount of time they
had in class to read their own personal books because work had been completed so quickly and they were waiting for other students to finish.

Students almost never felt overly challenged. When students did admit to this, it usually involved a component of time management as the challenging factor rather than the content or complexity of an assignment. All students acknowledged feeling most challenged by the GATE class. Reasons for the increased perception of challenge in GATE will be analyzed in a further section.

Finding #3: Gifted students do not feel understood by their teachers. Gifted students in the study articulated that most teachers did not seem to understand giftedness. As Student N noted, “They (teachers) don’t really see most students out [individually]; they look at them more as a whole.” Seeing students as a whole is more convenient and creates an easier approach, but does not service the needs of diverse learners in a class. Additionally, many students noted when teachers did not look at a class as a whole, the focus was turned to those students who were falling behind or had not yet mastered a concept. An in-depth study by Loveless (2008), looking at survey results from 900 third through twelfth grade teachers, found 81% of teachers prioritized the needs of struggling students who received “dramatically more attention” than did other students. Manning et al. (2010) concurred, explaining teachers “are in a constant state of review, remediating for students that are weak. Higher-achieving students are lost in the shuffle and bored out of their minds” (p. 145), after studying general education teacher practices with gifted students.

All math and language arts teachers at the school site had been teaching for at least five years and, with the exception of one teacher, had been teaching the honors-level course for a minimum of three years. Therefore, none of the teachers were new to the concept of giftedness
or the needs of diverse learners. Each of these teachers taught two class periods of honors-level students and two class periods of non-honors. Additionally, all had agreed to teach the honors-level course at a differentiated, higher level than the other classes. Three out of four of the teachers had attended district training regarding teaching students at an honors level. Students acknowledged the math and language arts teachers did, at times, seem to appreciate certain students in the honors classes were gifted. This was conveyed by teachers providing a modified work load after absences, increased teacher expectations when grading their work, and higher work standards. However, the consistent analysis of students was that even if a teacher understood a student was gifted and had different educational needs, the teachers were unable or uncertain how to provide it.

The majority of students did feel better understood by the GATE teacher. The GATE teacher had been teaching for twenty years, had designed and run the gifted program for the past 13 years, and held a certificate in gifted education. Additionally, the GATE teacher had qualified as a gifted student in elementary school. Students indicated the GATE teacher’s extensive years of experience with students, intelligence level, and gifted qualification as a student all helped provide a better understanding of gifted student needs. Besides understanding gifted students from a personal perspective, students perceived the teacher’s high expectations for work, inclusion of varied student engagement strategies, and a focus on more depth and detail in instruction all showed awareness of what gifted students need. Similar results were found by Dolph (2009) in a study of curriculum and instructional approaches. In the Dolph (2009) study, conducted at the elementary school level, gifted resource teachers were more likely to employ critical thinking and engagement strategies than were teachers who taught gifted students in an inclusive classroom setting. Dolph (2009) posited differences could be attributed to the gifted
education teachers receiving more professional development in gifted education, a characteristic also applicable in the current research study.

Finding #4: Gifted students feel advanced classes are beneficial. Students admitted their honors-level classes were not always challenging or taught at an appropriate level. Student M honestly assessed perceptions of the honors class:

I feel that it’s meeting [the school’s] standards of [honors]. But I feel personally what I would consider an honors class is not what we’re at. I think there are some kids that are in class who should not be in an honors class, and that teaching that curriculum to them is not what I believe should be an honors standard.

Student I evaluated it this way:

[Honors class] is kind of at the right level. Because I think if it’s too hard, then you’ll lose the kids who just barely make it into [honors]. And then if it’s too easy, then the people who should definitely be in [honors] would just have nothing really challenging to do.

Even though the honors classes were not always taught at the level gifted students desired, students appreciated the opportunity to have a class that was supposed to be more rigorous. These students understood the benefit of being with similarly-minded peers who, though perhaps not as intelligent, still valued school and had a good work ethic. “I really like [honors] classes because the kids who want to learn and aren’t just there because they have to [be], then it gives them an opportunity to really learn and improve their education” (Student I).

Students especially appreciated the opportunities afforded by the level of rigor and the interaction with intellectual peers within the GATE class. “I think it’s good to have a GATE class because even though there are [honors] maths and language arts, not all the math and
language arts classes push; but GATE does” (Student Q). “GATE should be harder,” acknowledged Student I, “because you have to test to be in it. So it’s going to be really hard. It’s not going to be just for the kids who are kind-of [honors]. It’s going to be for the kids who really do have critical thinking . . . It’s an opportunity.” Homogeneously grouping students is of benefit to the highly gifted as students of similarly high intellect can play off each other’s ideas, encourage each other to seek deeper knowledge, and are not held back by repetitive lessons (Adams-Byers et al., 2004; Glass, 2004; Young & Balli, 2014).

**Finding #5: Gifted students feel increased teacher expectations increase challenge.**

The students in the research study expressed an understanding that the expectations of a teacher impact the level of challenge felt in a class. When teachers held students to a higher standard, gifted students worked to achieve at those increased standards. “I like [increased expectations],” explained Student M:

> Because I think naturally when you are considered a gifted student, people are going to expect more from you than just the average student. I’m not exactly happy about more work, but I think it’s understandable, considering the fact we are gifted students. We’re expected to do a little bit more than the average.

Scager, Akkerman, Pilot, and Wubbels (2013) found in a study conducted with honors students at the collegiate level that courses students ranked as having a high challenge level always included high teacher expectations. Although the Scager study was conducted at a different level of education, it supports the concept that regardless of student age, teacher expectations and challenge level are intrinsically tied together in gifted students’ perceptions.

Many gifted students are intrinsically motivated. The students are able to look ahead to see the benefits of serious work habits and good grades paying off in the future. However, it is
important to remember gifted children are still children, with the natural instinct to be lazy or take the easy way out at times. One student quite succinctly put it this way: “Don’t expect *me* to work as hard as I can if *you’re* not going to expect me to” (Student N).

Dixon et al. (2004) advised “the assumption that [gifted students] can think at higher levels is paramount to productive classes” (p. 74). Having and maintaining that assumption is vital to maintaining a class with high expectations. In the past, Gallagher (1998) added gifted students “revel in the complexities they are offered” and when presented with “a healthy dose of advanced content” and an activity which “requires that students take their learning beyond the classroom to applications about the conduct of the world outside the classroom,” expectations are increased and challenge is felt (p. 19).

Students felt many teachers should expect more. This especially included the language arts teachers.

Teachers will teach us something, but they only expect what they taught. They don’t expect more. I feel if teachers expect more from us than what they taught us, then it will definitely challenge students more. Because then it would challenge them to do more because the teacher expects it. (Student G)

However, in GATE, Student B explained “you could have the right answer, but if you didn’t go into detail, you might not get full credit,” which made the GATE class feel more challenging. Student R noted, “You have to one-up what you think is the best grade. Like you have to think, ‘This is good, but I could probably do better.’”

Mastery of content, as expressed through comprehensive answers, is an important component of high expectations. Zito and McQuillan (2010) observed that “work that demands comprehensive understanding of some topic, always in some form of higher-order thinking,
tends to promote engagement and honest work” (p. 12). This idea corroborates Csikszentmihalyi’s (2004) concept of flow. According to Csikszentmihalyi (2004), flow is most likely to occur when an individual’s strengths and skills are properly aligned with a task that evokes challenge. By matching the skill level with the challenge level, individuals develop passion and satisfaction in accomplishing a task.

Students emphasized that increased expectations often came through in the way teachers graded student work. Student F observed:

I think a teacher has a lot of impact on how hard a class is. Because I know [GATE] class was always harder than a lot of other classes, which I think has a lot to do with the teaching and grading. Because some teachers would let you get away with one sentence, while others would really make you go into detail and explain yourself.

Student P explained:

If the teacher doesn’t really look [at your work], if she doesn’t really read it, just skims through and sees one correct sentence and is like, “Oh, okay. It’s good,” then you can’t really learn. But if you go really in depth, you can.

Gifted students wanted to see corrections on their paper because the students viewed that as a way to learn from their mistakes and make improvements on their current efforts. Lines (1994) concurred, noting “immediate knowledge by students of their performance is probably the most powerful force in maintaining continuous progress” (p. 39). Several students expressed frustration with their grade going down and not understanding why, perhaps because papers had not been returned in a timely fashion or had been returned without corrections or markings. As student O put it, “Gifted students are the ones who have an A, but still worry about their grade.
They are the ones who want the answers to questions, even if that is not the point of the worksheet.”

Finding #6: Gifted students feel certain instructional strategies increase challenge. Cooperative grouping, authentic learning and assessment, accelerated pacing, and critical thinking activities were all identified by gifted students as instructional strategies adding an increased level of challenge. Beside teacher expectations, this was one of the predominant reasons students found the GATE class more challenging than the language arts or math classes.

GATE was more thinking outside the box and kind of going outside your comfort zone a lot and doing things you never thought you would, and thinking the way you never thought you would. That was new . . . It was always kind of different from everything else. (Student B)

Armstrong’s (1989) historical study of how elementary students defined an ideal gifted program identified innovative teaching practices as a key component. Students further identified such practices as working in groups and doing hands-on activities. As with the middle schoolers in this research study, participating in such learning activities forced students to think in different ways than other classes and often integrated multiple content areas in a way that encouraged students to analyze and apply varied components previously learned in other classes.

A recurring lament of gifted students was the preponderance of worksheets used as assignments in classes. This topic came up repeatedly in student comments regarding language arts and math. Although during one observation of the gifted class students were working on what could be termed a “worksheet,” students never once mentioned the word “worksheet” in reference to their GATE work. This could be because in GATE, the “worksheet” prompted thinking and assessed comprehension in regard to a hands-on and interactive activity students
were working on together. Worksheets observed in the math and language arts classrooms were completed in isolation and usually assessed discrete skills, such as completing math equations or identifying proper comma placement.

Despite the fact that the language arts and math/algebra classes were designed to be honors-level courses, students believed them to be largely taught in the same manner as non-honors classes. Within the honors classes, students observed there was no differentiation for those labeled gifted or performing at the highest levels. Gifted students were expected to work at the same level and pace as those around them. Similar studies found “concern that gifted children receive more of the same type of assignments required of non-GATE students, rather than differentiated assignments” (Young & Balli, 2014, p. 238). Yet McCollister and Sayler (2010) advised that gifted students’ “readiness makes curriculum designed for most students at the typical age of the class developmentally inappropriate for those whose needs far exceed the norm” (p. 41).

While evaluating instructional practices, it must be remembered that the GATE class is taught as an elective course. The GATE class does not have state-mandated standards, nor does it have district or state assessments to prepare for. The language arts and math classes do have to operate within the confines of state and district policies. Hargrove (2012) noted legislation has caused schools to focus more on the students not yet making the grade and to disregard the desire of those students who have already mastered content to learn more. Hargrove (2012) tempered her comments by explaining “this does not mean that teachers and principals are uncaring or even unconcerned. It does mean that their focus is on general education and, in particular, on that group of children who are struggling to meet minimum standards” (p. 72).
Finding #7: Gifted students feel increased depth of content increases challenge.

Besides teacher expectations and instructional strategies, gifted students acknowledged depth of content also increased the level of challenge for students. Gifted students often already know surface-level content or, if it is new, can pick up on it quickly. However, it is by going into depth and making connections with other content that students felt challenged. This concept is supported by the research of Renzulli (2002) who explained gifted students need accelerated pacing and greater complexity in learning experiences.

Again students found GATE class more likely to take students to increased depth of content. Student O explained GATE was more challenging than language arts and math because “we learn the common thing, but then we go into more depth. It’s like language arts and math are kind of the top layer.” Math was determined to be the second most challenging class by the majority of students because the content felt new and students were asked to increasingly build on previously learned mathematical skills.

The California Association for the Gifted (1994) noted “another way of looking at depth is to mark the difference between a collection of isolated facts and what they become when they are assembled as concepts – the ‘big’ ideas” (p 41). Teaching in a cross-curricular fashion helped increase the depth to which students were asked to go in their thinking and understanding. “GATE involves more than one topic. Like it involves math, science, language arts, and that kind of stuff, whereas science is just science and math is just math” (Student G). Increasing depth of content “involves making relationships between and among ideas, connecting other concepts, and layering – a why/how interdisciplinary approach that connects and bridges to other disciplines, always enhancing the meaning of ideas” (CAG, 1994, p. 20). Students acknowledged that depth also involves using more complex texts, teaching above-grade-level
standards, and providing further explanations of processes and content – the why, rather than merely the what.

Finding #8: Gifted students feel district and state policies can decrease challenge. Students understood there are elements outside the teacher’s direct control that influence the level of challenge experienced in a classroom. Mandates are put on teachers through state, district, and school policies. These may include the population of students within a class, the pacing of instruction, or the standards being addressed.

The fact that outside pressures often circumscribe what a teacher does instructionally is a point of contention and concern. Callahan et al. (2014), Glass (2004), Hargrove (2012), Loveless (2008), Neal and Schanzenbach (2007), and Plucker et al. (2010), have documented the effects of legislative decisions on teaching methods and directing the focus of schools toward students performing in the mid-range and below. Hargrove (2004) noted “the pressure on schools is to meet minimum standards with few if any incentives for schools to focus on students who can go beyond” (p. 72).

The gifted students were cognizant of these limitations and very frank in their assessment of the issue. “I feel like they don’t want you to get too far ahead. I understand that, but sometimes that makes it really easy because I already know it from last year or the year before,” explained Student J. “It seemed like we were doing a lot of the same things as the other kids, which was a lot easier for us compared to them. But I don’t know if [the teachers] would be able to pull us aside and do anything different,” rationalized Student F. Students were aware of pressure for students to pass the district benchmark tests and the state tests. They knew they were to be given a quiz every two weeks on the current standard(s). With those limitations in
mind, comments showed students understood in some cases why teachers made the instructional choices they did.

Young & Balli (2014) “found that many teachers may not deviate from parameters, feeling pressured to jettison creative classroom activities in proportion to the increasing focus on preparing diverse students… for standardized tests” (p. 241). In the language arts and math classes observed, two subjects that are highly tested, teaching was much more formal and teacher-directed. Skills were standard-specific and work was largely focused on discrete skills. A teacher in a study conducted by Moon et al. (2003) stated she does not do projects at all until after state tests have been completed. This was also true of the language arts and math classes observed in this study. The GATE class, an untested subject, stood in contrast:

[GATE] is more people-based. It’s like you’re getting challenged. Not like with math and language arts [where] you have to work to the person at the lowest level because you know they don’t know it. In GATE, basically you know you can do it. Everyone’s the same [intelligence]—not exactly the same, but around enough. You can help them individually, because it’s either group projects where, if you don’t understand it, [others in the group] probably understand. Or if it’s like a solo project, you always have the teacher to come help. (Student O).

Students acknowledged the GATE class was much more inclined to construct lessons integrating multiple standards and content areas, as well as to employ more project-based learning through critical thinking and authentic assessment activities. Gallagher et al. (1997) found similar results regarding subject areas and challenge after studying 871 students across nine districts. Language arts was ranked as the least challenging of the three subjects, with either the GATE or the math class being ranked most challenging, depending on the grade level.
Finding #9: Gifted students feel teacher misunderstanding may decrease challenge.

Students understood if teachers did not understand the needs of the gifted, it would be hard for teachers to meet those needs. McCollister and Sayler (2010) explained that while a teacher might understand a student is gifted, the advanced development of that gifted student is likely even higher than the teacher expects, making the curriculum to be taught to everyone else even more disadvantageous for the gifted child. Willis (2007) even explained students “may feel that their teachers know less than they really do because of the level to which the teachers must teach in mixed-ability classes” (p. 38).

Students noted teachers often left them alone, expecting them to be fine on their own. Lines (1994) cautioned “teacher assistance is even more vital as instruction becomes more individualized to accommodate the differences in the learners of middle school age” (p. 39). If no teacher assistance is needed, work is most likely not at a level commensurate with the learning needs of the gifted student.

Another complaint among gifted students regarded teachers not being able to answer the questions asked. Numerous students commented that teachers ignored them and would not call on them. If called on, the teacher might dismiss the student by saying the questions addressed something that was not an important part of the lesson. Students understood teachers might not know the answers to all their questions (although some students suggested teachers might prepare better by thinking about what questions a student might ask), but teachers should be willing to look up the answer rather than just tell them no. “I feel like I am bothering [the teachers] by asking questions,” admitted Student O, “but when I ask questions, it’s like complex questions . . . There’s question after question because I want it more explained or more detailed.” In contrast to what students were aiming for, students felt teachers perceived them as
an interruption or even impertinent when asking questions, highlighting the fact teachers did not understand the gifted student’s quest for knowledge.

The NAGC (2010) explained in their standards for gifted programming it is crucial that educators of the gifted “must understand the characteristics and needs of the population for whom they are planning curriculum, instruction, assessment, programs, and services” (p. 8). By understanding the needs, teachers are better able to plan and differentiate. Similarly, Young & Balli (2014) found “parents concurred that teachers who had extensive GATE training were better equipped to teach gifted students” (p. 242). Thus the NAGC (2014) declared it “imperative that teacher-training programs ensure that all teachers are prepared to maximize the potential of all students, including those with gifts and talents” (para. 4).

**Finding #10: Gifted students feel a lack of academic rigor decreases challenge.**

Teacher techniques and instructional methods were decided factors in students’ perceptions that a class lacked challenge. Students frequently brought up the concept of repetition and how much students felt standards and activities were gone over in excessive repetition. “Each year we repeat the same stuff. It gets really boring, so we learn it over and over again. It doesn’t really feel like an honors class because we are learning the same stuff we did last year” (Student F). Young & Balli (2014) noted “an indicator of above-average ability is boredom with the slower pace often necessary in heterogeneous classrooms. Along with feeling bored when they have completed their assignments in class . . . they also experience boredom when their teachers explain the same lessons over again for those students who may be having difficulty” (p. 240).

This repetition was particularly perceived to be true in the language arts class:

I feel like in language arts it’s kind of easy. You learn the concepts, but they’re still kind of old concepts. Like we just went over tone and mood, which I am pretty sure we
learned at the 6th grade, and even though it’s [honors], we’re still going over it. It’s not the same PowerPoints, but it says the same thing. We get it. (Student Q).

Common Core language arts standards do remain largely the same across the middle school grade band. Tone and mood are indeed covered at the sixth grade level, with the expectation of more depth and complexity when taught at the seventh and eighth grade levels. However, students perceived it as very repetitive and one student mentioned they had even used the same PowerPoint in a previous grade that they were using in their current grade. In addition to repetitive standards, students complained of frequent worksheets and station work that focused on basic skills. However, “classrooms filled with repetition, practice worksheets, and skill drills are not reflective of the recommended best practices for gifted learners” (Moon et al, 2003, p. 54).

Math was seen as less repetitive across grade levels. Math standards usually built on skills learned at a previous level and were then used in a more complex way. However, students felt discrete skills and concepts could be taught for too long or at too slow a pace. “After a few days, I understand it completely and then it goes back to easy again,” complained Student A. Moon et al. (2003) “indicated students were bored and in need of more complex and diverse instructional materials” and “reported that instruction was paced too slowly and based on repeated presentation of previously mastered material” (p. 50). Even though most students found math to be more challenging than language arts, challenge was lessened when instruction occurred at too slow a pace.

Students did not complain GATE was repetitive. “Instead, it’s like you never know what you’re doing until you’re doing it in GATE. She’s teaching us skills we wouldn’t have learned until later in our lives—that you might never even learn at all,” explained Student E. The GATE
class is populated by students in the sixth through eighth grades, with lessons designed on a three-year rotation, so students never repeat activities. Thematic units differ each year and lessons move at an accelerated pace. Basic skills were often taught briefly or quickly reviewed at the start of a unit before moving on to more complex concepts or usage of the skills. Therefore, repetition was limited.

**Discussion of the Results in Relation to the Literature**

**The need for challenge.** Gifted students do not feel challenged, yet desire to be challenged during the course of their educational experience. One hundred percent of the students interviewed for this study indicated a desire to experience challenge. These same students indicated they have almost never felt challenged or have only been challenged by their GATE class thus far in their education. A lack of challenge being experienced by gifted students has been noted by researchers (Adams-Byers et al., 2004; Davidson & Davidson, 2004; DeLisle, 2014; McCollister & Sayler, 2010; Marland 1971). The lack of challenge is a detriment to these individual students who, without a challenging curriculum that stimulates and engages their brain and interests, will likely not live up to their full potential (Finn, 2014; DeLisle, 2014).

Schools which create honors-level classes or offer gifted courses are making strides to improve the educational experience of the nation’s gifted students. Gifted students do better with homogeneous grouping environments (Adams-Byers et al., 2004; Olszewski-Kubilius, 2016b; Young & Balli, 2014) and complex curriculum presented in engaging ways (Armstrong, 1989; Barnes & Urbanowski, 2014; Olszewski-Kubilius, 2016a). However, many of those programs still lack the rigor required to effect a challenging learning environment (CAG, 1994; Callahan et al., 2014; Davidson & Davidson, 2004).
Numerous components may detract from an honors-level class achieving the appropriate level of rigor. Although classes have been labeled “honors,” the fact remains that non-honors students sometimes get placed in these classes due to staffing and population issues, or even by parent request (Loveless, 2008; Davidson & Davidson, 2004). Honors classes may not have as homogeneous a grouping as desired. If a class consists of the top 30 students in a grade level, there may still be a sizable difference between the test scores or intellectual capability of the student at the top and the student at the bottom of that class, even though they are both among the brighter students in the school.

Regardless the achievement level of the class, the modern educational system largely revolves around state and district assessments. There is pressure on schools to achieve high scores, which then transfers pressure to teachers to get those high scores out of their students. Many teachers nationwide admit to changing instructional practices to meet the needs of the test rather than to meet the needs of higher-achieving students in the class (Loveless, 2008; CAG, 1994; Manning et al., 2010). Only courses which are not assessed by state or district tests have some luxury in programming, scheduling, and instructional focus. All others must cotton to the mandates of curriculum calendars, scheduled assessments, and the power of test scores.

In contrast to the one-size-fits-all theory, “the concept of differentiated learning experiences based on educational readiness is a foundational idea for the field of gifted education” (Kettler, 2014, p. 128). Gifted students do require different learning environments, which include grouping strategies, complex texts, increased depth of content, and the use of critical thinking and problem solving activities which encourage deeper thinking. Olszewski-Kubilius (2016a) suggested:
Curricula must be sufficiently advanced and complex so it challenges even the strongest learners in the class, [and] require multiple levels of thinking and higher order questioning from the student. It must be sufficiently in depth to allow students to study important issues and problems related to the content area. And the curriculum must encourage creativity, open-ended responses, high-level choices, and problem finding as well as problem solving. (para. 3)

By offering courses for gifted students, taught at an honors level, and designed with an appropriate curriculum, gifted students can flourish in a learning environment which challenges students to learn.

**The need for understanding.** Gifted students expressed the perception that most of their teachers did not understand their giftedness. Those who did understand the needs of a gifted student were most often perceived as unable to meet those needs. “The national programming standards for gifted education advocate that to effectively work with identified gifted and talented students, educators need to understand the characteristics of the students in the population” (Kettler, 2014, p. 128). However, only one of the five teachers at the research site had extensive training in teaching gifted students.

Dr. Ann Robinson, director of Jodie Mahony Center for Gifted Education, advised “training teachers in gifted, talented, and creative instruction and services is a hallmark of districts who are interested in advancing the performance and engagement of all students” (Faller, 2017, para. 3). Jolly and Robins (2016) found that even in districts that sought to provide some sort of differentiated services for gifted students, the services were provided within regular classrooms, by general education teachers, who had received little or no training in addressing the needs of the gifted. However, research conducted by Dolph (2009) found a
statistically significant difference favoring gifted teachers in regard to the types of differentiated instruction they used to address the needs of gifted students as compared to teachers of classes that only had clusters of gifted students. Dolph (2009) noted the difference could arise from gifted teachers receiving more professional development focusing on the needs of gifted students, thereby giving the gifted teachers a better understanding of gifted learners’ needs.

The need for appropriate instructional techniques. If, as noted, gifted students do not feel challenged and perceive teachers to not understand their educational needs, perhaps one of the best ways to remedy that situation is to utilize appropriate instructional techniques. Each of the techniques discussed in this section was used on a consistent basis within the children’s GATE class, helping add to the perception of challenge found in that class. The strategies were rarely, if ever, used in the honors-language arts or math classes. While each of these techniques is an individual component, the techniques are often used together or overlap in their methods. For example, a critical thinking activity may also be constructed as an authentic assessment assignment. However, for the purposes of analysis, each will be examined as an individual technique.

Critical thinking. Students found critical thinking assignments to be both challenging and engaging. Student interviews suggested two types of activities fell under the concept of critical thinking in their estimation. The first type of critical thinking assignment involved activities that made them question deeply and go beyond surface levels of knowledge. Students gave an example of an activity using building toys where they had to examine symmetry and compare the symmetry to patterns in nature. While there were obvious comparisons, students were expected to look beyond the apparent answers. An alternative type of critical thinking assignment was explained as one where there was not a single correct answer. Some students
mentioned a unit where they were presented with an ecological problem. Students had to research the possible problem and its probable causes, use analysis to determine which cause was most likely, and present their findings as proposed solutions to a mock town board.

“The field of gifted education has considered critical thinking a desirable goal for gifted programs and critical thinking instruction has been included as an evidence-based practice in the National Gifted Programming Standards” (Kettler, 2014, p. 128). Researchers show the benefits of using critical thinking activities with advanced learners (Dixon, 2002; Dixon et al., 2004; Gallagher, 1998; McCollister & Sayler, 2010).

Critical thinking activities are often associated with project-based learning or problem-based learning. Gallagher (1998), in discussing high schoolers, noted the benefit of such activities comes from students being “presented with authentic ill-structured problems of science and society in using problem-based learning, emphasizing self-directed learning and important habits of mind in addition to important content” (p. 18). Kettler (2014) similarly examined gifted elementary students’ positive academic outcomes when presented with critical thinking activities. However, Willis (2007) explained that the middle schooler’s “strong desire to explore and obtain information” is ideally suited to critical thinking activities, as well.

Students noted that at times they struggled with the open-ended critical thinking assignments. This type of activity pushed them outside their comfort zones. Students who were concerned about their grade liked to know there was a correct answer which could be obtained. Many critical thinking activities, such as the aforementioned ecological simulation, do not have a correct answer and the learning comes from the process of discovery. However, critical thinking is a skill needed in the modern world and one looked for by many employers (Kettler, 2014). Because gifted students have the ability to think at higher levels and forge connections in all
activities, teachers must develop lessons and activities that regularly and consistently utilize opportunities for children to think (Dixon et al., 2004). Critical thinking will not only engage gifted students in classroom activities, but better prepare students for future educational endeavors and a career beyond that.

**Authentic learning and assessment.** The majority of students mentioned the words “real-world” or expressed satisfaction with learning activities they felt were preparing them for life later on. “If I’m going to use it in my real life,” commented Student C, “I pay attention more than I would if it’s something I know I’m never going to use.” In the education world, activities that involve a real-world element are often known as authentic learning assessments. Students appreciated the applicability to real life and were challenged to take on whatever role was presented. Student M observed:

I’m going to be honest, it’s like algebra. Unless you’re a math teacher or a mathematician, you’re not going to use algebra much in real life. But I think with authentic assessments, you will use those in real life. Even if it’s not your job, it’s still a part of you. Like when you’re making a cartoon and presenting—presenting is part of everything. I think more students learn how to cope with that kind of stuff, the easier it’s going to be for them later on.

Authentic assessments, sometimes referred to as “performance-based assessments” or “alternative assessments,” have been found to meet the needs of gifted students in the classroom (Burke, 2009; DeCastro, 2005; Moon et al., 2005; Powell, 1993; Reed, 1993; Rivera, Kuehne, & Banbury, 1995). Moon et al. (2005) explained authentic assessments should “engage students in real-world tasks and scenario-based problem solving,” be “largely open-ended and often can be answered using multiple approaches,” and “always allow students to demonstrate knowledge and
skills that are worth knowing” (p. 120). Burke (2009) added that authentic assessments often involve “collaboration and group interaction emphasizing both academic and social outcomes” and “realistic performance tasks correlating to real-life situations faced by students and adults every day” (p. 9).

Students in the study often participated in such assignments in GATE class. “I feel like GATE really prepares you for later on in life because you do stuff like [authentic assessments] and you develop skills and you learn what you could do. Which is sometimes frustrating because you’re like, ‘Oh no! What am I going to do?’ But then again, it leaves you more options and helps you realize stuff” (Student Q). Students cited examples of constructing a product, developing marketing materials, and then selling it on campus as one example, while a unit on finance and budgeting culminated in a shopping trip to the store where the goal was to use rounding to come closest to the allotted dollar amount without going over. Willis (2007) explained that “encourag[ing] students to construct knowledge through active, authentic learning tasks to promote faster, more coordinated information processing and retrieval networks” (p. 42) is ideal for brain development at the middle school level. Barnes & Urbanowski (2014) confirmed this assessment by explaining changes occurring in early adolescence result in higher-order cognitive advances which make such students capable of abstract thought and logical reasoning. Additionally, authentic assessment allowed students to “view the learning process as important and linked to skills used in the real world” (Moon et al., 2005), thereby giving purpose to their education and readying students for the next stage in academics or for a career later in life, traits which students determined to be important.

**Accelerated pacing.** Gifted students frequently expressed frustration with the slow pace of learning. Students often felt they were being taught something they had learned at a prior
grade level, so did not need to spend an extended period of time on learning it again. An accelerated pace has proven beneficial in keeping the attention of gifted learners and challenging them to excel (CAG, 1994; Davidson & Davidson, 2004; Young & Balli, 2014).

The CAG explained acceleration is “perhaps the most straightforward means of differentiation to meet the needs of students with demonstrated high levels of understanding [in order] to arrange for them to move more rapidly through a particular curricular sequence” (p. 11). Several students noted this is what they had been led to believe would be the case once enrolled in honors classes, but district curriculum calendars kept students moving at the same pace in all levels of classes. Gallagher et al. (1997) discovered similar complaints when evaluating 871 gifted students from nine districts in North Carolina. Students felt the “slow pace, too much repetition of already mastered information, inability to move on after mastering the regular curriculum . . . and an emphasis on the mastery of facts rather than the use of thinking skills” (Gallagher, 1997, p. 132) were all detrimental to creating a challenging environment. Gifted students are often at least one grade level above peers their age (Gallagher, 1998; Manning et al., 2010). Therefore, moving at the same pace as peers in the class puts gifted students at a disadvantage.

**Homogeneous cooperative grouping.** Students noted the creation of honors classes whose population was culled from the top 60 scores on district and state assessments was beneficial. However, in many cases this grouping still provided too disparate a population. The GATE class, although consisting of students from the sixth through eighth grades, was composed of students who had all achieved at the 97th percentile or higher on the CogAT. This made the GATE class feel more like a grouping of intellectual peers.
Adams-Byers et al. (2004) examined the perceptions of 44 students in grades 5-11 regarding grouping strategies. “On the whole, participants perceived homogeneous grouping more positively with respect to academic outcomes. They learned more in the more challenging environment provided by homogeneous classes” (Adams-Byers et al., 2004, p. 7). The perceived advantages to homogeneous grouping topped out at more than three to one in favor of a homogeneous structure over a heterogeneous one. Students noted the advantages included the ability to work at a faster pace, lessons designed with a higher challenge level, and content not being repeated.

Gifted students typically receive the majority of their instruction within regular classrooms (Glass, 2004). However, even within such regular classes, or honors classes as described in this study, smaller cooperative homogeneous groupings can be advantageous in creating challenge for high-ability learners. Ability grouping “involves placing students into classes or small groups, either within the same class, or across multiple grades, based on their readiness for content, prior achievement in an area, or ability levels. The aim here is to match the curriculum and instruction to the learning needs and abilities of the student” (Olszewski-Kubilius, 2016b, para 1.) Students in the study also noted the positive benefits of working with others: practice for future jobs, sharing of ideas, students providing strengths where others were weak, mental stimulation, and the sharing of workloads. Webb (1997) concurred, noting collaborative groups “can foster student learning and socio-emotional outcomes such as social skills, self-esteem, and attitudes towards others” (p. 205).

Limitations

While research studies strive to be as in-depth and encompassing as possible, all studies face limitations affecting results. In the case of this study, limitations centered on sampling and
time constraints. The participants in this study cannot be considered representative of all gifted students.

**Population sample limitations.** The study site was selected as it was the only one within the neighboring community to have a dedicated daily gifted elective combined with honors-level language arts and math classes. Additionally, the program had proven longevity as it had been running in this format for approximately six years, providing a level of structure and experience which were of benefit to the study’s goals. Both math teachers had been teaching at the school for six years and teaching at the honors level for at least three. One language arts teacher had been employed at the site for twelve years and had taught at the honors level for at least three. Although the second language arts instructor was new to the district, the teacher was not a first-year teacher. With these defining characteristics, the school site had the population most suited to being able to compare and contrast instructional methods of various teachers and classes, as well as to evaluate the level of challenge provided by such classes.

Selecting this school as the research site meant the population would be limited to those students enrolled at that school site. One cannot control the number of males and females, the identified gifted students at a single grade level, or the variety of ethnic groups enrolled at any given time. As such, the study consisted of a population where more than three-fourths of the participants were female (Table 6). Additionally, over three-fourths of the population considered themselves Caucasian.
Table 6

Sample Population Demographics by Overall Percentage

<table>
<thead>
<tr>
<th>Demographic</th>
<th>Total Number</th>
<th>Percentage of Sample</th>
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</thead>
<tbody>
<tr>
<td>Males</td>
<td>4</td>
<td>22%</td>
</tr>
<tr>
<td>Females</td>
<td>14</td>
<td>78%</td>
</tr>
<tr>
<td>7th Grade</td>
<td>3</td>
<td>17%</td>
</tr>
<tr>
<td>8th Grade</td>
<td>8</td>
<td>44%</td>
</tr>
<tr>
<td>9th Grade</td>
<td>7</td>
<td>39%</td>
</tr>
<tr>
<td>Caucasian</td>
<td>14</td>
<td>78%</td>
</tr>
<tr>
<td>Mixed Race (Caucasian/Hispanic)</td>
<td>2</td>
<td>11%</td>
</tr>
<tr>
<td>Middle Eastern</td>
<td>2</td>
<td>11%</td>
</tr>
</tbody>
</table>

Note. Overall sample size consisted of 18 students.

Although the current sample was more heavily populated by females, in past years the targeted population had more males. Ethnic diversity had also been greater in past years, with more Hispanic students, and occasionally those identifying as African-American or Asian. The local district, however, was predominantly populated by Caucasian and Hispanic/Latino individuals, so such numbers did reflect overall trends within the community.

The lack of a greater number of males or a more diverse ethnic sampling could have affected the outcomes of the study. However, it should be noted all students, regardless of age, gender, or ethnicity were in agreement regarding a lack of challenge provided overall throughout their education, including within the middle school setting. Despite varying backgrounds, the entire sample perceived challenge to be lacking, desired increased challenge, and felt most teachers did not understand the needs of the gifted.
A larger population size could also affect outcomes. The sample size of eighteen was conducive to conducting in-depth interviews with individual students, which would have been hindered by a much larger population. However, it must be noted that a larger selection of students could increase the range of answers and types of experiences students had. Additionally, sampling students from a variety of schools, instead of a single site, could have resulted in different outcomes. A single site was convenient in conducting research with students. This method also served to create a comprehensive picture of a gifted program at one site, with the benefit of effecting change at the school site in the future school year.

**Time limitations.** A second limitation of the study involved time constraints. All interviews were conducted during the school day and within a single school year. Interviews were restricted to a maximum of thirty-minutes by the availability of students during their Advisory period. This time was sufficient for all but two students who were called back to finish the interview questions. Interrupting the interview and continuing later did not seem to hinder the flow of information with these students.

Approval from the IRB was concurrent with the start of the students’ second semester. This was conducive in many ways for the seventh and eighth graders, as they had just completed a semester within the honors program. Ideas and perceptions were fresh. The ninth graders, however, were distanced from the program by a semester. Memories and perceptions could possibly have been fresher if students had been interviewed closer to the end of their eighth grade experience. Similarly, the current students may have had different responses at the end of the full term, rather than just at the semester. It was noted that the math and language arts teachers tend to do projects only at the end of the school year. The inclusion of such activities may have changed the level of challenge students perceived in those classes.
Implication of the Results for Practice, Policy, and Theory

This study was used to determine whether gifted students perceived themselves to feel challenged by the gifted programming provided at the middle school level, as well as determine which elements most hindered or contributed to a perception of challenge. The study was intended to add to a body of literature in regard to gifted education. Research on gifted education often addresses the needs of elementary and high school students, neglecting the crucial middle years. Because this study focused on those middle grades, where students “are going through some of the most profound physical, emotional, social, and intellectual changes that they will ever experience” (Lines, 1994, p. 39), the findings can add understanding to a population not as widely discussed. Additionally, as school districts seek to implement or modify gifted programming, the findings of this study can aid decision making in staffing, curriculum design, and program implementation at the middle school level.

Although the school site has designed and implemented a course of study for accelerated students, the honors-level courses are not meeting the needs of the gifted students. Because gifted students need to work at an accelerated pace and with content at a deeper depth than non-gifted students, the district needs to allow the honors classes to do things differently than the non-honors classes. Following the curriculum calendar at the same pace as the non-honors classes slows down the instruction and does not allow teachers to move on when students have mastered a concept. The use of formative assessments at the start of a unit or introduction of a new concept would better provide teachers with a picture of what knowledge students already have. This may allow instruction to begin at a deeper level or allow review to be more condensed so as to meet students at their current level.
All teachers working with gifted students need properly trained to do so. Studies have noted teachers who have received training in teaching the gifted do a better job understanding the curricular needs of the gifted (Glass, 2004; Young & Balli, 2014). Professional development opportunities need to be made available for those teachers interested in teaching high-ability learners. Conversely, when hiring teachers for gifted positions, attention must be paid to the teachers’ level of experience and training with gifted education.

Because the gifted class is perceived as doing a better job of providing a challenging and rigorous learning environment, methods and techniques used in the GATE class should be included in other honors-level classes. “Without creative, innovative teaching reflective of recommended best practices, segments of our student population may not be engaged, and therefore, will see no need to invest in the learning effort needed to reach their potential” (Moon et al., 2003, p. 50). Varied and purposeful instructional strategies must be employed with high-achieving students. Worksheets and basic skills review must be minimized. Instead, activities and assignments which ask students to think critically, engage in authentic learning, and allow students to work collaboratively with intellectual peers, should be employed.

Although the gifted class was rated as the most challenging by all students interviewed, three students ranked the class between a 6 and a 7.5. This is just slightly lower than the level of eight, which was perceived to be an appropriate level of challenge by the students. While the GATE class is meeting most learners’ needs in providing a challenging learning environment, certain students are still not being adequately challenged. Callahan et al. (2014), in an extensive survey of gifted programs across the nation, found “identified gifted students are still considered and identified as a homogeneous group of students with all students being served in the same way” (p. 7). With that in mind, it is important to remember that even in a gifted class, where all
students have reached the 97th percentile or higher, intellectual differences are present. Attention must be paid to those differences so as to allow even the highly gifted to be challenged. Differentiation of activity and processes must be included, even within the gifted class, so as to reach all students.

Finally, expectations must be raised for gifted students. These expectations must come through in the quality of work expected, in teacher grading, and in the depth of content and level of texts used. Although gifted, these students are still children who admittedly said if the teacher did not expect much of them, they would likely not work as hard as they could. “The most obvious consequence of this scenario is the possibility of the underdevelopment of bright learners’ potential. In classrooms that focus on low-level tasks with low-expectations for student performance, students miss opportunities to develop the skills and attitudes necessary for success in rigorous academic . . . programs” (Moon et al., 2003, p. 59). Raising expectations can raise the level of challenge.

**Recommendations for Further Research**

Continued research must occur to better any educational program. That is likewise true in regard to gifted education. Further research should be conducted to better understand the needs of gifted students and which components of an instructional program best meet the needs of gifted students.

Further research should be conducted to better understand the elements of instruction which most add to or detract from the level of challenge experienced by gifted students. This study identified the fact that a select population of gifted students felt cooperative grouping strategies, presenting materials at an accelerated pace, participating in authentic learning experiences and assessments, and engaging in critical thinking activities all contributed to a
perception that a class was more challenging. Students were not asked to rank these methods in order of efficacy, but rather asked about them in an open-ended, exploratory way. The purpose of this study was not to identify which of these techniques worked best with gifted students, but further research could show the level to which each of these strategies was beneficial in adding rigor. There are likely additional instructional techniques which could be added to the list as determined through further research.

Another focus of further research could center on the effect of teacher training impacting the level of challenge felt by gifted students. In this study, only the gifted teacher had any significant training in teaching gifted students, holding a certificate in gifted and talented instruction. All students ranked GATE class as the most challenging. Further study could investigate the degree to which teacher training is important in providing an adequate level of challenge for gifted students.

To expand the scope of this study, further research could involve multiple sites. This study was limited to a single school, due to the unique nature of the school’s honors program which incorporated a daily GATE elective with honors-level classes in language arts and math. Other school sites may not have the same set-up for gifted students, but students could still provide insight into the level of challenge they perceived in whatever ideation of a gifted program that particular school had. Incorporating more perspectives could flesh out the understanding of the phenomenon of giftedness and student experience with gifted education.

Gender is often a contributing factor in the perception of individuals. As noted, roughly one-fourth of the sample population was male. Although greater numbers of males have been enrolled in the gifted program, the year in which this study was conducted provided only a limited opportunity to engage the male perspective. Conducting a study with a more equitable
male versus female population could present different outcomes. Further study could compare the perspectives of separate gender populations in determining what creates a challenging learning environment.

One more possible avenue of research could investigate the reasons why more hands-on and creative instructional strategies such as those mentioned by the gifted students are not used in classrooms. Authors of gifted literature often lament how standardized testing has impacted classroom instruction, even among high-ability learners (Hargrove, 2012; Loveless, 2008; Moon et al., 2003). Teaching to the test and teaching to the middle both take away from the instructional strategies best serving the gifted population. Teacher preparedness and experience may also contribute to a teacher’s exclusion of instructional techniques such as authentic assessments or critical thinking activities. Further study could elucidate the degree to which these contributing factors affect the level of challenge perceived by gifted students in the classroom.

**Conclusion**

In conclusion, the gifted population is a group that is frequently overlooked in the educational setting. As Gallagher (as quoted in Jolly & Robins, 2016) explained:

One of the interesting characteristics of the gifted is that they really aren’t a crisis population. They don’t require immediate attention. The school system is not going to become unhinged if their needs are not taken care of. These are long-term needs in terms of what you do or don’t do for talented youngsters. They extend far into the future. (p. 146)

In 1994, almost a quarter of a century ago, the California Association for the Gifted pleaded that “it is important to understand that there is an urgent need to recapture excellence for a greater
number of our students” (p. 32). The evidence shows that statement is still true today, as many of our nation’s gifted students feel left out of the educational process, sitting through classes where little new content is learned and their minds are not engaged.

In answering a research question regarding their perceptions of gifted education, every single student in the study expressed a desire to be challenged and a declaration that they almost never are. Two further research sub-questions delved into the characteristics of an educational environment which lend to or detract from its perception as challenging. Both student comments and literature show gifted students benefit from increased teacher expectations; utilization of instructional strategies that include such elements as critical thinking, authentic learning, and cooperative grouping; and increased depth of content. Teachers misunderstanding the needs of the gifted, a lack of rigor in expectations and content, and even district policies regarding grouping and pacing of content, can all detract from providing a challenging learning environment. Even districts that have designed programs for advanced learners need to evaluate those programs to ensure they are doing their best for gifted students by providing the challenge, teacher understanding, and appropriate curriculum and instructional strategies which best meet the gifted students’ needs.

At the conclusion of this writing, Congress has recently passed the Every Student Succeeds Act (ESSA). As with any legislation, making the lofty goals a reality is always the difficult part. When the nation declared that no child was to be left behind, gifted children still often were. Today, when the nation proclaims that every student will succeed, we must ensure they do.


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http://dx.doi.org/10.1177/001698620605000103


http://dx.doi.org/10.1177/1076217514544030

Appendix A: Informed Consent Form

Dear Parent/Guardian:

Your child is invited to participate in a research study being conducted regarding the perceptions gifted students have regarding the academic challenge provided by their gifted and honors classes. This study is being conducted as partial fulfillment of doctoral program requirements through the University of Concordia-Portland’s Doctorate in Education in Teacher Leadership program. Your child has been selected based on the fact he/she has been involved in the gifted program for at least two years at this site and is concurrently enrolled in both honors-level math and language arts classes.

The study is titled “Developing Appropriate Challenge and Rigor in the Classroom: Perceptions of Gifted Middle Schoolers.” The goal of this study is to determine whether students feel challenged by their gifted and honors-level classes, as well as which elements of a class most contribute or detract from this perception. By conducting this study, I hope to identify ways our school, as well as gifted programs in general, can improve curriculum and instruction to meet the academic needs of gifted children.

Much research on the gifted does not actually include the student’s own voice on this issue. Therefore, I am seeking permission to interview your child in order to determine his or her exact perceptions regarding the gifted and honors program. If your child participates, he or she will be interviewed on campus regarding his or her experience with the gifted and honors programs. Participation in this study will not require any time or effort outside of school on your part.

To be in this study, your child will:
1. Sign and return consent form
2. Participate in a first round of interviews as one of 4 to 5 members of a focus group
3. Be observed within Honors Language Arts, Honors Math and/or GATE classes
4. Participate in a second round of interviews as an individual or pair
5. (Possibly) be asked for a third interview to clarify any comments or statements previously made

There are no risks to participating in this study, other than providing your information. However, that information will be protected. Any information obtained through the interviews will remain confidential. While interview comments will be used in the dissertation, all reporting will be done using pseudonyms, rather than actual student names in order to maintain confidentiality. Interview recordings and transcripts will be kept securely and only I will have access to them. When any of our investigators look at the data, none of the data will have the student’s name or identifying information, only student pseudonyms. Students will not be identified in any publication or report. This information will not be distributed to any other agency and will be kept private and confidential. The only exception to this is if there is a report of abuse or neglect which causes concern for immediate health or safety. Information will be kept private at all times and all study documents will be destroyed three years after the study concludes.
Participation in this study is greatly appreciated, but I acknowledge the questions we are asking are personal in nature. Your student is free at any point to choose not to engage with or stop the study. He or she may skip any questions they do not wish to answer. Your child’s participation is voluntary and will not affect any relationships with the school. If at any time they experience a negative emotion from answering the questions, I will stop asking the questions.

You will receive a copy of this consent form. If you have any questions regarding this research study or your child’s participation, please contact me at [researcher e-mail redacted] or [Researcher phone number redacted]. If you want to talk with a participant advocate other than me, you can write or call the director of our institutional review board, Dr. OraLee Branch (email obranch@cu-portland.edu or call 503-493-6390).

Thank you in advance for your consideration.

Sincerely,

Noelle Regan
Doctoral Graduate Student
Concordia University-Portland

Please fill out the form below and return it at your earliest convenience.

I have read the above information. I asked questions if I had them, and my questions were answered. I volunteer consent for this study.

____________________   _______________  ______________
Printed Student Name  Student Signature  Date

____________________   __________________
Printed Parent Name     Parent Signature   Date

____________________   __________________
Printed Investigator Name  Investigator Signature   Date

Investigator: Noelle Regan    email: [Researcher e-mail redacted]
c/o: Professor Chad Becker
Concordia University – Portland
2811 NE Holman Street
Portland, Oregon  97221
Appendix B: Protocol for Student Interviews

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<td><strong>Background Interview Data</strong></td>
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</tr>
<tr>
<td>Participants:</td>
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<tr>
<td>Recording Method and Data Location:</td>
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</table>

<table>
<thead>
<tr>
<th><strong>First Round Interviews</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Introductory Script:</td>
</tr>
</tbody>
</table>

Thank you for attending this interview and your participation in this study. I am currently working on the dissertation to attain my Doctorate in Education. I have chosen to focus on gifted education. In school, I was identified as a gifted student and as a teacher, I have been teaching gifted students for 20 years in general language arts and history classes, as well as in the GATE class for the past 12 years. It is my goal to help make gifted education the best it can be. So, I am asking for your help in doing so. The purpose of these interviews is to understand how you, as a student, feel about the education you are getting from your GATE and Honors Language Arts and Honors Math classes. In general, are they meeting your educational needs? Which aspects best help you learn or detract from your ability to learn? The information you provide will be written up in a research paper, and also be used at this school site to improve the education future gifted students receive.

I would like to remind you that you, and your parents, all signed a consent form giving permission to participate in this study. I will be video recording these interviews so that when I listen to them later, I can be sure of which of you said what. I will be the only one viewing the recordings. When I write the research, your comments will not appear under your name, but rather as “Student A” or “Student B.” By implementing all these steps, your confidentiality will be maintained and no one will be able to identify you from the research. If at any time you feel uncomfortable with this process or wish to withdraw your participation, please let me know. That is completely acceptable and will not negatively affect you in any way.

For the first round of interviews, I have asked you here as a group. I understand that being interviewed and recorded may make you nervous. I also understand that sometimes it may be hard to think of answers. By including you in a small focus group such as this one, I hope it makes you a little more comfortable with the process and may also allow you to feed off the answers of others. Throughout the interview I will be taking a few notes to help me remember important points or I may think of a question I want to ask based on something you have said. In the future, I will also be interviewing you individually. This will allow you to provide more
specific information and allow you to speak more personally without having to worry about what anyone else may think of your answers. There are no “right” or “wrong” answers here. I am only looking to understand how each of you feel about the gifted education you have received. Please understand that one of you may feel a certain way, while another student may have a completely different opinion. That is completely acceptable.

Are there any questions before we begin?

Interview Set-Up:
- All interviews will take place in the teacher’s classroom, a location familiar to the students.
- Focus group interviews for round one will consist of 3 to 4 students.
- Interviews will be video recorded from start to finish.
- Notes will be taken during the interviews to identify important points or follow-up questions.
- Interviews will take place during school hours so no transportation burdens will be placed on students or parents.
- Interviews will last approximately 30 minutes.

Round One Interview Questions:
While the following interview questions will guide the study, the interviews will consist of a conversation between interviewer and interviewee in which a responsive interview technique will be used and the exact wording may differ.

1. How do you feel about your gifted experience in middle school?
2. Describe what it is like to be in a gifted class in middle school? What is the teaching and curriculum like? What is interaction with peers like?
3. How do you feel about your experience in your Honors Language Arts class?
4. How do you feel about your experience in your Honors Math class?
5. How do you feel about your experience in your GATE class?
6. What does “academic challenge” mean to you?
7. To what degree have you felt challenge in your Honors Language Arts class? Honors Math? GATE?
8. Are there any further comments you would like to make?

Interview Wrap-Up:

Thank you for your participation today and the insights you have provided. I will be interviewing each of you again, but first I am going to sit in and observe your classes. This will allow me to better understand some of the concepts and comments you have made, as well as to see how teachers approach the instruction of gifted students.

In the next round of interviews, I would like you to think a bit more specifically about what sort of education you would most like to receive in school. How would a teacher make sure that happens? What sort of instruction or curriculum would best help you obtain that sort of education?
At the end of the interview, students will be dismissed to return to class.

**Researcher’s Initial Reflections:**

**Comments:**

**Reflections:**

**Questions:**

**Interview Follow-Up:**
- After interviews have been recorded, a word-for-word transcription will be typed. Notes will also be typed and added to transcripts.
- A table will be made to assign each student a pseudonym. These pseudonyms will be maintained throughout further interviews, observations, research, and reporting.
- Transcripts will be read for preliminary identification of emerging concepts or themes by which to begin coding.
- Transcripts will also be read and analyzed to determine any gaps in information or additional questions that need to be asked for content or clarification.
- Classroom observations will take place before the second round of interviews occurs.

### Interview Two

<table>
<thead>
<tr>
<th>Background Interview Data</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Location:</strong></td>
</tr>
<tr>
<td><strong>Participant(s):</strong></td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>
Second Round Interviews

Introductory Script:

Thank you again for attending this interview and your participation in this study. I will be video-recording this interview, as well as taking notes to help me remember important information or additional questions I would like to ask. I would like to remind you that your confidentiality will be maintained throughout this process by assigning you a pseudonym. Additionally, I will be the only one viewing these materials. If at any time you feel uncomfortable with this process or wish to withdraw your participation, please let me know. That is completely acceptable and will not negatively affect you in any way.

For this second round of interviews, I am interviewing you by yourself (or with a partner). I want you to feel comfortable sharing your own personal experience. There are no “right” or “wrong” answers and I understand that each student experiences his or her education in a unique way. Please be honest about your experiences and how you feel about them as that will be most helpful in analyzing the efficacy of gifted education.

Are there any questions before we begin?

Interview Set-Up:

- All interviews will take place in the teacher’s classroom, a location familiar to the students.
- Interviews for round two will consist of 1 or 2 students.
- Interviews will be video recorded from start to finish.
- Interviews will take place during school hours so no transportation burdens will be places on students or parents.
- Interviews will last approximately 30 minutes.

Round Two Interview Questions:

While the following interview questions will guide the study, the interviews will consist of a conversation between interviewer and interviewee in which a responsive interview technique will be used and the exact wording may differ.

1. Now that you have had time to think about it, would you like to make any changes or additions to how you defined “academic challenge?”
2. How important is academic challenge to you in your educational experience?
3. Again, let us review: How challenged have you felt by your Honors Language Arts class? Honors math? GATE?
4. Why do you believe that is so (in regard to each answer in question 3)?
5. Do you feel your honors classes are taught at an honors level? Explain.
6. What would you most like to see in your honors classes in order for them to be taught at the level of challenge you feel is appropriate?
7. Do you believe your honors classes have prepared you for the next steps in your education?
8. Are there any further comments you would like to make?

**Interview Wrap-Up:**

*Thank you for your participation today and the insights you have provided. After I have listened to the recording and transcribed what you have said, I may have some further questions for you in order to clarify what you have said.*

At the end of the interview, students will be dismissed to return to class.

**Researcher’s Initial Reflections:**

- **Comments:**

- **Reflections:**

- **Questions:**

**Interview Follow-Up:**

- After interviews have been recorded, a word-for-word transcription will be typed.
- Previously-assigned pseudonyms will be maintained throughout the interviews, observations, research, and reporting.
- Transcripts will be read for confirmation of concepts or themes from the first round of interviews, as well as any new concepts or themes emerging from the second round of interviews for the process of coding and analysis.
- Transcripts will also be read and analyzed to determine any gaps in information or additional questions that need to be asked for content or clarification.

---

**Interview Three**

*Note:* Round three interviews will only take place if there is a need to clarify a student comment. Interviews will take place in the same location and under the same parameters, but will likely not occur with all student participants.

**Background Interview Data**
Thank you again for attending this interview and your participation in this study. I will be video-recording this interview, as well as taking notes to help me remember important information or additional questions I would like to ask. Your confidentiality will be maintained throughout this process by assigning you a pseudonym. Additionally, I will be the only one viewing these materials. If at any time you feel uncomfortable with this process or wish to withdraw your participation, please let me know. That is completely acceptable and will not negatively affect you in any way.

I have asked you here today for this interview so I can clarify what you meant in your previous interview. This will help me better understand what you said and to make sure I do not misrepresent you in the research.

Are there any questions before we begin?

Interview Set-Up:
- All interviews will take place in the teacher’s classroom, a location familiar to the students.
- Interviews will consist of only 1 student.
- Interviews will be video recorded from start to finish.
- Interviews will take place during school hours so no transportation burdens will be places on students or parents.
- Interviews will last long enough to clarify comments or question, but no longer than 30 minutes.

Round Two Interview Questions:
There is no set list of questions for this round of interviews. Questions will be precipitated by the comments previously made by students. These questions are intended to clarify comments made by students in their earlier interviews and will pertain specifically to the comments or observations they have made.

Interview Wrap-Up:
Thank you for coming back to add more clarity to your comments about your experience with
gifted education. Your insights have been valuable and will help me in writing up the research.

At the end of the interview, students will be dismissed to return to class.

Researcher’s Initial Reflections:
   Comments:

   Reflections:

   Questions:

Interview Follow-Up:
   • After interviews have been recorded, a word-for-word transcription will be typed.
   • Previously-assigned pseudonyms will be maintained throughout the interviews, observations, research, and reporting.
   • Transcripts will be read for confirmation of concepts or themes from the first rounds of interviews, as well as any new concepts or themes emerging from the second round of interviews for the process of coding and analysis.
### Appendix C: Observation Protocol

<table>
<thead>
<tr>
<th>Site and Observation Data</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Date:</td>
<td>Subject/Classroom:</td>
</tr>
<tr>
<td>Site:</td>
<td>Grade Level:</td>
</tr>
<tr>
<td>Time:</td>
<td># of gifted students observed:</td>
</tr>
</tbody>
</table>

### General Observations

<table>
<thead>
<tr>
<th>General Observations</th>
</tr>
</thead>
<tbody>
<tr>
<td>General description of observed classroom lesson and activity:</td>
</tr>
</tbody>
</table>

### Observations of Targeted Gifted Students

<table>
<thead>
<tr>
<th>Observations of Targeted Gifted Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description of engagement of identified gifted students:</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Description of overall student engagement:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identify observation of any of the following:</td>
</tr>
<tr>
<td>_____ critical thinking activities  (describe;)</td>
</tr>
<tr>
<td>_____ authentic assessment/activity                   (describe;)</td>
</tr>
<tr>
<td>_____ differentiated activity (describe:)</td>
</tr>
<tr>
<td>_____ other (describe:)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Description of instructional techniques:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reflective Notes</td>
</tr>
<tr>
<td>------------------</td>
</tr>
<tr>
<td><strong>Researcher’s comments on what seems to be occurring:</strong></td>
</tr>
<tr>
<td><strong>Connections to student interview comments:</strong></td>
</tr>
<tr>
<td><strong>Interpretations:</strong></td>
</tr>
<tr>
<td><strong>Questions to self:</strong></td>
</tr>
</tbody>
</table>
### Appendix D: Student Definitions of Academic Challenge

<table>
<thead>
<tr>
<th>Student</th>
<th>Definition of Challenge</th>
</tr>
</thead>
</table>
| Student A | - Work that pushes you to get an A  
- Forces you to do extra work besides just what is given |
| Student B | - Something that’s difficult to do but not impossible |
| Student C | - Harder than the usual  
- keeps out boredom  
- expands mind beyond simple stuff |
| Student D | - Something I am not very aware of so when I try to do it it is hard for me  
- Makes me think  
- Pushed outside your comfort zone |
| Student E | - When you actually find out your work is hard and you have to actually work at it rather than do nothing and get a good grade |
| Student F | - Whether or not I am having a hard time doing things  
- Feel like I am learning versus things just coming very easily to me |
| Student G | - Taking what you have learned and making it more complicated  
- Figuring something out based on what you have learned, but not automatically knowing it |
| Student H | - it’s personal and varies |
| Student I | - Pushing you to the limits |
| Student J | - Extra work for your brain to do  
- Prepares you for next steps |
| Student K | - Harder than you’re used to |
| Student L | - How much you are pushed in your classes to go farther |
| Student M | - How much it stimulates you and how much you have to work for it  
- Pushes you to succeed |
| Student N | - being something you are able to do, but you actually have to try at it |
| Student O | - go outside the normal content/lesson  
- hard, but not extremely hard |
| Student P | - makes you think and have to go deeper; searching for an answer  
- thinking outside the box |
<table>
<thead>
<tr>
<th>Student</th>
<th>Definition of Challenge</th>
</tr>
</thead>
</table>
| Student Q | - pushed to learn more  
|          | - learn quicker                     |
| Student R | - working harder                   |
### Appendix E: Student Perceptions of the Level of Challenge Provided in Honors-level Classes

<table>
<thead>
<tr>
<th>Student</th>
<th>Honors ELA</th>
<th>Algebra / Honors Math*</th>
<th>GATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student A</td>
<td>4</td>
<td>6</td>
<td>8.5</td>
</tr>
<tr>
<td>Student B</td>
<td>5</td>
<td>6.5</td>
<td>8.5</td>
</tr>
<tr>
<td>Student C</td>
<td>7</td>
<td>5.5</td>
<td>8</td>
</tr>
<tr>
<td>Student D</td>
<td>7</td>
<td>5.5</td>
<td>8</td>
</tr>
<tr>
<td>Student E</td>
<td>4</td>
<td>7</td>
<td>8</td>
</tr>
<tr>
<td>Student F</td>
<td>3.5</td>
<td>5</td>
<td>8</td>
</tr>
<tr>
<td>Student G</td>
<td>4.5</td>
<td>2</td>
<td>7.5</td>
</tr>
<tr>
<td>Student H</td>
<td>6</td>
<td>8</td>
<td>10</td>
</tr>
<tr>
<td>Student I</td>
<td>7</td>
<td>5*</td>
<td>10</td>
</tr>
<tr>
<td>Student J</td>
<td>7</td>
<td>6*</td>
<td>9.5</td>
</tr>
<tr>
<td>Student K</td>
<td>5</td>
<td>6</td>
<td>8</td>
</tr>
<tr>
<td>Student L</td>
<td>0</td>
<td>5</td>
<td>8.5</td>
</tr>
<tr>
<td>Student M</td>
<td>7.4</td>
<td>6*</td>
<td>8.9</td>
</tr>
<tr>
<td>Student N</td>
<td>4</td>
<td>7</td>
<td>8</td>
</tr>
<tr>
<td>Student O</td>
<td>2</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>Student P</td>
<td>6</td>
<td>8</td>
<td>9.5</td>
</tr>
<tr>
<td>Student Q</td>
<td>3</td>
<td>4.5</td>
<td>6.5</td>
</tr>
<tr>
<td>Student R</td>
<td>4.5</td>
<td>7</td>
<td>8</td>
</tr>
</tbody>
</table>

*Note.* * denotes students in 7th Grade Honors Math, rather than Algebra.
## Appendix F: Ranked Student Perceptions of the Level of Challenge in Honors-level Classes

<table>
<thead>
<tr>
<th>Student</th>
<th>Honors</th>
<th>Algebra / Honors Math*</th>
<th>GATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student A</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Student B</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Student C</td>
<td>2</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Student D</td>
<td>2</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Student E</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Student F</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Student G</td>
<td>2</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Student H</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Student I</td>
<td>2</td>
<td>3*</td>
<td>1</td>
</tr>
<tr>
<td>Student J</td>
<td>2</td>
<td>3*</td>
<td>1</td>
</tr>
<tr>
<td>Student K</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Student L</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Student M</td>
<td>2</td>
<td>3*</td>
<td>1</td>
</tr>
<tr>
<td>Student N</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Student O</td>
<td>2</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Student P</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Student Q</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Student</td>
<td>Honors</td>
<td>Algebra / Honors Math*</td>
<td>GATE</td>
</tr>
<tr>
<td>---------</td>
<td>--------</td>
<td>------------------------</td>
<td>------</td>
</tr>
<tr>
<td>R</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

Note. * denotes students in 7th Grade Honors Math, rather than Algebra.

<table>
<thead>
<tr>
<th>Ranking of Difficulty</th>
<th>Honors</th>
<th>Algebra / Honors Math*</th>
<th>GATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 as 1st</td>
<td>0 as 1st</td>
<td>18 as 1st</td>
<td></td>
</tr>
<tr>
<td>7 as 2nd</td>
<td>11 as 2nd</td>
<td>0 as 2nd</td>
<td></td>
</tr>
<tr>
<td>11 as 3rd</td>
<td>7 as 3rd</td>
<td>0 as 3rd</td>
<td></td>
</tr>
</tbody>
</table>
### Appendix G: Student Perceptions of Challenge and Critical Components of Academic Challenge

<table>
<thead>
<tr>
<th>Student</th>
<th>Want</th>
<th>Why</th>
<th>Ever had</th>
<th>Too much</th>
<th>Coop-erative</th>
<th>Auth-entic</th>
<th>Crit-ical</th>
<th>Pace</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student A</td>
<td>+ / -</td>
<td>- Interferes with other things - Skills for future</td>
<td>GATE</td>
<td>No</td>
<td>+</td>
<td>+</td>
<td>+/-</td>
<td>+/-</td>
</tr>
<tr>
<td>Student B</td>
<td>+</td>
<td>- But not at risk of grade - Prepared for college</td>
<td>GATE Math</td>
<td>No</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
</tr>
<tr>
<td>Student C</td>
<td>+</td>
<td>- Able to learn a lot; Fun</td>
<td>GATE</td>
<td>No</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Student D</td>
<td>+</td>
<td>- Makes me think - Problem-solve</td>
<td>GATE</td>
<td>No</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Student E</td>
<td>+</td>
<td>- Get ready for future</td>
<td>GATE</td>
<td>No</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Student F</td>
<td>+</td>
<td>- Get ready for future</td>
<td>Math GATE</td>
<td>No</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+/-</td>
</tr>
<tr>
<td>Student G</td>
<td>+</td>
<td>- Want to feel like I’ve earned the grade - Keeps me engaged</td>
<td>GATE</td>
<td>No</td>
<td>+/-</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Student H</td>
<td>+</td>
<td>- Something to strive for</td>
<td>GATE</td>
<td>No</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Student I</td>
<td>+</td>
<td>- Feel like I’m learning - Not bored</td>
<td>GATE</td>
<td>No</td>
<td>+/-</td>
<td>+</td>
<td>+/-</td>
<td>+</td>
</tr>
<tr>
<td>Student J</td>
<td>+</td>
<td>- Prepares for next step - Not bored</td>
<td>Some</td>
<td>No</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Student K</td>
<td>+</td>
<td>- Keeps interest - Get smarter</td>
<td>GATE</td>
<td>No</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Student L</td>
<td>+</td>
<td>- Learn more - Get smarter</td>
<td>Rare</td>
<td>No</td>
<td>+/-</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Student M</td>
<td>+</td>
<td>- Pushes to succeed</td>
<td>Some Yes</td>
<td>Yes</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>---------</td>
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<td>-----------</td>
<td>--------------</td>
<td>-----------</td>
<td>----------</td>
<td>------</td>
</tr>
<tr>
<td>Student N</td>
<td>+</td>
<td>- Feel like you’re progressing</td>
<td>GATE</td>
<td>No</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Student O</td>
<td>+</td>
<td>- I have to be here for 7 hours</td>
<td>GATE</td>
<td>No</td>
<td>+/-</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Student P</td>
<td>+</td>
<td></td>
<td>GATE SS</td>
<td>No</td>
<td>+/-</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Student Q</td>
<td>+</td>
<td>- Get smarter</td>
<td>GATE</td>
<td>No</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Student R</td>
<td>+</td>
<td>- Want to stand out</td>
<td>Math SS GATE</td>
<td>Once</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
</tbody>
</table>
Appendix H: Statement of Original Work

The Concordia University Doctorate of Education Program is a collaborative community of scholar-practitioners, who seek to transform society by pursuing ethically-informed, rigorously-researched, inquiry-based projects that benefit professional, institutional, and local educational contexts. Each member of the community affirms throughout their program of study, adherence to the principles and standards outlined in the Concordia University Academic Integrity Policy. This policy states the following:

Statement of academic integrity.

As a member of the Concordia University community, I will neither engage in fraudulent or unauthorized behaviors in the presentation and completion of my work, nor will I provide unauthorized assistance to others.

Explanations:

What does “fraudulent” mean?

“Fraudulent” work is any material submitted for evaluation that is falsely or improperly presented as one’s own. This includes, but is not limited to texts, graphics and other multi-media files appropriated form any source, including another individual, that are intentionally presented as all or part of a candidate’s final work without full and complete documentation.

What is “unauthorized “assistance?

“Unauthorized assistance” refers to any support candidates solicit in the completion of their work, that has not been either explicitly specified as appropriate by the instructor, or any assistance that is understood in the class context as inappropriate. This can include, but is not limited to:
• Use of unauthorized notes or another’s work during an online test
• Use of unauthorized notes or personal assistance in an online exam setting
• Inappropriate collaboration in preparation and/or completion of a project
• Unauthorized solicitation of professional resources for the completion of the work.

I attest that:

1. I have read, understood, and complied with all aspects of the Concordia University-Portland Academic Integrity Policy during the development and writing of this dissertation.

2. Where information and/or materials from outside sources has been used in the production of this dissertation, all information and/or materials from outside sources has been properly referenced and all permissions required for use of the information and/or materials have been obtained, in accordance with research standards outlined in the


Noelle Regan

3 October 2017