

**EFFECTS OF GIFTED AND TALENTED PROGRAMS ON STANDARDIZED
TEST SCORES OF FOURTH GRADE STUDENTS IN TWO SCHOOL DISTRICTS**

by

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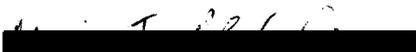
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CERTIFICATION OF PROJECT WORK

We, the undersigned, certify that this project entitled, "Effects of Gifted and Talented Programs on Standardized Test Scores of Fourth Grade Students in Two School Districts" by Melinda J. Ruggiero, Candidate for the Degree of Master of Science in Education, Curriculum and Inclusive Instruction, is acceptable in form and content and demonstrates a satisfactory knowledge of the field covered by this project.


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Abstract

Gifted and Talented (G/T) programs have been implemented in many school districts for a number of decades. In that time, these programs have sought to improve academic and intellectual abilities of students with unique gifts and talents. Unfortunately, these programs have often been surrounded by problems such as insufficient funding, inadequate professional development, limited program availability, and excessive rules and regulations. In addition, there is little research to support specific academic, intellectual, and/or interpersonal benefits that such programs have produced. This is particularly true with regard to improved student achievement. This investigation compared the performance of two groups of 4th grade students, one of whom received G/T services and the other who did not, on New York State ELA test scores. Results indicated that 4th grade students enrolled in a program for Gifted and Talented students received higher average test scores on the 2010-2011 New York State English Language Arts (NYSELA) exam than those students in a similar district with comparable grade averages who did not participate in a program for Gifted and Talented program. Implications for research and practice are discussed.

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Introduction

Programs for students who are gifted and talented are a valuable and often scarce resource in many elementary schools. They are designed for students capable of high performance in one or more of the following areas (a) intellectual ability, (b) creative and productive thinking, (c) leadership skills, (d) visual and performing arts, (e) specific ability arts, and (f) psychomotor arts (Harrington, 2001). Gifted and Talented (G/T) programs allow students and teachers to pursue topics and ideas at greater depth; to go outside of their curricula limits; and to take part in creative, in-depth activities or projects with a smaller group of peers (O'Donovan, 2007). According to Callahan, Scot, and Uruquhart (2009), these programs should attend to the unique characteristics of students while simultaneously challenging them at an appropriate level.

While G/T programs are designed to benefit students with high potential, many questions surround the overall effectiveness of these programs. The investigator's professional experiences as both a student teacher and volunteer in programs for the gifted and talented have suggested that many programs can provide academic and interpersonal benefits, if they are implemented appropriately. It is also important, however, to anticipate and prepare for any potential negative outcomes that may be associated with the use of G/T programs. One particular area for concern involves the use of standardized test scores in the identification of students for G/T programs and to evaluate educational outcomes from such experiences. This study, therefore, focuses on the use and impact of standardized test scores in programs for students with gifts and talents.

If positive correlations can be found for participation in G/T programming, then school leaders may have tangible "evidence" to support their use. This is particularly important in light

of the fact that many schools are reducing or eliminating their use of G/T programs. Evidence to support the effectiveness of such programs may prevent this from happening. One supporter of G/T programs explained that gifted students are often overlooked because they are *ahead* of their peers academically; however, if their talents are not recognized, they may not reach their full potential (Sack, 2001). This study addresses the very basic question, “Do students who participate in G/T programs have higher standardized achievement test scores than those students in similar districts who do not participate in G/T programs?” An affirmative answer to this question should support district policies and may produce additional financial support for their use.

Literature Review

Programs for the gifted and talented have been carefully scrutinized since their early beginnings in the 1920’s. Educators, researchers, and school leaders have long questioned the purposes, organization, effectiveness, and occasionally the moral value of such programs. The need for some sort of special programs for those who were already “ahead” of their normally developing peers has always been challenged by some in our American society (Gallagher, 1994). Even so, many researchers suggested that gifted and talented programs were commonly overlooked and underappreciated in our educational system. The purpose, design, and effectiveness of these programs, therefore, are legitimate arenas for research if they are to be used in our school systems.

This illustrative literature review: (a) describes the multiple purposes of G/T programs, (b) provides a brief historical perspective on their development and implementation, and (c) discusses the current status of G/T programs in contemporary American schools. Additionally,

the review describes implementation-related issues such as funding, program evaluation, and professional development.

Defining Students with Gifts and Talents

The terms “gifted” and “talented” have been difficult to define for educators, researchers, and the general public. Given such ambiguity in definition, it is not surprising to see that state and local education agencies have developed numerous ways for identifying children with gifts and talents. According to the U.S. Office of Education under Public Law, 91-230, section 806, gifted and talented children are capable of high performance in *one or more of the following areas*: (a) intellectual ability, (b) creative and productive thinking, (c) leadership ability, (d) visual and performing arts, (e) specific ability areas, and/or (f) psychomotor ability (Harrington, 2001). With such diverse criteria, one might assume that the term “gifted and talented” represents a rather heterogeneous group of learners. Harrington (2001) reported, however, that about three to five percent of school-aged students were gifted and talented and surprisingly, 95% of these students were gifted in terms of their intellectual abilities. As such, the remaining 5% represents pupils in one of the other six G/T categories (Harrington, 2001). These data suggest at the very least an imbalance in representation of those who are classified as gifted and talented; an imbalance that does not appear to be consistent with the U.S. Department of Education’s official definition of the terms.

Renzulli (1978), a leading scholar in G/T research and practice, offered a *three-prong* conception of giftedness. To him, students with gifts and talents possessed three general traits: (a) above average ability, (b) task commitment, and (c) creativity. Renzulli (1978) explained that any definition of giftedness that, “does not give equal attention to all three clusters is simply

ignoring the results of the best available research dealing with this topic” (p.5). He also warned that defining giftedness narrowly (e.g., high IQ or academic achievement alone) will limit the number of areas that are deemed as eligibility and programming factors. For example, if one does not consider task commitment or creativity to be important components of giftedness, then there would be no need to create measures to assess these competencies and/or educational practices to enhance them. High academic abilities alone cannot define giftedness and/or the programs that are developed to cultivate their development. All school districts must provide school leaders, teachers, and parents with a clear and comprehensive definition of giftedness and describe explicitly the multiple criteria for determining acceptance into these programs (O’Donovan, 2007). It is important to note, however, that defining and identifying students as gifted and talented does *not* ensure that children will either: (a) receive “special” services for their gifts and talents (e.g., placement in a G/T program) and/or (b) that such services will, in fact, improve their educational outcomes.

Historical Perspectives on G/T Programming

The history of G/T programs, like other special education services, emerged from a general belief that some students differ to a point that they require “special” educational services (Heward, 2009). It is widely known and accepted in education, for example, that no two pupils learn the same way or at the same pace. It is vital for teachers, therefore, to accommodate all students in their learning by *differentiating* instruction based upon pupil needs. The idea of differentiated instruction was developed for teachers to help students take greater responsibility for their own learning by meeting their individual learning styles (Bailey & Williams-Black, 2008). Bailey et al., explained further that, “differentiated instruction provides educators with a

tool to help students fit within-the-cracks instead of falling-through-the-cracks in order to become successful individuals in today's society" (p.134). Differentiated instruction was designed to help all students reach their full potential; not just those who fall behind or need special education services. Those students who already exceed grade level expectations should be afforded a similar opportunity to maximize their potential.

While many students fall behind in school, many other students are not maximizing their educational potential as well. These students often do quite well academically, yet they are not pushed to exceed their current performance. According to Callahan et al., (2009) educators may be more focused on raising test scores of lower-performing students than challenging their gifted and talented students. It is important to consider, for example, that many G/T programs were started initially to meet the needs of gifted learners, while simultaneously challenging them to maximize their potential (Callahan et al., 2009). Although formal programs for students with gifts and talents did not emerge until the 19th Century, the profession's study of gifted individuals has been around for much longer. The first study of *high ability* humans, for example, was credited to Sir Francis Galton who published *Hereditary Genius* in the 19th Century (Gallagher, 1994). Once the existence of individuals with gifts and talents was recognized formally by the professional community, the need to provide educational support was not far behind. The need for G/T programs was recognized as early as the 1860's. In 1868, for instance, William Torrey Harris designed an educational system in which students were given early or accelerated grade promotions for displaying outstanding academic ability. This initial attempt to meet the individual needs of higher performing students recognized a need to let them progress at their own rates. Identification of who was really "gifted and talented" was impeded

however, by a lack of appropriate assessment measures and/or tools to decide who would be eligible for these special programs (Jolly, 2009). It wasn't until the early parts of the 20th Century that notable progress was made toward gifted and talented programs. The development and widespread use of standardized intelligence tests (e.g., Stanford-Binet Test of Intelligence) was one particularly important event that promoted the use of such IQ tests as tools to identify and classify individuals as gifted and talented. Other important contributors to the movement to serve students with gifts and talents were Leta Stetter Hollingworth and Lewis Terman, early pioneers in gifted education (Jolly 2009). During the early portions of the 20th Century, Hollingworth and Terman dedicated their lives to defining gifted and talented individuals, describing their unique learning characteristics, and developing school-based guidelines for serving these individuals effectively (Jolly, 2009). Unfortunately, not much progress was made in gifted education over the decades spanning the Second World War and its aftermath (i.e., 1940-1960). However, in the late 1950's, gifted education finally got the attention it warranted as a result of the Sputnik launching. The United States recognized immediately the need to improve our educational systems, particularly in the areas of science and mathematics (Gallagher, 1994). U.S. Congress passed legislation in the form of the National Defense Education Act (NDEA), to provide better education for "talented" youth (Jolly, 2009). This act was a huge stepping stone for gifted and talented education. The NDEA was the first *federal* legislation to finance education-related services for "talented" youth. A report in 1960 claimed that NDEA authorized over \$1 billion in four years towards scholarships, loans, and fellowships to aid students who were academically capable, but without financial means to pursue higher education (Jolly 2009). This act promoted growth in gifted education programs well into the 1970's. In 1974, the 93rd Congress created the

Office of Gifted and Talented in the U.S. Office of Education. This office provided: (a) grants for local and state education agencies to support G/T programs, (b) research and training, and (c) the National Clearinghouse for gifted students (Gallagher, 1994). Collectively, research findings indicate that children who are gifted and talented require *special* services that are not normally provided in general education classrooms (Gittman & Koster, 2000). Such G/T programs have benefited students with gifts and talents, and their importance and necessity must be recognized and appreciated.

Not all contemporary school districts serve the gifted and talented in the same way. In fact, identification and classification requirements, service delivery models (i.e., pull out versus push in), curricular models, and instructional practices vary substantially from site to site. For instance, only 32 of 50 states even mandate the formal identification and classification of students as gifted and talented, and only 29 require that such youngsters be provided with gifted and talented programs (Fine, 2001). Some professionals have argued, therefore, that a set or common curriculum must be established at state and/or local levels to assist in program development (Mulhern & Morris, 2001). Some schools also employ G/T coordinators to guide program development and evaluation. Services for students with gifts and talents are also provided in many different ways. In elementary schools, for example, common G/T practices include cluster-group arrangements (i.e., homogeneous and heterogeneous) in classrooms, “pull-out” programs offered on a part-time basis, and/ or full-time programs and schools for the gifted and talented. At the high school level, G/T programs often consist of Advanced Placement and honors-type courses, as well as acceleration and early admissions to college (Callahan et al.,

2009). The utility of programs for the gifted and talented students can only be enhanced by the use of important screening and identification criteria.

Role of Intelligence (IQ) testing

For students to be considered for G/T programs, they must first be formally identified and classified as being in need of “special education” services (Heward, 2009). It is important that these identification procedures be accurate, reliable, and fair to all students. It is important to understand, however, that there are no absolute “right” and “wrong” answers in these areas and as such, there are wide variations in local practices. Initially, the only criterion for identification and classification as “gifted and talented” was through the use of standardized, individual intelligence testing (Heward, 2009). A minimum IQ of 130 was used, for example, almost exclusively as a criterion for admission to G/T programs in the early years (Harrington, 2001; Jolly, 2009). As early as the 1930’s, however, Hollingworth acknowledged that, “giftedness could manifest itself in diverse ways” (Jolly, 2009). States may also vary in terms of how many different kinds of tests must be given when assessing pupils for admission to G/T programs (Harrington, 2001). In 2005, New York City announced a new city-wide approach to the education of gifted and talented students in elementary schools. Students were now screened using the Otis-Lennon School Ability Test and the Gifted Rating Scales (O’Donovan, 2007). Given longstanding concerns about the use of intelligence tests, particularly among culturally and linguistically diverse pupils, many school districts have also included teacher nominations as another assessment approach (Harrington, 2004).

Teacher nominations

Teacher nominations can be important tools for accurately identifying students for acceptance into programs for the gifted and talented. After all, classroom teachers are often intimately familiar with their students' academic and/or interpersonal needs from direct daily contacts. Some school districts provide teachers with formal rating scales to nominate pupils for G/T programs (e. g., Mann, Moore, Siegle, & Wilson, 2010). Teacher nominations were believed to, "provide a window into the classroom performance of the child which a test does not illustrate" (Mann et al. 2010; p.338). However, there is also quite a bit of controversy surrounding the use of teacher nominations as a primary criterion for identification. An early empirical investigation, for example, indicated that teachers were not very accurate or reliable in identifying students with IQ scores of 130 or more (Gagne 1995). In a more recent study though, Gagne reported that teachers were just as effective as other forms of identification for gifted students. Much of the variability in identification and classification may stem as well from competing and often ambiguous definitions of giftedness. Be that as it may, without a clear definition, teachers must rely on previous trainings, experiences, and/or stereotypes to recommend their students (Mann et al., 2010). Current researchers suggested that the most accurate and reliable way to identify pupils for G/T programs is through the use of multiple measures that include: (a) standardized intelligence and achievement test scores, (b) pupil portfolios, and (c) teacher nominations (O'Donovan 2007).

Gifted and Talented Program Models

While considerable concerns remain regarding identification and classification practices, many students continue to enter programs for the gifted and talented. As one can imagine,

G/T programs vary dramatically in terms of curriculum, instructional practices, and service delivery models. One of the earliest forms of G/T programming involved *acceleration*; the practice of allowing students to move through curriculum at a faster pass than their normally developing peers. This often came in the form of grade skipping, telescoping the curriculums, and/or early entrance into college. Concerns emerged, however, about the potential negative effects of acceleration on pupils' social development. As a result, acceleration became less popular and prevalent in the 1960's and 1970's (Jolly, 2009).

In contrast, Renzulli (1978) advocated for a "revolving door" concept in which students were placed in flexible groups with highly-trained teachers. This model combined a variety of enrichment activities including field trips, assemblies, problem-solving skills, and interest based projects or tasks (O'Donovan, 2007). Some districts implemented instruction through lectures, laboratory work, guest speakers, writing, drama, chorus, the environment, as well as visual arts (Mulhern & Morris, 2001). One common form of G/T programming was the pull-out model for instruction. Here, students were usually "pulled out" of their general education classes to be taught for full periods of time (e.g., 90 minutes twice per week) by specially trained teachers of the gifted and talented. In this model, children were often grouped by grade level and provided special curriculum materials and activities that were geared to their interests and intellectual competence (Gittman & Koster, 2000). Another common strategy particularly in elementary schools is *enrichment* programs. Enrichment programs were designed to allow students to stay in class with their peers, but also take part in instructional activities that stretched their thinking and problem-solving skills beyond their curricula. Unfortunately, general education teachers often

have difficulty finding the time and materials to enrich learning activities for some of their students (Jolly, 2009).

Societal and Institutional Issues

Given wide variations in assessment and instructional practices associated with programs for the gifted and talented, it is not surprising that all types of programs varying considerably in quality have emerged across the United States. It is important, therefore, for state and local school leaders to ensure that their G/T programs are aligned properly with federal and state standards, and that their curricula and teaching practices are evidence-based. According to Cruziero, Lewis, and Hall (2007), gifted and talented programs must be held to the same rigorous standards as their general education counterparts. That is, all teachers must be highly qualified to work with students who have particular gifts and talents.

There are a number of other important issues associated with G/T programs such as funding, teacher certification requirements, and curriculum design. Programs for the gifted and talented are subject to multiple sources of pressure, however, financial costs is one of the most common (Mulhern & Morris, 2001). Addressing Congress on the issue of a lack of funding for gifted programs, Peter D. Rosenstein, Executive Director of the National Association for Gifted Children, noted that Congress had finally recognized the needs of gifted children (Sack, 2001). Through the ESEA reauthorization bill, provisions were made to a new state grant program focused specifically on students with gifts and talents. As of 2001, G/T programs were supported almost exclusively by the 22 year old Jacob K. Javit's Gifted and Talented Students' Education Program (Sack, 2001). In that same year, \$7.5 million of a total 46.7 billion dollar federal education budget, a small percentage in comparison, was provided for research on gifted

education; a paltry .01% by comparison (Fine, 2001). Due to state differences, inconsistent funding and programming levels vary from state to state. In 2000, for example, Mississippi spent a total of \$26 million on gifted education programs, while Massachusetts reportedly spent only \$437,970; a very surprising finding indeed (Fine, 2001). Professionals in gifted education have long felt ignored by the federal government, feeling that they were not receiving the funding and benefits that their students and programs rightfully deserved (Fine, 2001).

Districts with financial struggles might consider enrichment programs as initial efforts to assist students with gifts and talents. According to Mulhern and Morris (2001), districts should seek ways to first strengthen their general education classrooms, for example, by using resource teachers to work with students who were gifted and talented. Cruziero et al., (2007) argued that principals should be advocates for G/T programs by noting that, “parents, teachers, and the students themselves are important advocates of gifted education; however, without the support of a school principal’s support, services for the gifted learners will continue to be disjointed and piecemeal at best” (p.62). Due to the design of No Child Left Behind (NCLB) law, Callahan, et al., (2009) explained that the present state compliance for federal support is conditional on the results of an accountability system, performance on standardized tests, and the meeting of yearly progress expectations. Finding proof that G/T programs help students achieve higher scores on standardized tests might help districts in receiving additional funding.

Teacher Issues

Districts that have G/T programs in place with professionally-trained teachers and confirmed academic progress among students also face issues with program implementation and evaluation. Creating clear, accurate, and fair identification procedures is a critical first step

towards building a gifted and talented program. District leaders must select professionally-trained teachers to work with gifted and talented students and provide, appropriate and evidence-based curricular materials and instructional strategies, as well as all necessary support. Before the push for G/T programs, there was not one single staff member in any state department education program who was assigned to the education of gifted students in the 1950's (Jolly, 2009). By the 1960's, 11 states including California, Hawaii, Illinois, Minnesota, New York, North Carolina, Ohio, Oregon, Rhode Island, Tennessee, and Washington hired full- or part-time gifted program directors. By 1965, almost half of all state departments had someone assigned to G/T directorships (Jolly, 2009).

In another fairly recent article, the Editor of *Gifted Child Today* noted another concern regarding teacher training requirements. Johnsen (2007) argued that most certification tests teachers must pass to be considered "highly qualified" do *not* require a direct measure of teaching practice. More importantly, teacher preparation for working with the gifted and talented was almost nonexistent in teacher training colleges (Jolly, 2009). In a survey done in 1958, for example, less than 4% of 800 college courses dedicated time to learning about G/T programs at both the graduate and undergraduate levels. Many universities provided these types of educational experiences during summer and professional development workshops, leaving the majority of teacher training in gifted education to the school districts and teachers themselves (Jolly, 2009). Even if teachers become highly qualified to teach students with gifts and talents, they still must figure out how to differentiate their instruction to reach *all* of their students.

In addition to finding trained teachers, NCLB has put immense pressure on educators to maintain high standards and performance for all students and to ensure that they move smoothly

from one grade to the next (Johnsen, 2007). Many educators argued that NCLB forgot about students with gifts and talents by narrowing the curricular focus on struggling students instead. Fine (2001) argued that, “They (gifted students) need and deserve a challenging and appropriate education. If the federal government is going to say it has the responsibility to leave no child behind, then that includes those who are more advanced than their age peers.” Some researchers feel that the NCLB Act has “obliterated” gains in G/T programs. By increasing accountability and narrowing the curricular focus, the needs of gifted students were often not met (Jolly, 2009).

Student Issues

While struggling learners can be a source of stress and frustration among teachers, they may be equally distressed by the fact that many students with gifts and talents do not work up to their potential either. It can be argued that these students deserve the same amount of motivation, attention, and support services as their academically struggling peers. As stated previously, gifted and talented programs come in many forms (Gittman & Koster, 2000). Gittman and Koster (2000) suggested that having students in pull-out G/T programs for one full day per week was too much time out of the classroom. Students who were labeled gifted and talented and attended such pull out programs reported difficulties in keeping up with their general education classroom work. Gittman and Koster (2000) concluded that, “To succeed in the large enrichment group setting and also keep up with studies in the regular classroom placement despite their absence for one full day each week, students must be capable and motivated” (p.3). Renzulli (1978) supported this conclusion by noting that “...it takes motivation and commitment for talented students to produce high quality work” (p.70). In addition, discussions in gifted programs typically involve more “out of the box” thinking, rather than the classroom curriculum (Johnsen,

2007). In their general classrooms, teachers are pressured to focus primarily on those skills assessed on high stakes assessments (Johnsen, 2007). Pulling students out of their general classrooms may also interfere with their learning and performance on standardized tests. The intended purpose for gifted and talented programs was for students to receive special services that were not normally provided within their general classrooms (Gittman & Koster, 2000).

The need for G/T programs has been evident for many years; unfortunately the programs have been too few and far between (Jolly, 2009). The differences in teacher qualifications and nominations, curricula, funding, and requirements all cause confusion among the G/T community. Much research on G/T programming discusses the need for such programs but fails to provide evidence to support their efficacy. More information and research is needed in the field of gifted education to ensure further opportunities for our gifted and talented students. Gifted and talented students must be pushed academically and intellectually; they have the potential but we must provide the opportunities to grow. By building research and information on gifted programming and creating highly effective G/T programs, professionals and advocates may increase the acceptance and approval of G/T programs within districts nationwide.

The purpose of this study, therefore, was to answer the basic question, “Do students who participate in a program for the gifted and talented earn significantly higher scores on state-mandated, high stakes exams (NYSELA) than a comparable group of students who were not enrolled in a G/T program?” To address this question, the investigator conducted a descriptive study that examined pupil performance on the New York State ELA over the past academic year. To assess the impact of G/T programs, pupil test scores were compared statistically to determine if there was a significant effect on pupil performance.

Method

Participants and Settings

Participants consisted of 30, fourth grade students enrolled in two different elementary schools in Western New York. Fifteen students from each district were chosen as participants based on their academic achievement and participation or lack thereof in Gifted and Talented programs. One elementary school (School A) was located in a suburban area while the other (School B) was in a rural setting. Both elementary schools were categorized as “similar districts” (i.e., Group 15) according to the New York State Department of Education’s School Report Card (NYSDOE, 2009). Group 15 classification indicates that elementary schools in respective districts have *average student needs in relation to district resource capacity*. As such, both districts were rated as having sufficient resources to meet their pupil needs; neither district was characterized as being “high needs”.

School A was a suburban, elementary school with an existing, “pull out” program for students with gifts and talents. The elementary school was one of four in the district and contained approximately 236 students, 44 of whom were enrolled in two 4th grade classes. Average class size in the building was approximately 22 students. Eighty-six percent of students were Caucasian and the remaining 14% were Hispanic, Native –American, African American, and Asian-American respectively. Thirty-four percent of School A students were eligible for free and/or reduced meals and there were no students who were limited English proficient. Most School A students met New York State learning standards by earning scores of 3 or 4 on the mandated, high stakes exams (e.g., ELA, mathematics, and science). For 4th graders, the focus of this study, ELA scores for the previous school year indicated that approximately 53% scored at

or above Level 3. In addition, out of the 45 total students tested, 4% scored at the Advanced Level 4.

School B was a rural elementary school that did not have a G/T program. School B was the only elementary school in the district and had about 237 total students and 45 fourth graders. There were two classes per grade level with approximately 18 students per class. Sixty-three percent of 4th grade students scored at or above Level 3 on their ELA exams. This was about 10% more students than School A. About 85% of School B students were Caucasian with remaining students identified as Hispanic, African-American, and Asian-American respectively. In terms of ethnic diversity, both school districts appeared to be equally diverse. Thirty-one percent of School B students were eligible for free and/or reduced meals. As of 2011, both schools within the school district were listed as being in good standing in ELA, Math, and Science. Sixty-one percent of 4th graders scored at or above Level 3 on the ELA exam the previous year and 2% of students scored at the Advanced Level 4.

Students were selected as “participants” based upon their initial academic standing and performance on the NYS English and Language Arts (NYSELA) exam. NYS ELA scores for 4th grade students from both School A and School B were examined for the past academic year (i.e., 2010-2011). Fifteen students from both comparison schools were selected based on the following criteria: (a) teacher nominations as “above average”, (b) performance on group and/or individual intelligence tests, and (c) enrollment in a program for gifted and talented students (i.e., School A pupils only). General education teachers from School A relied heavily on teacher nominations when selecting their students to participate in a program for gifted and talented learners. An IQ score of 130 or above is a common indicator that students will qualify to participate in a program

for the gifted and talented, but other factors such as maturity, responsibility, and cooperation are also taken into account when nominating students. Pupils with IQ scores below 130 have been inducted into the school's program in the past, but they must display advancement in some other area such as creativity and/or leadership. In School B, the district without a G/T program, students were chosen based solely on teacher nominations/suggestions. Recent IQ scores were not readily available in this district. General education teachers based their decision to nominate 15 students based on overall grade averages, responsibility, and maturity levels. Student test scores on the state's high stakes ELA exam were then compared to determine if noticeable differences existed in their achievement levels as a function of participation or lack thereof in a program for the gifted and talented.

Comparison Schools and Programs

The school's G/T program at School A was developed and implemented by two itinerant teachers with master's degrees in gifted education who worked in all four elementary schools. As such, they traveled from school to school throughout the week. Both teachers developed the existing curriculum collaboratively and tried to use similar instructional activities and projects. G/T services were provided through "pull out" services that were offered for approximately two hours per week. Curricular activities focused on higher-order thinking, guiding students to acquire creative thinking strategies, becoming more familiar with multiple types of abilities and exploring topics at deeper levels. Students were also expected to develop skills in leadership, team work, problem solving, decision making, technology, organization, and critical thinking. School A's program for gifted and talented students was based around Joseph Renzulli's *Three Ring Conception of Giftedness*. Students were expected to complete research projects to expand

their knowledge and investigative skills. Students in the gifted and talented program did not receive a letter or number grade rather they got a participation report. Participation reports highlighted skills that students demonstrated along with areas in which they had opportunities to grow.

School B participants were also nominated by their classroom teachers as above average and they had comparable scores on their initial NYS ELA assessments. The difference, however, was that these students were not enrolled in a program for the gifted and talented. Instead, they continued to attend their general education classes with their normally developing peers. There was no evidence that any of the “creativity” and “inquiry-based” activities were used routinely by their general education teachers. Students from School B were taught lessons in English Language Arts (Reading, Phonics, and Grammar) and Mathematics every school day. On average, the general education teacher spent 1.5 hours on English Language Arts and one hour on mathematics. In addition, lessons in science, social studies, and health were rotated throughout the week allocating about 2 hours to each of the three subjects per week. Other than the program for gifted and talented students, students from both School A and School B were purported to have similar school experiences and education.

Data Collection and Analysis

Both schools supplied standardized student achievement data (i.e., New York State English Language Arts) on 15 above average, 4th grade students. Students were chosen as participants based on teacher nominations and grade point averages. All 15 students from School A had participated in the school’s pull-out Gifted and Talented program during the 2010-2011 academic year for approximately two hours per week. Participants from School B were chosen

based on teacher nominations and grade averages. School B did not have a program for gifted and talented students, so classroom teachers chose 15 students that they felt would qualify to participate in a G/T program had their district implemented one. The following scoring standards were developed for the New York State English and Language Arts (NYSELA) assessment measure. Students receiving scores between 637 and 668 were placed at Level 2; Level 3 was assigned for students receiving scores between 668 and 720; and Level 4 was given for students scoring 720 and higher. Students' ELA data were aggregated by school and are presented in tabular fashion.

Results

Aggregated achievement data for participants in the two target schools can be seen in Table 1. As depicted, 4th grade students enrolled in a program for Gifted and Talented students received slightly higher mean test scores on the 2010-2011 New York State English Language Arts Examination than their counterparts in a similar district who did not participate in a program for Gifted and Talented learners. The mean difference in performance, however, was only four points (i.e., School A = 682 versus School B = 678) and was not statistically significant. Any conclusions about the superiority of G/T programming based on these data, therefore, are not warranted at this time. Further analysis of pupil performance indicated that 10 of 15 students from School A scored at Level 3 while five others scored at a Level 4. All 15 students, therefore, earned "passing grades" on the NYSELA. In contrast, 11 pupils in School B earned Level 3 scores and three others got Level 4 ratings on the same exam. One pupil scored at Level 2 which is not considered to be a passing score. School A had no students at Level 2 and had two more students than School B (five versus three) placed at Level 4.

Discussion

Results of the present study indicated that 4th students enrolled in similar school districts but with different instructional programs (i.e., G/T program versus no G/T program), earned comparable mean scores on the New York State high stakes exam during the 2010-2011 school year. Although test scores were not dramatically different, School A students did score slightly higher than their peers in a comparable setting but without G/T programs. As noted, these differences were not statistically significant. As such, they cannot be used as empirical support for Gifted and Talented programming. On the other hand, the G/T program did not appear to have any adverse effects on pupil performance despite the fact that they were often “pulled out” of general education classes in order to participate in the program. Moreover, it is not clear that the state’s high stakes exams even “captured” the types of knowledge and skills that are taught in the G/T program. It is quite possible therefore, that pupils enrolled in the G/T program did develop new knowledge and skills that were not measured by the high stakes assessment.

There are a number of reasons why the G/T program in the present study did not produce more robust improvements in pupil performance. First, the program was only a part-time intervention. It’s quite possible that a more robust program (e.g., full-time) would produce more noticeable differences in pupil performance. As noted earlier, it is also possible that the current G/T program was developing skills and knowledge bases that were not assessed by the NYSELA. This is particular true if lessons focused primarily on problem-solving, creative thinking and leadership skills. One would not expect substantial change on measures that do not routinely tap such skill sets. A third possible explanation for failing to find significant differences is that students in the comparison schools may have received equally effective instruction within

the context of their general education classes. As such, it would be quite challenging to disentangle the effects across the two settings. Failure to find noticeable differences may have also been a product of differing ways of identifying and nominating pupils for participation in the program. While one might expect teacher nominations to reflect high achievement levels e.g., Jolly, 2009; Moore et al., 2010), it was surprising to see that one pupil in School B actually earned a failing score on the NYSELA. Obviously, future research should more carefully analyze the nature of instruction provided both within and outside of G/T classes. Finally, it is also possible that the current G/T program simply did not produce more noticeable effects on study participants. In this instance, opponents of G/T programming may have some fodder for their arguments.

There were also some procedural issues that may have contributed to the failure to find meaningful differences in pupil performance. The initial plan, for example, was to collect data for a minimum of 40 students from two separate school years across multiple school years. Unfortunately, the number of potential participants was reduced at the building level. Moreover, one teacher participant was unable to provide test scores from the previous year (i.e., 2009-2010) in order to compare results. Without sufficient data from both teachers, potential performance comparisons were limited to only one academic year. Two years of achievement data would provide a more robust and meaningful data set for comparison and contrast.

Despite these procedural difficulties, the Gifted and Talented program in School A has a strong history of service. There appeared to be student, teacher, and parental support for the program in the absence of formal achievement data. This speaks to the *social validity* or acceptability of the program within the target school district. It could be that the program is

sustained through advocacy and administrative support. Whether such support will be sufficient to withstand the increased scrutiny of contemporary accountability assessment practices remain to be seen. For students to receive the full benefits from Gifted and Talented programs, more research must be done to document empirically their impact on pupil learning. All students have the right to reach their full potential; those with gifts and talents should be no exceptions. With more attention and focus within the field, these programs may be resurfaced and reestablished, for the benefit of all students.

Although the potential for gifted and talented programming may be great, there were a number of limitations to present findings that warrant some discussion. First, the study included a relatively small sample size from one geographic location and at one grade level. Future research should include more students who are also more representative in terms of ethnicity, geographic location, and age and grade levels. Similarly, present findings were limited by the use of only one outcome measure; the New York State English and Language Arts (NYSELA) exams. As suggested, pupil outcomes in gifted and talented research should examine multiple outcomes (e.g., intellectual, achievement, affective, and creativity) rather than achievement alone (e.g., Gallagher, 1994; Renzulli, 1978). Not only was one outcome collected but it represented only one academic domain, literacy); future research should examine multiple areas of academic performance, as well as other outcome variables mentioned above. A third study limitation involved the use of only one year of achievement data. More rigorous investigations would include multiple years of academic achievement data in addition to multiple academic disciplines. A fourth area of concern involved the nature of the two instructional programs that were contrasted in the present investigation. Future research should collect much more

information regarding what was done specifically within each treatment condition. Obviously, this would involve more teacher interviews and perhaps direct observations of both G/T and general education classrooms. Ultimately, one must know what goes on in contrasting settings and conditions to ensure that they represent truly distinct instructional arrangements. If no noticeable difference exists in the nature of programming, then this may explain why significant differences were not found in outcomes. If observational differences in programming do appear, then this information would also be useful in discussing why such differences were not found.

In conclusion, the present study reported findings on 15 fourth grade pupils from two similar schools; one with a program for the gifted and talented and one without a comparable program. An analysis of pupil achievement outcomes from the most recent high stakes assessment revealed very similar performance for both groups, although those who received G/T services scored slightly higher than their counterparts. While the data did not provide definitive support for the current G/T program, it did suggest that students currently attending this program as at least holding their own in comparison to those who did not receive similar services. In other words, it wasn't doing them any harm academically. In addition, social validity data suggested that pupils, teachers, and parents found the program to be benefit. More rigorous data would permit greater support for such convictions.

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Table 1 shows the NYSELA Scores for Participants for Academic Year 2010-2011.

School A		School B			
Students	Standard Scores	Levels	Students	Standard Scores	Level
1	671	3	1	671	3
2	671	3	2	674	3
3	696	4	3	696	4
4	674	3	4	674	3
5	687	3	5	696	4
6	680	3	6	674	3
7	681	3	7	687	3
8	690	4	8	665	3
9	680	3	9	680	3
10	661	3	10	691	4
11	687	3	11	671	3
12	674	3	12	687	3
13	696	4	13	656	2
14	691	4	14	674	3
15	696	4	15	674	3
Mean	682		Mean	678	
Range	661 to 696	10 Level 3 5 Level 4	Range	656 to 696	11 Level 3 3 Level 4

