

THE INS AND OUTS OF THE GIFTED PROGRAMS: ONE AND THE SAME?

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A Thesis Submitted in Partial Fulfillment of  
the Requirements for the Degree of Master of Arts in Political Science  
to the office of Graduate and Extended Studies of  
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## **ABSTRACT**

A Thesis Submitted in Partial Fulfillment of the Requirements for the Degree of Master of Arts in Political Science to the office of Graduate and Extended Studies of East Stroudsburg University of Pennsylvania.

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### **Abstract**

The tech gurus and Nobel Prize winners of the 21st century are not former gifted students, yet they overachieved against the odds. This study addresses this anomaly and examines the effectiveness of gifted programs from the end point, when gifted students are in their professional careers or fields of study rather than its source, when they are waiting to be identified. With this new perspective of analysis, an online survey was conducted in Delaware Valley and Greater Nanticoke school districts. The goal was to evaluate the long-term impact of gifted programs in terms of their needs and purposes. Thirty-one respondents shared their experiences (n=31). Findings show evidence of satisfaction while indicating a negative long-term impact. This contradiction reveals a new need; work ethic in instructional methods of teaching. The emergence of an ethical capital opens the door to a 21st century educational system.

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## CHAPTER I INTRODUCTION

In 2017, a senator argued “But .03 cents on every dollar spent on education for a program with little impact is simply too much to ask. Tell me what has gifted education ever given to general education” (Danielan, 2017). He was considering whether or not to vote for a \$20 million funding toward the Jacob K. Javits Gifted and Talented Program; the only federal program supplementing state and local institutions through research for the nation’s 3.2 million gifted students. Does this factor alone account for the ineffectiveness of gifted programs?

Over the past centuries from Binet’s concept of mental age to Spearman’s concept of general intelligence and to Welcher’s intelligence scales, measuring intelligence has raised controversy. These multiple metrics might promise academic achievement but they do not guarantee professional success, which brings forth this research question: do students’ enrollment in gifted programs translate into professional careers or fields of study that value their needs and fulfill their purposes?



Over the recent years, a paradigm shift has occurred with effectiveness at its epicenter. Gifted programs that once were the core agents that helped create a better society, are now useful tools in the hands of society. The pressure to pin the label gifted on a college application in a culture of intense competition has set new challenges. With a decentralized system that delegates responsibilities to other entities and with a scholarly field that resists any attempt to meet their needs, gifted students are left on their own, vulnerable, and secluded.

Today, the lack of contributions on this subject (Robertson et.al, 2011) do not undermine its significance since it affects future generations. Explaining why an increasing number of not gifted students over-achieve against the odds mean erasing assumptions. Most scholars presume that analyzing the effectiveness of gifted programs means focusing on the identification criteria. The purpose of this study is to examine the shift in the effectiveness of gifted programs from its end point, when gifted students look back at their experiences, rather than its source, when gifted students are awaiting to be identified. With this new perspective, the focus is now primarily on former gifted students that are 18 years old or older or their parents. The key objective is to highlight the strengths and weaknesses of gifted programs by having a retrospective outlook. Two school districts, Delaware Valley and Greater Nanticoke, agreed to promote the online survey on their websites and social media accounts for two weeks. Adopting a quantitative research design helped gather specific data for an in breath and in depth understanding of the effectiveness of gifted programs.

The following chapter reviews the literature by summarizing and assessing the findings of previous scholars. The third chapter explains the rationale for adopting a quantitative research design and the process of gathering data. The fourth chapter describes the results with tables and figures. The fifth chapter discusses the implications while enunciating some limitations. The last chapter presents the contributions of this research.

## CHAPTER II LITERATURE REVIEW

### **Introduction**

According to the Nobel Foundation database, the U.S. leads the world in Nobel nominations (4922) and Prizes (336). In 2018, six Americans won the Nobel prizes in the field of economics, physiology, chemistry, and science, yet none of them were qualified as exceptionally gifted. Only 13 high school gifted students, from the prestigious Westinghouse Science Talent Search won Nobel prizes since its foundation in 1942. Why?

The concept of giftedness is multidimensional, and its application fosters the problem of identification. Giftedness incites different theoretical frameworks among scholars, such as Gagné's differentiated model, which distinguishes giftedness and talent, and Renzulli's three ring conceptions, which are above average ability, creativity, and task commitment (Gagné, 1995; Renzulli, 2003). Giftedness also comes with a variety of definitions that differ from the federal government, the school districts, and the states. The U.S Department of Education has modified the definition of giftedness several times

since the Marland Report of 1972. Today, the reauthorized Every Student Succeeds Act reads that “students, children, or youth who give evidence of high achievement capability in areas such as intellectual, creative, artistic, or leadership capacity, or in specific academic fields and who need services or activities not ordinarily provided by the school in order to fully develop those capabilities” (ESSA, 2015). The lack of a universal definition, federal mandate, and direct funding create diverse identification policies not only among states but also within the school districts of a state. Multiple or specific identification criteria varies among school systems. Therefore, a child can be identified as gifted in one school district yet not meet the criteria in another. The Davidson Institute database provides an extensive and detailed information categorizing the types of support gifted programs receive in each state, which can range from fully mandated and funded to having no mandate nor funding (Davidson Institute, 2018). The complex and intricate phenomenon of gifted programming calls for a literature review, that will explain the process of enrollment based on two approaches that are proficiency rates and differential learning rates and then assesses the outcomes based on each approach. Lastly, it will show the need for effectiveness since both methods still share similar challenges while offering different possibilities, that can act as stimuli for new policies.

### **The Process of Enrollment**

The traditional measure of intelligence, Stanford-Binet, which is an adaptation of the Binet-Simon intelligence scale originated in France, determines the enrollment in gifted programs that is based on proficiency rates. Lewis Terman, the pioneer of “the

measurement of intelligence” in the United States, has utilized cognitive ability assessment tests to launch the longest and oldest longitudinal study of gifted students (Terman, 1925). This 95-year comprehensive analysis of gifted or “termites” attempts to uncover causal connections between Intelligence Quotient (IQ) and life achievement. Intelligence Quotients are scores on intelligence tests that can vary from 90 to 110, with 100 as the median score, and above 130 considered as exceptional, and below 70 prone to mental retardation. Sir Francis Galton (1869), the father of empirical psychology, was the first to introduce the concept of general mental ability. Spearman labeled it the g factor “which is responsible for overall performance on mental ability tests” and developed a statistical technique to extract the common g factor, which he refers to as “mental energy” (Spearman, 1904). Jensen followed Spearman’s footsteps confirming his hypothesis; the g factor is valid, reliable, and influenced by heredity rather than by social environment. He concludes that assessment tests are culturally unbiased, therefore the g factor is a practical predictive power of life achievement (Jensen, 1980). Most researchers accept the evidence of a positive correlation between IQ and real-world outcomes. Divergence among scholars emerged regarding the strength of the relationship. Proponents concur that IQ is the main predictor of occupational outcomes (Gottfredson, 2003). Critics argue that IQ is not as significant as other variables such as parental socio-economic status (Strenze, 2007). The predictive validity of IQ tests is contested. This could partially explain what the U.S. Department of Education (1993) called “the quiet crisis” in gifted education. Gifted programs that give prevalence to tests preparations, remediation, and strict curriculum are of disservice to gifted students who

fail to feel challenged thus dropping out. Poor teacher training and lack of counseling contribute to this phenomenon of underachievement (Reis & Renzulli, 2010). The concept of giftedness when narrowed down to proficiency rates generates an “intellectual capital” that lack challenges, whereas broadened to differential learning rates creates a “social capital” that rise to the challenges (Renzulli, 2012). Giftedness is no longer limited to general intelligence (g) with its standardized tests.

The new approach measuring intelligence is based on aptitudes, what the student is capable of learning, rather than achievements, what the student has learned previously. The enrollment process comes with a series of school evaluations. David Welscher, an American psychologist developed the Wechsler Intelligence Scale (WISC) in 1955. The most recent version, WISC 5, is administered in public schools for children between the ages of 6 and 16 years old and provides, not only a full-scale IQ score, but also scores for 5 specific domains of cognition.

In less than 100 years, a shift has occurred in the selection procedure with greater emphasis on specific abilities and individual differences, which account for different educational needs. The concept of individuality in gifted students is multidimensional, but their multipotentiality is contested. School counselors often endorse the concept of multipotentiality, which is the ability of gifted students to excel in more than one field, to justify gifted students’ poor decision making in career choices. However, empirical findings show that multipotentiality is not the core issue, but that traditional methods of vocational assessment are inappropriate tools (Lubinski, 1996; Achter et al., 2016). Intelligence is no longer measured as a single entity. An array of scholars recognized that

everyone possesses multiple intelligence. Gardner's theory of multiple intelligences identified eight of them; musical, spatial, logical-mathematical, linguistic, bodily kinesthetic, intrapersonal and naturalist ( Bornstein & Gardner, 1986). Sternberg emphasized the importance of practical intelligence; the ability to respond effectively to difficult situations, and developed measures of tacit knowledge, that are independent from intelligence tests scores (Sternberg, 1985). Goleman introduced the concept of emotional intelligence, with empathy as the main attribute for effective leadership (Cherniss & Goleman, 2001). Albercht asserts that social intelligence is the ability to get along with others while winning their cooperation. In this era of technology, social competence is a need that comes with a set of five competencies; situation awareness, presence, authenticity, clarity, and empathy (Albercht, 2006).

Today our educational system mostly applies math and verbal Scholastic Aptitude Test assessment (SAT) and too often neglects the use of Differential Aptitude tests to measure spatial reasoning. A study of intellectually precocious youth shows that the ability to mentally manipulate 2d and 3d objects helps to determine gifted students' future accomplishments (Lubinski et al., 2006). Nonetheless, gifted education recognizes the importance of differentiation and domain specific abilities. But how do they apply these concepts in the area of curriculum? Through acceleration, which is a form of intervention that helps gifted students feel challenged in school. Implementing acceleration is the pathway where the nation stops being "deceived" about its presumed negative impacts, such as lack of socialization, and starts being "empowered" by its great results, such as STEM based curriculum ( Science, Technology, Engineering and

Mathematics) (Colangelo et al., 2004; Assouline et al., 2015). The advantages of STEMs programs in public education are numerous since they help students enter the workforce, develop the necessary skills for their career choices and goals, and promote equal opportunity between males and females. Even though some disadvantages exist, such as promoting an elite class, the benefits still outweigh the costs (White, 2014). For most scholars “the focus here is on giftedness as a developmental process” (Subtonik et al., 2011). In this study the focus here is on gifted programs as an incremental progress.

How much of an impact the two different approaches have on real world successes? An assessment of the outcomes based either on proficiency rates, and differential learning rates will offer some clarification.

### **The Assessment of Professional Outcomes**

When talent identification is based on proficiency rates, the goal is achievement. It is a short-term desirable outcome. Gottfredson distinguishes between proximal or short-term outcomes, which are related to on the job performance, and distal cumulative outcomes, which are associated with levels of occupations. The g factor plays an influential role in the hierarchy of occupations. The more prestigious and complex the profession, the higher the range of IQ (Gottfredson, 2002). Consequently, achievement tests serve their purpose as measuring tools assessing students’ performance, determining ways to enhance curriculum, and allocating funds. However, undesirable outcomes surface in the long term. The tentacles of accountability reach the teachers and the school administrators, who must answer to the students test scores. A recent study shows evidence of a correlation between increased spending in low income school districts and



students performance ( Lafortune et al., 2018). Conversely, another study concludes that there is “not a statistically significant correlation” between the Colorado district funding level and standardized test scores (Izard, 2016). The debate is still out about the influence of school funding on achievement tests. It is undeniable that test-based accountability increases the amount of pressure in the educational system, bringing with it a set of challenges. The constant focus on accountability system with the achievement tests is detrimental to the principle of equity, which states that all students have equal educational opportunities. The 2001 No Child Left Behind Act, federal education policy, attempts to close the achievement gap between low income minority students and higher achieving and less disadvantaged students. Many studies have shown the negative impact of performance driven accountability on educational equity, except for Texas; an outlier (Lee & Wong, 2004). The switch, from a performance-based approach to “eminence-focused gifted education”, is a move forward, where equity takes a stand (Grantham, 2012).

When differential learning rates prevail in the educational system, the goal is eminence or excellence. Differentiation is defined as “a matter of presenting the same task in different ways and at different levels, so that all students can approach it in their own ways" (Irujo, 2004). Indeed, differentiation takes many forms, such as advanced placement, the international baccalaureate program, grade skipping, curriculum compacting etc... The outcomes are deemed desirable in the long term. Implementing different teaching and learning strategies promote self-efficacy and improve motivation

among students. The Fullerton Longitudinal Study, a four-decade investigation of motivational giftedness from childhood through adolescence, shows that the development of intrinsic motivation influences life course outcomes. Stimulating motivation at school and at home will improve its continuity throughout adulthood (Gottfried et al., 2006). Other studies have shown that differentiation not only benefits high achieving students who find themselves more challenged with differentiated curriculum instruction, but also provides students with disabilities the opportunity to learn through targeted instructions (Tieso, 2005; Mc Quarrie et al., 2008). The equitable access to curriculum is a non-negligible factor. The variety of instructions shows the importance of curriculum choice and the flexible nature of differentiation. But the complexity of differentiated curriculum, which requires modification of the regular curriculum by constant adjustment process, exposes deficiencies in its implementation (Lunsford, 2017). Teachers, that are grouping students who share similar abilities, express some concerns about the practicality of differentiation. Can too much differentiation become counterproductive? This study agrees that acceleration is necessary but points out that, when gifted students transition into their professional careers, restraint is mandatory. The habit of acceleration in the academy could backfire in their vocational careers where restraint is preferred. Therefore, to avoid crashes when merging into the highway of occupations, it is deemed cautious to slow down and ease into the profession where teamwork is more valued than stardom. Acceleration and restraint are seen as opposite forces but they do share a point of convergence in this instance. What are the short-term undesirable outcomes of differential learning rates? It starts in the classroom. Teachers bear the burden of

multitasking by teaching and managing various groups at different levels in a limited time which makes differentiation less efficient. A few alternatives exist such as training teachers but it is time consuming. Attracting and recruiting more teachers is also difficult because of low salaries. Differentiation is synonym of change and is often met with resistance. However, when adaptation sinks in, differentiation can bring great results.

Implementing differentiated instruction requires teachers to change their behaviors and attitudes, while acknowledging the everyday school problems, like absenteeism, classroom sizes and workload (Brighton et al., 2005). Evidence shows that the benefits of individualized talented programs outweigh the costs (Booij et al., 2016). Hope is on the horizon with the Every Student Succeed Act (ESSA) that recently gave more authority to the states to implement improved systems of accountability measures and the opportunity to design plans based on performance. But to be truly effective more needs to be done.

### **The Need for Effectiveness**

Both approaches share similar challenges, such as equity. The lack of equity or the “under representations of the socio economically and ethically disadvantaged students in gifted education has its sources of unfair identification practices” (Gagné, 2011). A recurrent issue that is not only specific to gifted education but that also expands to other fields. Gagne claims that the meritocratic system based on past performance is the answer to inequity. Benbow argues that excellence and equity can coexist when individual differences are part of the equation (Benbow & Stanley, 1996) Indeed, it is crucial to

avoid the amalgam between equality of access and equality of results, which could be detrimental to the effectiveness of gifted programs.

Both approaches come with different possibilities, where proficiencies and individual student growth can join forces rather than stand alone in their uniqueness. Proficiency rates are a valuable concept for teachers, as they set common standards and minimum expectation for students' performance, whereas growth targets encompass all learning levels and acknowledge how teachers impact students learning. School districts are responsible to choose which approach best fit their local needs. The American Institute of Research emphasizes the need for growth that helps set meaningful goals for students and teachers alike (Lackhan-Haché & Castro, 2015). Outcomes differ depending on schools' policies, which also reflect different perspectives. Can a new perspective emerge from this literature review? Changing perspective means gifted students are not perceived through the lens of the development of their potential which is an under realized ability (Subtonik, 2003). They are examined according to their capacities, meaning the ability to accomplish a goal based on something that exists and is recognized. The goal is for gifted children to realize their full capacities. Such a scope of study justifies evaluating the effectiveness of gifted programs at the point of impact, professional careers or fields of study, rather than at its source, enrollment.

What are *professional careers* or *fields of study*? A profession is defined as a paid occupation that is “service oriented” and requires education and training. A career encompasses an individual work's life and is “growth oriented” (Surbhi, 2018). The former is more specific to what one does for a living, whereas the latter is broader and

linked to a person's decisions and personality traits. Gifted students have noble professions but seem to encounter difficulties in their career decisions and development. According to the Oxford dictionary (n.d.) a field of study is defined as “a branch of knowledge”. Gifted students faced similar challenges when selecting a field of study in a college or university.

Do professional careers or fields of study *value their needs*? Gifted students have intellectual, social, self-directional, and emotional needs that gifted programs strive to meet (Neihart, 2002; Halsted, 2009). As grown-ups, they answer to different stakeholders like corporations which either do not value gifted students' needs or prioritize their own. The nature of the organization is a determinant factor when evaluating the needs of the gifted. A pioneer work on leadership presents four needs of an organization: body, heart, mind, and spirit, which means survival, relationships, growth and development, integrity and contribution (Covey, 2008). The goal is to match the needs of the organization with the needs of the gifted.

Do the professional careers or fields of study *fulfill their purposes*? Merriam-Webster Dictionary (n.d.) defines to fulfill as to make whole. Purpose originates from the Old French “proposer” meaning proposal or a proposition. Goal originates from the Middle English meaning limit or boundary. A goal is precise, directional, and limited in time whereas a purpose is conditional and not limited in time. A purpose is an inner motivation and a goal is the action required for it to happen. Both are intertwined. It is difficult to achieve a goal if it is not aligned to one's purpose. The literature review is loquacious on goals but silent on purposes. According to the NAGC, gifted programs

provide curriculum goals “to ensure that student’s learning needs are met”, “promote critical thinking and reasoning abilities.” An emphasis on goals and how to reach them through school funding and equal opportunities come at the cost of “values education.” Implementing strategies that promote ethical behavior or character education is fundamental for the livelihood of gifted programs. Character education is defined as “teaching children basic human values including honesty, kindness, generosity, courage , freedom, equality and respect” (Berkowitz, 2005). The capacity of gifted students to act not only intellectually, socially but also ethically would assure the true effectiveness of gifted programs.

### **Conclusion**

This literature review is organized chronologically and also grouped into two specific themes. The primary goal is to show the evolution from one approach (proficiency rates) to another (differential learning rates). The ultimate goal is to highlight the benefits and costs of each approach which calls for the need for effectiveness. Recurrent names surged when reading scholarly works; Renzulli, Lubinski, and Subtonik. It indicates a lack of research and a hunger for novel ideas. It also explains why this study offers a new perspective and attempts to forge a new path in evaluating gifted programs. Having effective gifted programs not only requires curriculum goals but also specific strategies where purposes are addressed. Gifted students’ main interests should be aligned with their career goals rather than society goals determining their interests. Addressing this issue means choosing a specific method of analysis. The next chapter presents the underlying reasons for a quantitative methodology.

## CHAPTER III METHODOLOGY

To reiterate the purpose of this research, which is to examine the long-term impact of gifted programs on the professional careers or fields of study of former gifted students, is to help the reader understand the rationale of the methodology used. First, this chapter provides an explanation for selecting a quantitative research design. Second, it shows how the data were collected, and third how they were analyzed.

### **A Quantitative Research Design**

The researcher did not choose a qualitative methodology and arrived at this conclusion by the process of elimination. The techniques of investigation for a qualitative methodology have many flaws. They are invasive, costly, and time consuming. Indeed, conducting interviews or content analysis of documents come with a series of challenges not suited for this academic research. Moreover, the subjective nature of qualitative data opens a Pandora box of interpretations that minimize the accuracy of the results (Rahman,2017). Interviews not only introduce implicit bias from the interviewer but also

is conducive of bias from the interviewee who can manipulate the information. Scientific rigour is paramount in this study and numeric data are best fitted to evaluate the long term impact of gifted programs. Even though the researcher opted for one qualitative question, it had the advantage to provide detailed information and attempt to achieve a balance in the formulation of the research design. The goal is not to annihilate one method for another but to select specific elements that are appropriate for this research.

Also, most scholars choose a quantitative research design when analyzing gifted education. A study reports that out of 697 articles, 234 or 33.6% were quantitative, 99 or 14.2% were qualitative and 36 or 5.2% were mixed methods. The same article shows that descriptive statistics are the norm when summarizing and interpreting quantitative data in this particular field (Warne et al., 2012). This thesis will follow this tradition by using descriptive statistics and applying a quantitative methodology. Indeed, numeric data provides objective and accurate results that serve the purpose of this study.

#### **Data Collection: Online Survey**

The researcher created an online survey, which was the preferred instrument for this study, and used SurveyMonkey for the design. This cloud based software program offered a list of pre-selected options known as multiple choice questions. For the sake of reliability, the researcher opted for a five-point Likert scale or rating scale which has the advantage to increase the response rates while reducing the “level of frustration” of the respondents (Babakus & Mangold, 1992). In this case, it brings clarity by determining the scope and direction of the impact of gifted programs and allows for comparisons by gathering the opinions of former gifted students and their parents.



For the sake of validity and accuracy, this survey gives respondents an answer option or a comment field for every question. The goal is to avoid any bias in the results. This added feature gives a greater degree of nuance, therefore a greater detail of data analysis. Anonymity is another element of rigour. Survey Monkey provided the settings to collect anonymous data. No identifiable data were collected, consequently it was impossible to link any individual to their survey responses. If this study would have conducted interviews instead of an online survey, anonymity of the respondents would have been difficult to maintain, which validates the choice of an online survey design.

The online survey is a versatile tool since respondents can take the survey wherever and whenever it is convenient for them. It can also reach specific groups. In this instance, the targeted population are male or female gifted students that are 18 years old or older or their parents. They are the appropriate units of analysis since they can provide valuable and accurate information about the long-term impact that gifted programs had or have on their professional careers or fields of study. The aforementioned characteristics of inclusion criteria suggest that anyone under the age of 18 years old or students that are not gifted will be immediately disqualified. Most importantly, prior to recruiting any potential respondents, the East Stroudsburg University Institutional Review Board (IRB) for the Protection of Human Rights reviewed and approved this research (See Appendix A). The IRB verified that this study did not include any obvious risks or discomforts and that it did safeguard the privacy and confidentiality of the respondents. Additionally, all information collected in this study was for the sole purpose of writing this thesis and remained anonymous. Prior to taking the survey, an electronic consent form asked online

respondents if they were 18 years old or older and if they agreed to participate in this study. These 2 required questions determined the eligibility criteria. Also, respondents did not receive any compensation. Overall, this research met the ethical guidelines of East Stroudsburg University (ESU) and gathered all the required signatures.

Specifically, the purpose of this survey was to collect data about the opinions and experiences of former gifted students or their parents. Two school districts, Delaware Valley School District and Greater Nanticoke School District, each signed permission letters for conducting the online survey. There were no other alternative to gather information without seeking first their consent. They were able to choose between three methods of recruitment; either by including a surveylink in their email distribution list or posting it on their social media accounts or on their official websites. Delaware Valley School District posted the survey link on its official website and on social media accounts; Twitter and Facebook. Greater Nanticoke School District posted the survey link on its official website. Both school districts included the following message: “Former gifted students or parents of former gifted students, please take 5 minutes to complete this survey research. Your feedback is important. Thank you!” None of the schools chose to include the survey in their email distribution list.

The survey was launched on October 25 and remained open until November 8. It was accessible for two weeks with 24 questions in all. Two were required; one for the electronic consent form and one for the eligibility criteria. Respondents were given the option to exit the survey at any time during this process if they wished to do so. After having answered two required questions, each respondent, either former gifted students

or their parents, were assigned 11 questions that had the same content but only differed if the subject was addressed directly (Do you?) or indirectly ( Does you gifted child?). The informed consent and the survey were designed with the respondents in mind and with an emphasis on clarity and efficiency (See Appendix C).

Former gifted students or their parents had 10 multiple choice questions and one comment field. This last open ended question not only allowed the respondents to express their opinions but also enhanced the quality of the survey. It gave the opportunity to find common themes and discover new areas of research that would have been missed otherwise. All the questions assess the effectiveness of gifted programs in several categories: level of satisfaction, values, purposes, years of enrollment, and impact.

#### **Data Analysis: Descriptive Statistics**

This study conducted a statistical analysis. The results of this survey were analyzed to examine the impact of gifted programs on the professional careers or fields of study of gifted students but also to highlight if gifted programs implemented strategies that addressed their needs and purposes in the long run.

Descriptive statistics comes with many advantages that fit this particular study. First, it gives a clear statistical explanation of the data. It not only reports the measures of central tendency (the mean, median, mode), and dispersion (standard deviation) but it also allows for the generation of frequency tables and graphs. Second, it reaches a wider audience. Organizing and summarizing the data in a simple and clear manner provides a deeper understanding about the effectiveness of gifted programs and encourages a

widespread dissemination of a subject so often ignored. These benefits outweigh the costs, such as the inability to draw inferences due to the small sample size.

Accurate results come with data preparation. The researcher checked for any missing data before conducting the analysis. Fifty-six respondents answered the survey but, due to incomplete answers, thirty-one respondents were included in the analysis. The total sample size was 31 (n=31). This dataset was exported to an SPSS data file (Statistical Package for Social Science Version 26 ) and security was enforced during the transfer. The responses were then dichotomized between former gifted students and parents of former gifted students. By applying the SurveyMonkey feature skip logic, some answers were left blank because they were not applicable. Therefore, they were recoded and omitted from any analysis. This study used a 5 point Likert scale and most variables were ordinal and a few were nominal such as “Identity” (gifted students or parents of gifted students). With a low response rate, computing 2 variables to create a new one was necessary since many variables were highly correlated and only differed in their wording (Students Years of Enrollment + Parents Reporting Years of Enrollment = Total Years of Enrollment) .

Lastly, the qualitative question was not exported to SPSS. Twenty six answers were grouped and analyzed manually (See Appendix C). Common themes and patterns emerged and categories were built from inductive reasoning. In a nutshell, this chapter explained the reasons for adopting a quantitative methodology, then described the online survey and data collection, and finally showed the benefits for conducting a descriptive

analysis. The following chapter will expose the major results that correspond to the issue of the effectiveness of gifted programs.

CHAPTER IV  
RESULTS

**Quantitative Data: Frequencies and Graphs**

**Table 1.1 Gifted Student or Parent**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid I am a gifted student	10	32.3	32.3	32.3
I am the parent of a gifted student	21	67.7	67.7	100.0
Total	31	100.0	100.0	

Table 1.1 provides information about the number of former gifted students and parents of former gifted students that participated in the survey. The total sample size is 31 or  $n=31$ . The majority of respondents were parents (67.7%) compared to gifted students (32.2%)

**Table 1.2 Comparing Means for Years of Enrollment**

		Gifted Students Years of Enrollment	Gifted Children Years of Enrollment
N	Valid	10	25
	Missing	21	6
Mean		6.70	6.68
Std. Error of Mean		.844	.415
Std. Deviation		2.669	2.076
Variance		7.122	4.310
Minimum		0	0
Maximum		8	8
Sum		67	167

Table 1.2 shows how many years on average former gifted students or gifted children were enrolled in gifted programs. Former gifted students were enrolled in gifted programs for 6.70 years (mean= 6.70) with a standard deviation of + 2.66 years or - 2.66 years away from the mean. Former gifted children were enrolled for 6.68 years (mean=6.68) with a standard deviation of + 2.076 years or - 2.076 away from the mean. The standard deviation for gifted students years of enrollment is slightly greater than the one for gifted children. On average former gifted students and gifted children stayed enrolled in gifted programs between 4 to 9 years. The variance indicates that the data collected for “Years of Enrollment” are more dispersed for gifted students 7.122 than gifted children 4.310. Indeed, a larger number of parents (21) participated in the survey compared to a smaller number of former gifted students (10).

**Table 1.3 Total Satisfaction–Gifted Students and Parents**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Very Satisfied	10	32.3	32.3	32.3
Satisfied	6	19.4	19.4	51.6
Neither Satisfied or Dissatisfied	6	19.4	19.4	71.0
Dissatisfied	6	19.4	19.4	90.3
Very Dissatisfied	3	9.7	9.7	100.0
Total	31	100.0	100.0	

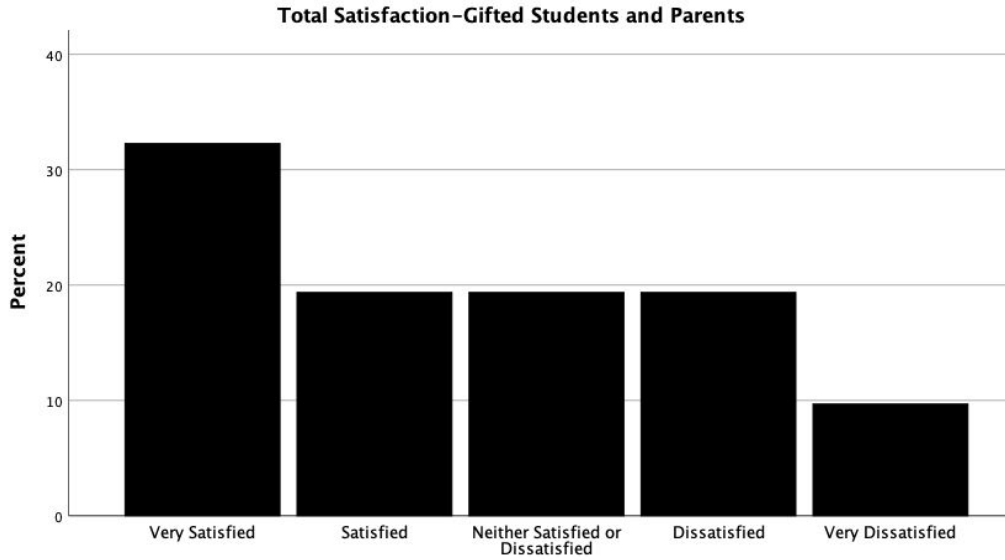
Table 1.3 presents the number of observations to the following question: “How would you rate your experience in gifted programs?” The responses of former gifted students and parents were combined into one. A new variable was created “Total Satisfaction-Gifted Students and Parents” for better statistical analysis. More respondents were very satisfied (32.3%) compared to the ones (9.7%) who were very dissatisfied. Please note that neither satisfied or dissatisfied (19.4%) received the same amount of responses as satisfied and dissatisfied (19.4%).



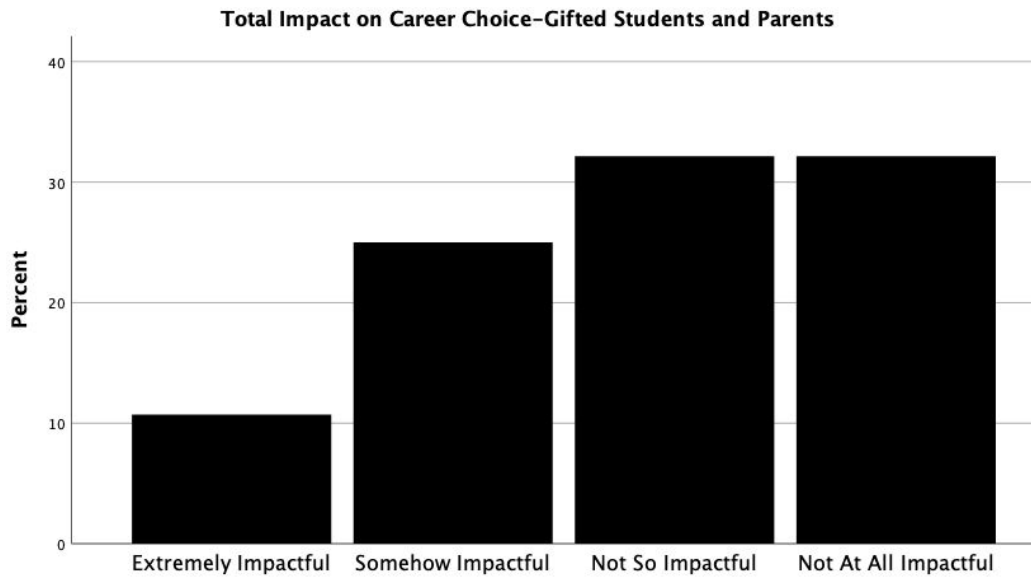
**Table 1.4 Total Impact on Career Choice–Gifted Students and Parents**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Extremely Impactful	3	9.7	10.7	10.7
	Somehow Impactful	7	22.6	25.0	35.7
	Not So Impactful	9	29.0	32.1	67.9
	Not At All Impactful	9	29.0	32.1	100.0
	Total	28	90.3	100.0	
Missing	8.00	1	3.2		
	59.00	1	3.2		
	66.00	1	3.2		
	Total	3	9.7		
Total		31	100.0		

Table 1.4 presents the number of observations to the following question: “How much of an impact did gifted programs have in your choice of career or field of study?” As previously explained, the responses of former gifted students and parents were grouped into one and a new variable was created called : “Total Impact on Career Choice-Gifted Students and Parents”. The majority of respondents reported that gifted programs were not so impactful (32.1%) and not at all impactful (32.1%) corresponding to a total of (64.2%). A minority of respondents considered gifted programs somehow impactful (25%) and extremely impactful (10.7%) consisting of a total of (36.4%). Note three missing values (8, 59, and 66) that were not included in the analysis.



**Figure 2.1 Total Satisfaction– Gifted Students and Parents**



**Figure 2.2 Total Impact on Career Choice–Gifted Students and Parents**

The two bar graphs (Figures 2.1 and 2.2) illustrate the two questions aforementioned. The x axis represents the different rating scales from very satisfied to very dissatisfied for figure 2.1, and from not at all impactful to extremely impactful for figure 2.2. The y axis in both figures show the percentages of respondents.

### **Qualitative Data: One Open Ended Question**

The open ended question was: “Add your comments about the positive or negative aspects of gifted programs in public schools.” Out of 31 responses, there were 20 comments and 6 extra answers regarding other sections of the survey (See Appendix C). A total of 26 answers were synthesized and organized. After conducting a textual analysis, data were grouped into three themes; positive impact, negative impact, and from positive to negative impact.

Nine comments indicated the positive aspects of gifted programs. Terms such as “amazing”, “enjoyed”, “benefited most”, “a bonus”, and “influential” highlighted the advantages of gifted programs.

Nine comments exposed the negative aspects of gifted programs. Terms such as; “useless”, “the programs should be dismantled”, “boring” and “a waste of time” showed the drawbacks of gifted programs.

Eight comments revealed a downward trend where gifted programs once perceived as positive in the early years of education were then viewed as negative in high schools. For example; “The gifted program in elementary was positive..... Middle school was just ok and high school did not exist...”. The next chapter will discuss the implications of these results.

## CHAPTER V DISCUSSION

### **Implications**

Table 1.1 shows that parents predominantly participated in this survey (n =21) compared to former gifted students (n=10). Therefore, caution is exercised when interpreting the results as to not alter their validity. For this reason, two variables labeled years of enrollment of former gifted students and former gifted children were grouped into one. Comparing the two means show the similarities of the two groups (See Table 1.2). Both responded that enrollment in gifted programs lasted between four to nine years. Creating a new variable strengthens the validity of the results and gives a better description when conducting a statistical analysis. In this instance, statistical efficiency is improved since the sample size is now larger (n=31) (Donilcar et al., 2016).

The two new variables (Total Satisfaction and Total Impact on Career Choice) display surprising results when put in contrast (See Figures 2.1 and 2.2). In the first new variable, most of the respondents are very satisfied (32.1%) and satisfied (19.4%) with gifted programs. These results corroborate the findings of previous studies. In a 1994 a

longitudinal study of Mathematically Precocious Youth, Lubinski and Benbow show evidence of a high level of satisfaction of former gifted students. Similarly, another study reveals that gifted students have a strong satisfaction with gifted programs (Matthews and Kitchen, 2007). Since the majority of respondents stayed enrolled in gifted programs for more than 5 years (See Table 1.2), it would be reasonable to deduct that they enjoyed participating in the activities or they would have dropped out.

Conversely, in the second new variable (Total Impact on Career Choice) the majority of respondents view gifted programs as not so impactful (32.1%) or not at all (32.1%). These results (Table 1.4) appear in contradiction with the ones aforementioned where former gifted students report having a high level of satisfaction (Table 1.3). Only one qualitative article has addressed the impact of gifted programs and find that positive outcomes are tainted with concerns of elitism and stigma (Hertzog, 2003). The lack of comparison with previous scholarly articles does not undervalue this study but rather points out to the need for more exploratory research. It shows a gap in a particular section that has not yet been addressed. This thesis hopes to set a trend for more statistical analysis. Future studies should assess the impact of gifted programs and test the relationship between satisfaction and long-term impact. The following hypothesis could serve as a threshold: as the level of satisfaction increases, the long-term impact on gifted programs decreases. In this instance, operationalizing the term satisfaction would determine the validity of the results. However, the last question in the survey provides some insights.

Three categories have been created for the qualitative question: “Add your comments about the negative and positive impact of gifted programs?” The numbers of comments in each category are practically the same and not one category is significantly greater than the other. “Negative Impact” has 9 comments, “Positive Impact” also has 9 comments and “From Positive to Negative” has 8 comments. The results are inconclusive. The new category (From Positive to Negative) presents interesting commentaries. Some recurring statements suggest that an emphasis is placed on younger gifted students enrolled in elementary schools and that a disinterest is visible for older gifted students in high schools. For example, “The middle school program was good and got us involved. Once I got to high school, it felt pointless.” or “Our teachers were very influential. . . Just wish they had continue the program in high school.” Six of the respondents expressed the same idea and highlighted the need for gifted programs in secondary schools as a complement or substitute to Advanced Placement (AP) classes: “. . . high school did not exist due to vast amount spent in AP and honors classes.” A few studies show evidence of a correlation between taking AP classes and college success rate (Klopfenstein and Thomas, 2009). However, in 2007, a public high school in Scarsdale, NY, dropped the curriculum and 11 years later eight private schools followed suit in Washington, D.C. (Jaschik, 2018). Is it time to debunk the myth of AP for new and improved gifted programs implementing effective curriculum? According to a former gifted student: “My best experience was a half day pull out in elementary school with an emphasis on project-based learning.” Engaging in challenging activities and in depth investigations can also be formulated at the high school level.

In summary, the positive comments reflect the benefits of gifted programs in elementary schools and the negative comments show the deficiencies of gifted programs in high schools. More importantly, gifted students' performance is linked to teachers' preferred methods of instruction; a relevant factor when assessing the impact of gifted programs. An example of a negative influence: "Gifted actually failed to teach me about hard work because the teachers would always just inflate our egos...". An example of a positive influence: "He benefited most from the leader who tapped into each child's individual special talents."

Teachers that also demonstrate work ethic are the panacea for effective gifted programs. A few respondents have expressed the need for work ethic: "The best programs connected me to peers while encouraging a growth mindset and work ethic which was difficult to cultivate in the typical classroom where all work was exceedingly easy" or "... I wish I was better taught how to work hard in school. . ."

This study suggests that the effectiveness of gifted programs resides not only in the implementation of specific curriculum that enhances project-based learning but mostly lies in the hands of teachers and their methods of instruction that incorporate work ethic. Further research should examine the relationship between teachers instructional methods and their long-term impact on gifted programs.

### **Limitations**

This study has a few limitations. The first one is the small sample size since it was conducted in only two school districts. The lack of generalization and the lack of responses of former gifted students compared to their parents can weaken the validity of

the results. Reaching special populations such as former gifted students is a difficult task that most researchers have to face. The second limitation is the online survey tool. Comments from the internet are generally strong and represent the extremes which can skew the results. Also, former gifted students or parents that did not have access to the internet or did not have social media accounts were excluded from this study. Voluntary response bias is one of the shortcomings when conducting an online survey on a website or on social media (Visser et. al, 2000).



## CHAPTER VI CONCLUSION

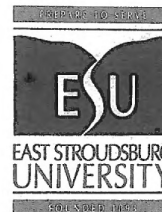
Key findings show that former gifted students or their parents are satisfied with gifted programs even though they do not find them impactful. In the introduction, a senator denounced the “little impact” that gifted programs have. Should this mean dismantling any research or encouraging more? This study favors the latter since it contributes to the literature by offering a new perspective of analysis and by highlighting the influence of teachers and the need for work ethic in education.

Time is of the essence. The 19th century has seen the rise of an “intellectual capital” and the 20th century has developed a “social capital” (Renzulli, 2012). This thesis suggests that the 21st century should establish an ethical capital where hard work, patience, perseverance, and teamwork are the essential tools in producing the game changers of society. Asking relevant research questions is necessary when the goal is to implement effective instructional methods and curricula. The main objective is not to offer vague solutions but to dig deeper into the issue of effectiveness. Understanding a

problem in its entirety dissolves it, while proposing ambiguous answers tend to prolong it (Krishnamurti, 2000). The true effectiveness of gifted programs can only be found in accurate research questions. The following two take a step in that direction: “Which specific curriculum in high schools has a positive or negative impact on the careers or academic fields of former gifted students?” and “How much of an impact do teachers have on gifted students when incorporating work ethic in their methods of instruction?” Analyzing the hearts and minds of former gifted students is not enough without inquiring into their spirits. Building a bridge between ethical and critical thinking would create a new generation of gifted students.

APPENDIX A: IRB APPROVAL

200 Prospect Street  
East Stroudsburg, PA  
18301-2999



East Stroudsburg University Institutional Review Board  
Human Research Review  
Protocol # ESU-IRB-015-1920

Date: **October 21, 2019**

To: **Stephanie Milanese and Adam McGlynn**

From: **Shala E. Davis, Ph.D., IRB Chair**

Proposal Title: **"The Ins and Outs of Gifted Programs"**

Review Requested: Exempted Expedited **X** Full Review

Review Approved: Exempted Expedited **X** Full Review

**FULL RESEARCH**

- \_\_\_ Your full review research proposal has been approved by the University IRB (12 months). Please provide the University IRB a copy of your Final Report at the completion of your research.
- \_\_\_ Your full review research proposal has been approved with recommendations by the University IRB. Please review recommendations provided by the reviewers and **submit necessary documentation for full approval.**
- \_\_\_ Your full review research proposal has not been approved by the University IRB. Please review recommendations provided by the reviewers and resubmit.

**EXEMPTED RESEARCH**

- \_\_\_ Your exempted review research proposal has been approved by the University IRB (12 months). Please provide the University IRB a copy of your Final Report at the completion of your research.
- \_\_\_ Your exempted review research proposal has been approved with recommendations by the University IRB. Please review recommendations provided by the reviewers and **submit necessary documentation for full approval.**
- \_\_\_ Your exempted review research proposal has not been approved by the University IRB. Please review recommendations provided by the reviewers and resubmit, if appropriate.

**EXPEDITED RESEARCH**

- Your expedited review research proposal has been approved by the University IRB (12months). Please provide the University IRB a copy of your Final Report at the completion of your research.
- \_\_\_ Your expedited review research proposal has been approved with recommendations by the University IRB. Please review recommendations provided by the reviewers and **submit necessary documentation for full approval.**
- \_\_\_ Your expedited review research proposal has not been approved by the University IRB. Please review recommendations provided by the reviewers and resubmit, if appropriate.

Please revise or submit the following:

East Stroudsburg University of Pennsylvania  
A Member of Pennsylvania's State System of Higher Education  
An Equal Opportunity/Affirmative Action Employer

## APPENDIX B: INFORMED CONSENT FORM AND SURVEY

**My name is Stephanie Milanese. I am a graduate student in the Department of Political Science at East Stroudsburg University and I am working on my thesis titled: The Ins and Outs of the Gifted Programs: One and the Same? My thesis advisor is Dr. McGlynn, Associate Professor of Political Science, who can be reached at amcglynn@po-box.esu.edu**

**I would like to invite you to participate in my research study. The purpose is to evaluate the effectiveness of gifted programs in the educational system. The online survey should take about 5 minutes or less to complete. This is strictly an academic study for the completion of my thesis.**

**Please understand that your participation is entirely voluntary; you may exit the online survey at any time, for any reason without penalty. There are no expected risks from participating in this survey, you may skip any question you do not wish to answer.**

**You must be an 18-year-old or older gifted student or the parent of an 18-year-old gifted student to participate. If you are not at least an 18-year-old gifted student nor the parent of an 18-year-old gifted student, please do not complete the online survey.**

**Participants will benefit from this survey by having a better understanding of how past experiences in gifted programs have influenced their lives or their children's lives. Participants will also benefit from this survey knowing their feedback will help gifted programs and the new generation of gifted students.**

**The online survey is entirely anonymous and I will not ask for your name or any contact information and I will not be able to connect any individual to their survey responses.**

**If you have any questions about this study, or to report any adverse effects during or following participation, contact the researcher, Stephanie Milanese at smilanese@live.esu.edu or 570-234-5228.**

**This research has been reviewed and approved by the East Stroudsburg University of Pennsylvania Institutional Review Board for the Protection of Human Subjects (IRB).**

**If you have any questions about your rights as a participant, or if you feel that your rights as a participant were not adequately met by the researcher, please contact the IRB Chair, Dr. Shala Davis at 570-422-3336 or sdavis@esu.edu**

\* 1. Check the box below to indicate that you are at least 18 years old and agree to participate in the survey

Yes

No

\* 2. Which of the following best describes you

- I am a gifted student
- I am the parent of a gifted student

3. When did you first enroll in gifted programs?

- Elementary school
- Intermediate school
- Middle school
- High school
- Other (please specify)

4. How long did you attend gifted programs?

- Few weeks
- 3 months
- 6 months
- 1 year
- Other (please specify)
- 2 years
- 3 years
- 4 years
- 5 years or more

\* 5. How would you rate your experience in gifted programs?

- Very satisfied
- Satisfied
- Neither satisfied nor dissatisfied
- Other (please specify)
- Dissatisfied
- Very dissatisfied

6. How effective were gifted programs in teaching you the values of patience and perseverance?

- Extremely effective
- Very effective
- Somewhat effective
- Other (please specify)
- Not so effective
- Not at all effective

7. How effective were gifted programs in developing in you a sense of self awareness and fulfillment?

- Extremely effective
- Very effective
- Somewhat effective
- Other (please specify)
- Not very effective
- Not at all effective

8. How much of an impact did gifted programs have in your choice of career or field of study?

- Extremely impactful
- Very impactful
- Somewhat impactful
- Other (please specify)
- Not so impactful
- Not at all impactful

9. How well did gifted programs strategies translate later in your career or field of study?

- Extremely well
- Very well
- Well
- Not well
- Not well at all
- Other (please specify)

10. In what field of study or profession do you belong to?

- Information Technology
- Mechanical/ Information/ Management Engineering
- Agriculture/ Environment/ Fisheries Sciences
- Natural/ Physical Science/Mathematics
- Medical/Dental Science
- Health/ Nursing Science
- Education/ Social Services
- Business Administration/Banking
- Liberal Arts/Law
- Architecture/ Infrastructure
- Other (please specify)

11. To what extent do you think gifted programs implemented strategies that corresponded to your main interests or career goals?

- To a very great extent
- To a great extent
- To a moderate extent
- To a small extent
- Not at all
- Other (please specify)

12. As a gifted student, how important do you think gifted programs are in determining someone's life accomplishments?

- Extremely important
- Very important
- Somewhat important
- Not so important
- Not at all important



13. Add your comments about the positive or negative aspects of gifted programs in public schools?

14. When did your gifted child first enroll in gifted programs?

- Elementary school
- Intermediate school
- Middle school
- High school
- Other (please specify)

15. How long did your gifted child attend gifted programs?

- Few weeks
- 3 months
- 6 months
- 1 year
- Other (please specify)
- 2 years
- 3 years
- 4 years
- 5 years or more

\* 16. How would you rate your gifted child's experience in gifted programs?

- Very satisfied
- Satisfied
- Neither satisfied nor dissatisfied
- Other (please specify)
- Dissatisfied
- Very dissatisfied

17. How effective were gifted programs in teaching your gifted child the values of patience and perseverance?

- Extremely effective
- Very effective
- Somewhat effective
- Other (please specify)
- Not so effective
- Not at all effective

18. How effective were gifted programs in developing in your gifted child a sense of self awareness and fulfillment?

- Extremely effective
- Very effective
- Somewhat effective
- Other (please specify)
- Not very effective
- Not at all effective

19. How much of an impact did gifted programs have in your gifted child's choice of professional career or field of study?

- Extremely impactful
- Very impactful
- Somewhat impactful
- Other (please specify)
- Not so impactful
- Not at all impactful

20. In what field of study or profession does your gifted child belong to?

- Information Technology
- Mechanical/ Information/ Management Engineering
- Agriculture/ Environment/ Fisheries Sciences
- Natural/ Physical Science/Mathematics
- Medical/Dental Science
- Health/ Nursing Science
- Education/ Social Services
- Business Administration/Banking
- Liberal Arts/Law
- Architecture/ Infrastructure
- Other (please specify)

21. To what extent do you think gifted programs implemented strategies that corresponded to your gifted child's main interests or career goals?

- To a very great extent
- To a great extent
- To a moderate extent
- To a small extent
- Not at all
- Other (please specify)

22. How well did gifted programs strategies translated later in your gifted child's career or field of study?

- Extremely well
- Very well
- Well
- Not well
- Not well at all
- Other (please specify)

23. As a parent of a gifted student, how important do you think gifted programs are in determining someone's life accomplishments?

- Extremely important
- Very important
- Somewhat important
- Not so important
- Not at all important

24. Add your comments about the positive or negative aspects of gifted programs in public schools?

## APPENDIX C: QUALITATIVE QUESTIONS AND RESPONSES

Questions #13 and #24 and 6 Extra comments:

Question #13: Gifted Students

1. If they are a challenging to a students course work then they can be beneficial. My program seemed like a waste of time.
2. Gifted has pushed me to do harder in every area of my life and a family I couldn't replace.
3. The middle school program was good and got us involved. Once I got to high school, it felt pointless

Question #24: Parents

1. programs need full enrichment... not just activities- need a deeper engagement in various subjects... not one-note teachers need to keep behavior expectations separate from academic expectations-- not lump them together
- 2.
3. Too much emphasis is placed on the student with a IEP and not a GIEP. As teachers we accommodate for an IEP but not GIEP enough.
4. The gifted program varied depending on who the leader was. He benefited most from the leader who tapped into each child's individual special talents. Also, the info on general life skills abilities such as being able to interact well with the general public was a bonus for the exceptionally bright students as most were lacking in that area.
5. Daughters program was run in the library by the librarian (not gifted certified). And, they pulled her out of math to attend. Useless...
6. If the student is exposed to a real gifted program that is taken seriously then I suppose it could be of some use.
7. Gifted students were treated as "special" and were not held to the same standards of life and responsibility as other students. I think the program should be dismantled.
8. My daughter found the program boring and stop attending after approximately 1 year
- 9 The gifted programs gave my children opportunities to explore subjects not covered in regular classes.

10. I have no comment.
11. Gifted teacher was amazing!
12. My child's gifted program ended when she entered high school. She was also not really interested in what they did in middle school. The program was not motivating enough.
13. I think gifted programs can be a huge asset however not the one at DV. My daughter should have been placed as gifted much earlier. It was a very haphazard once a week program. I don't feel she got much out of it. Once she got to HS the program was to basically advise her to take honors and AP classes which she would have done anyway as a matter of course.
14. My son was in 3rd grade and I feel the biggest positive aspect he took away from the gifted program is facing all fears and getting out of your comfort zone. That has followed him all the days of his life.
15. Same as before
16. I am the parent of three gifted students. The elementary program was great. The program in the middle school was truly wonderful for the older two. By the time the youngest was in middle school it had moved to a complete independent study program on any subject of the child's choosing. In our experience, not helpful in any way.
17. The Gifted Program gave us leverage since it is a legal status, but its implementation as perfunctory and CYA.
18. One is an Intelligence Office with the DOD, One is in Derivatives and one is a Math/Economics major at USNA.
19. My son enjoyed participating in our school's gifted program
20. The gifted program varied depending on who the leader was. He benefited most from the leader who tapped into each child's individual special talent

Six Extra Comments:

1. Our teachers were very influential. And we study a broad range of topics to give a full experience. Just wish they would have continued the program in high school.
2. I believe that my daughters' classroom teachers had more influence on her academic and life successes

3. Gifted actually failed to teach me about hard work because the teachers would always just inflate our egos and tell us we were naturally smart and never had to try yet as a senior in high school I wish I was better taught how to work hard in school because the teachers telling us we were naturally smart now make me not want to try or study in any of my classes even though desired resulted now require hard work
4. I joined the gifted program in 8th grade and attended the meetings. Once I got into high school I was still in gifted program but we never actually had programs to attend.
5. He was told he could do anything he wanted with his gifts and didn't have to follow the norm.
6. I was part of gifted programs in multiple states, and they varied considerably in their scope & implementation. My best experience was a half day pull out program in elementary school with an emphasis on project-based learning. "Enrichment" type programs focused on special occasions like a one day observation at a career placement or special events had no discernible impact for me. The best programs connected me to peers while encouraging a growth mindset and work ethic which was difficult to cultivate in the typical classroom where all work was exceedingly easy.

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