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Advanced Placement Teachers' Perspectives on Effectiveness of Georgia Gifted Legislation: A Generic Qualitative Study

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Advanced Placement Teachers' Perspectives on Effectiveness of Georgia Gifted Legislation: A Generic Qualitative Study

by
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Dedication

This dissertation is dedicated to my family, who helped me realize my potential and reach this step in my education. To my mother and father, Deborah and Warren Atkinson. In loving memory of my grandmothers, Antoinette, Constance and Dorothy and my Uncle Irvin. And to my sweet Isobelle.

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Philippians 4:13

Abstract

Gifted students from minority backgrounds, including low SES, African American and Latinx students, are underrepresented in gifted education, specifically high school Advanced Placement (AP) programs. Despite national legislation and guidance, the federal government allows individual states, including Georgia, to create their own gifted policies and delegate implementation to individual districts. Georgia, like many other states, continues to show inequity in gifted education for minority students and deficiencies in gifted instruction. The purpose of this study was to examine the extent of inequity in gifted education for high school students in Georgia through a generic qualitative research design that analyzed AP teachers' perceptions of gifted educational practices. The study took place in two West Georgia school districts where teacher perceptions of high school gifted education and Gagné's environmental catalysts was gathered. Legislation and Gagné's environmental catalysts from his Model of Giftedness were used to create interview questions for a generic qualitative study with 8 AP teachers via Zoom. This study filled gaps in the literature on teacher perceptions of efficacy in the use of AP coursework as gifted instruction as designated by Georgia state legislation. The study revealed information on the major themes of milieu, persons, provisions and events that revealed AP teachers perceived AP classes as an inadequate gifted education option. Gagné's framework helped focus on the themes of environmental catalysts to analyze implications for students underrepresented in the gifted education, revealing that teachers perceived impenetrable barriers between home and school in the themes of persons and milieu, with a lack of equality in adequate gifted opportunities for high school students from low socioeconomic African American and Latinx backgrounds.

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Chapter I: Introduction

Gifted students are identified as exceptional learners who require additional resources and interventions in school in order to reach their full potential (National Association for Gifted Children, n.d.). Detailed definitions of giftedness that are highly referenced include work by Gardner (Theory of Multiple Intelligences), Renzulli (Three- Ring Concept of Giftedness), and Gagné (Differentiated Model of Giftedness and Talent) (Gagné, 2004; Gardner & Hatch, 1989; Renzulli, 1999). For this study, the definition and description of giftedness development into talent by Gagné in his Differentiated Model of Giftedness and Talent (DMGT), is used to describe gifted learners and the purpose of gifted education (Gagné, 2004).

Gifted educational practices are different throughout the United States and also differ by grade level (National Association for Gifted Children, n.d.). In high school levels specifically, gifted students often are considered to be receiving services for their giftedness if they are enrolled in Advanced Placement (AP) or Dual Enrollment (DE) courses (Crabtree, Richardson & Lewis, 2019). AP classes are formatted by Pearson to provide students with an advanced form of studying beyond mere honors courses. These classes offer college level curriculum that students are tested on at the end of the course. A high enough score on the end of course test for AP classes can result in college credit. Based on the researcher's experience as a DE and AP teacher, like AP, Dual Enrollment courses also offer students the opportunity for college credit in high school. Dual Enrollment classes are actually enrollment in a college or university via a professor of the university, and there is no end of course test to be scored to determine college credit. The grade for the course is the final measure. For this study, Gagné's DMGT (1985) will be used to focus on the gifted provisions afforded to high school students as seen by teachers in Georgia AP classes, the teacher population with the most likely

interaction with gifted students and gifted curriculum at the high school level.

Gagné's DMGT (1985) established that giftedness needs to be fostered in order to reach talent. Gifted student talent development can be impacted by intrapersonal experiences and environmental catalysts. According to the DMGT, environmental catalysts include influences on students that are not intrapersonal. These catalysts include milieu, individuals, and provisions. In short, they are outside factors that impact the growth of gifted students (Gagné, 2011). Positive experiences can bring about positive talent growth. Likewise, negative experiences, such as a lack of opportunities for development, can hinder a gifted student's talent development (Gagné, 2004). By analyzing Gagné's DMGT, it becomes apparent that perceptible influences upon gifted student growth lie within the environmental catalysts. Therefore, teachers should be able to perceive the impact of environmental catalysts on their gifted students.

However, there remains concern in the disparities in gifted education, including within the state of Georgia (Georgia Association for Gifted Children, 2007). National and Georgia State educational legislation has sections intended to foster gifted learning, however further study can shed light on how well legislation is working to this end. By analyzing teacher perceptions of legislation implementation as it relates to the established "visible" environmental catalysts posed by Gagné (1985, 2004, 2011), better understanding of gifted student needs within low SES African American and Latinx sectors can be discovered.

Background of the Problem

Inequity in gifted services is a known phenomenon in education. This is an issue in the United States as well as other countries (Hernandez-Torrano & Tursunbayeva, 2016). Researchers have introduced numerous studies on the inequities found in the identification of minority primary students of low SES backgrounds (Plucker, Peters & Schmalensee, 2017;

VanTassel-Baska, Bonner & Goings, 2019; VanTassel-Baska & Hubbard, 2019; Walker & Pearsall, 2012; Wright & Zimmer, 2018; Yaluma & Tyner, 2018, Ecker-Lyster, M., Coleman-Tempel, L., Gregersen, S., & Snyder, J., 2021). There is also documented disparity found in correlation to student origin, or more precisely, where students live. For example, Azano, Callahan, Brodersen, and Caughey (2017) found that rural areas of poverty, like large portions of Georgia, are even more likely to suffer from increased lack of services for gifted students and identification. Students from low socioeconomic status (low SES) communities and those of minority populations (Latinx and African American) lack equal opportunities for the opportunity to be identified as *gifted* than their higher SES counterparts and students of non-minority families (Lakin, 2016; Mills, 2015, Plucker & Peters, 2017; Renbarger & Long, 2019; Wright & Ford, 2017). Despite the opportunities for gifted services that are reportedly available for those from numerous primary and middle schools, and the Advanced Placement (AP) and Dual Enrollment options presented to secondary high school students, there remains a noted gap in the enrollment equity, and provision equity for students (Crabtree, Richardson & Lewis, 2019). In addition, there is little information available on the additional programs available to secondary students.

Beyond enrolling students in AP and Dual Enrollment classes, there is little or no information on teacher adherence to gifted provisional requirements within those classrooms. However, appropriate use of gifted services for students of underrepresented communities offers an opportunity to bridge social inequity gaps within the country (Cross, 2013).

Gifted programs differ across the nation, and while requirements have been provided at the national level, states hold the right to determine their own educational requirements and programs for gifted students (VanTassel-Baska, 2018; Lockhart, Meyer & Crutchfield, 2022).

The state of Georgia reports that gifted students within the state suffer from the same inequities seen across the nation, with a disproportionately lower number of students of minority and low SES background being recognized and receiving services (Georgia Association for Gifted Children, n.d.). All gifted students in the state of Georgia are determined based on the provisions of State Board of Education Rule 160-4-2-.38 (2012) which also delineates the prescribed differentiation requirements for these students.

Evidence of the appropriateness of gifted education for students in the secondary level is limited. Few opportunities have been presented for educators to voice their opinions on the gifted programs and identification processes available to those in the secondary level, and fewer if any in the state of Georgia. Russell's (2018) study of teacher perspectives on defining giftedness pointed out that this similar study was one of a few available. There is a scarcity of studies found in the literature that have examined teacher perceptions on gifted education for high school students in regards to those of low SES backgrounds. Furthermore, there is no specified study on teacher perceptions of gifted programing and accommodations being used with efficacy, in particular for minority students, available in the state of Georgia.

Prior research, Russell's (2018) study, also focused on Renzulli's framework and not that of Gagné. Gagné's framework will shed more detailed light onto the subject of gifted education because of Gagné's focus on environmental catalysts. These catalysts can be influenced and observed by teachers. Therefore, teachers' perceptions of legislation impacting environmental catalysts and general views of environmental catalyst impacts on student talent development can be better understood through the lens of Gagné's Differentiated Model of Giftedness and Talent. These particular catalysts include impacts on gifted students based on milieu and persons that influence them. These factors of milieu and persons can be attributed to

economically disadvantaged students' educational opportunities or lack thereof.

Statement of the Problem

According to Gagné, environmental catalysts of milieu, persons, events and provisions are needed to foster the development of talent in gifted students (Gagné, 2004; Gagné 2011). Despite knowledge of gifted student needs, there continue to be obvious inequities in gifted services (Cross, 2013). Inequities in gifted education continue to be present despite research in the field, and perhaps new research methods on current attempts at altering disparities can enlighten educational leaders to make the appropriate changes needed.

Teachers are the first and foremost observers of students and their abilities and class progress. Despite the known inequities in gifted education representation, based on the researcher's experience, teachers of secondary education students in Georgia are not required to receive additional training in identification and services of gifted students. Based on the researcher's personal experiences in a Georgia public high school, teachers are not made explicitly aware of which students enrolled in their classes are gifted unless they have received gifted certification, as regulated by the Georgia Professional Standards Commission Rule 505-2-.107 (2014). Therefore, teachers do not know that students that may be in their class are in need of special services.

This study will addressed the concerns of gifted inequities by focusing on AP teacher perceptions to determine inequities in the lesser studied age group of high school gifted students. This AP teacher selection was because the only gifted services directly provided to public high school gifted students within Georgia at the time of the study were AP and Dual Enrollment classes (Georgia Department of Education, n.d.). As the only teachers with appropriate access to identification data on gifted students, gifted certified AP teachers were the

best subset to survey on apparent inequities in gifted education for Georgia gifted students, but the researcher was prepared to survey and question all AP high school teachers in the designated regions which was necessary due to the lack of participants available. Teachers who participated in the study were questioned on their perceptions of gifted education through the visible environmental catalysts established by Gagné and through their perceptions of implementation of National and Georgia state legislation for gifted students.

Purpose of the Study

The lack of gifted education knowledge by secondary teachers in Georgia could amplify the underrepresentation of low SES and minority students, thereby increasing the equity gap between those students and their peers. Classroom teachers are the first line of defense against inequity in student academic programs and services and could possibly serve as the most reliable source for determining areas of inequity that can be addressed. A specified study of teacher perceptions of gifted education in two Georgia school districts with a low SES population of African American and Latinx students helped shed further light on the inequities students are being subjected to at the last stage of their education in which they could still profit from appropriate gifted services. By focusing on the environmental catalysts of Gagné's Differentiated Model of Giftedness and Talent (DMGT), the study maintained a focus on aspects of influence on gifted and talent development that are observed and/or influenced by the teachers in the study. Teachers can impact and observe the environmental factors of milieu, persons, provisions and events. Additionally, teacher perceptions will provide insight on whether students are receiving a positive impact from environmental catalysts by analyzing perceptions of impact from Georgia State Legislation for gifted services.

The purpose of this research was to determine high school teacher perceptions of gifted

education services in accordance with Georgia legislation and Gagné's environmental catalysts to promote talent development in gifted students (Mayoh, & Onwuegbuzie, 2013). The focus group of AP teachers were requested to focus their perceptions on students who were disadvantaged (African American and Latinx), from low SES backgrounds, and who were often not provided equal access to gifted education services. This generic qualitative study added to the literature by giving specified perspectives on gifted education for high school students in Georgia, a state with identified inequity gaps within its gifted programs for students of color and from low-income families.

Research Questions

1. Based on high school AP teacher perceptions, how effective are Georgia gifted services for low SES African American and Latinx high school students? [QUAL]
2. How do Georgia high school AP teachers perceive the impact of environmental catalysts on low-income gifted African American and Latinx students? [QUAL]
3. What environmental catalysts do Georgia high school AP teachers perceive as impacting low SES African American and Latinx gifted student education as seen in the Georgia AP classroom (Georgia's Gifted Legislation opportunity)? [QUAL]

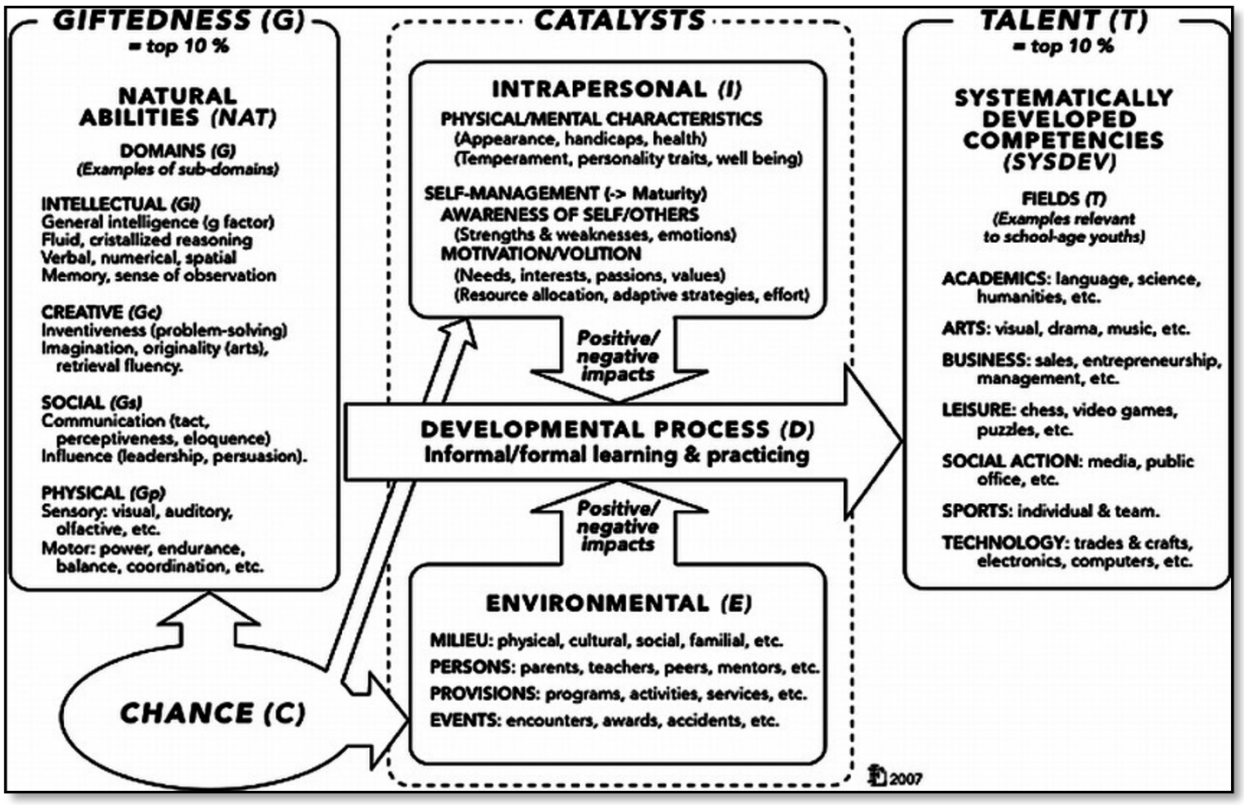
The use of *Latinx* in this research is supported by Torres (2018) and represents Hispanic persons of all genders. Additionally, Scharron-del Rio and Aja (2020) acknowledged that there is no solidarity in the identification of persons of Hispanic or Latino/a decent as a single term, and that while Latinx is one of the less accepted terms, it is designed to be inclusive of persons of Latin American decent irrespective of origin or gender identity (Scharron-del Rio & Aja, 2020). This purpose for the use Latinx in this text is to be inclusive of all gifted students of Latin American decent.

Theoretical Framework

For this study, the Differentiated Model of Giftedness and Talent (DMGT) presented by Gagné (1985) is used as the definition of giftedness. The DGMT derives from a 1985 article in which Gagné established that students who are gifted are in possession of some innate ability in a particular area of academia. A child who is identifiable as gifted ranks in the top ten percent performance area amongst their peers as a result of this giftedness (Gagné, 1985). According to Gagné, *gifted* and *talented* are not synonymous, and students who rank in the top ten percent of their peers academically because of developed skillsets would be considered talented, not gifted (Gagné, 1985; Gagné, 2011).

Within Gagné's framework, seen in Figure 1, giftedness can be fostered into talent, which is the epitome of giftedness. With appropriate implementation of curriculum and practices, teachers can help foster giftedness into giftedness and talent through environmental catalysts. Therefore, teachers with positive impacts on gifted student development can increase competencies in academia, art, business skills, social skills and/or technology. However, Gagné also identifies that education can have a negative impact on talent development if they have a negative impact on or neglect an environmental catalyst, therefore causing a deviation in the path to talent. (Gagné, 2004). The environmental catalysts of milieu, persons, provisions and events have been chosen as the focus of this study because they are the areas that can be both impacted by the teacher as well as observed by the teacher in order to gather data, whereas intrapersonal catalysts would serve better as a study of student reflection.

Figure 1
Gagné's Framework (2004) From Françoys Gagné*'s work*



The environmental portion of the Figure1 chart illustrates that positive and negative impacts from the students' environment include the milieu, persons, provisions and events that influence gifted students during their time as students. These individual environmental catalysts are further broken down within the chart to determine examples of each. The milieu component of environmental catalysts consists of physical, cultural, social and family impacts on student gifted growth, be it a family structure impact or a physical impact such as the home. The person component of environmental catalysts includes the teachers themselves, the parents of the students, their classmates and other persons who impact their learning experience, such as guidance counselors and other mentors. The provision component of environmental catalysts includes the gifted services offered to students, as well as other programs and services to aid in

their growth into the talent phase. Finally, the events component of environmental catalysts includes milestone moments such as awards, accidents and major meetings (Gagné, 2004). Additionally, the provisions associated with legislation and AP and Dual Enrollment services would fall into the environmental catalyst section that influences talent development as well (Gagné, 2004; Gagné, 1985).

Therefore, using the DGMT environmental catalyst section makes the most sense, as it provides a lens through which AP teachers (those most likely to have gifted students at the high school level) can view the impact of school and educational legislation on students. Additionally, focusing on teacher perceptions is key to this study because teachers have an impact on the environmental catalysts and can provide feedback on this impact. Teacher responses can give more insight into how effective they are in implementing the legislation as well as how effective they are in addressing the needs of low SES gifted African American and Latinx students.

Methodology Overview

For the generic qualitative study Georgia high school AP teachers who are gifted certified were interviewed. The purposefully selected population gave comparative points from the environmental catalysts of Gagné and to legislation in order to help triangulate data by their perceptions of environmental catalysts of provisions, peoples and events on students. The researcher interviewed 12 teachers from two different districts in West Georgia.

The study was a generic qualitative study, and will consisted of a semi- structured interview composed by the researcher (see appendix J). Participants were invited to the study via email and given opportunity to consent to participation. Participants were interviewed via Zoom platform and recorded for transcription. The interview consisted of 20 questions based on

the research questions and Gagné's environmental catalysts (see appendix J).

A generic qualitative study required a structured collection of data (Percy, et al, 2015). For this study, a semi-structured oral interview was used. Generic qualitative studies are supported by data collected in such a semi-structured format and was also appropriate for using a priori knowledge (Kennedy, 2016). Additionally, a generic qualitative study used a larger representation of the population (Percy, et al, 2015). For this study, teachers were interviewed to increase representation and those interviewed will came from multiple schools to increase representation of the area. Participants were recruited through email invitation using email addresses available through county school district websites. Only those counties that have given IRB approval were emailed. IRB approval was also gained from Columbus State University in addition to the participating counties.

Once data was collected, the generic qualitative study continued with thematic theoretical analysis (Percy et al, 2015). The steps for the theoretical thematic analysis were based on the VSAIEEDC from Percy, Kostere and Kostere's 2015 article and as described by Kennedy (2016). For this study, a priori themes were used based on Gagné's catalysts, which makes this a theoretical thematic analysis. The oral interviews were performed and then transcribed from recorded Zoom sessions. The transcriptions of the Zoom interviews were be reviewed by the researcher and a second observer and key information from Gagné's themes and the research questions were annotated using an a priori coded approach. Patterns were found and used to determine and explain themes. Themes that did not match Gagné's catalysts were highlighted. Each theme was analyzed by the researcher and reported on.

Delimitations and Limitations

Delimitations of the study are those under the control of the researcher. For this study,

one delimitation is that the selection could have been biased. Teachers will be selected from two districts, including a school district where the researcher is employed. Additionally, coverage bias exists within the study, as the focus includes a school district shared by the researcher. An additional delimitation is in generalizability of research findings, as this research does not present a nation-wide representation of AP teachers, but focuses implicitly on Georgia educators and their perceptions based on Georgia Legislation and training in two school districts. The teachers are also limited to AP teachers, all teachers cannot be addressed. The students of these AP teachers included non-gifted.

Another delimitation is interview. The interview could not cover all possible questions that could be explored with regards to Gagné's framework. For example, talent and the developmental process were not be looked at in depth because of the limit in number of feasible questions as well as the scope to focus the study. The qualitative questions focused on Gagné's environmental catalysts and the implementation of Georgia and National legislation for low SES and under-represented gifted students. However, there is possibility to expand on questions and situations related to other aspects of gifted education (Fetters, Curry & Creswell, 2013). The interview was created by the researcher which may have created some bias from the researcher's own beliefs on gifted education as opposed to a previously designed measurement, and that bias is discussed in the results.

Unreliability of the narrator is an additional delimitation of this study. Despite attempts at requesting unbiased opinions and responses, the subjects being questioned in this study may have brought unreliability to the data. This can be due to fear of repercussions, misunderstanding of the questions or other issues. The researcher attempted to specify outliers and incidents in which those questioned may have influenced a reply in a less than genuine

manner. The researcher sought to put the participants at ease by assuring confidentiality of their identities and giving the participants the option to withdraw from the study at any time if they felt the need to do so, which none did. The researcher also sought out participants for the qualitative study who are gifted endorsed as well as AP certified to seek credible teacher perceptions, with only two not fitting both requirements.

Limitations of the study are those outside of the control of the researcher. One limitation within this study was the generalizability of research findings. Self-report data with reporter bias was to be expected as a limitation to the study. Self-reported data from teachers questioned in the study could be biased from point of view, perceptions and memory. Social desirability bias is another limitation where the participants can provide an optimistic and positive responses to establish favorable views for the gifted programs and AP and Dual Enrollment classes they teach.

Limitations were also found in the number of teachers that participated in the study, a total of 12. However, saturation was reached, the researcher began hearing the same information from teachers in both counties for the majority of the interviews. There was also uneven representation of the two counties interviewed, with 8 teachers from one county and 4 from the second.

Definition of Terms

Advanced Placement: Advanced Placement (AP) courses in the United States are nationally available courses designed to present students with college level curriculum and then present students with an examination at the end of the course which results in possible college credit being gained through the College Board. Students are not required to be gifted in order to take these classes (College Board, 2020).

- Dual Enrollment: Dual Enrollment classes are college courses offered to high school students, in which students participate in a college course via a physical college campus, online classes or college class being offered on the high school campus. Students gain both college credit and credit for the high school equivalent of the class taken (Best Value Schools, 2020) Unlike AP courses, there is no examination required to receive college credit at the end of the class. Students are not required to be gifted in order to take these classes.
- Environmental Catalysts: outside factors which impact a gifted student's transition from gifted to gifted and talented. Environmental catalysts include milieu, persons, provisions and events (Gagné, 1985; Gagné, 2004).
- Milieu: physical location of the student/school, culture or cultural background of the student, social or family background (Gagné, 1985, 2004).
- Persons: People involved in the student's development, including teachers, parents, classmates etc. (Gagné, 1985, 2004).
- Provisions: Programs, activities and services that the student participates in or is given as an addition to learning (Gagné, 1985, 2004).
- Events: Major events in the student's life or educational career that impact them profoundly, such as an award or meeting (Gagné, 1985, 2004).
- Gifted: Gifted students are identified as those with inherent advanced ability or talent in specified academic areas. Gagné's definition from his Differentiated Model of Giftedness and Talent will be used for the research portion of this study. This poses that those students with an inherent and advanced ability in a specific area can advance to upper tier levels of talent with the appropriate environmental

and interpersonal catalysts during the developmental process of learning (Gagné, 1985, 2004).

- Gifted Efficacy: Efficacy is the term for determining how effective something is. In this case, gifted efficacy is the effectiveness of gifted programing and curriculum provided to gifted high school students (Mojarad, 2018).
- Inequity (in Gifted Education): Negative disparities or unequal provisions in educational opportunity are inequities (Sadker & Zittleman, 2018). In the representation and supplementary support service access to gifted students of color or low SES status, there are visible inequities (Ford, 2014).
- Supplementary Support Services: For gifted students, supplementary supports include any programs, activities or added experiences to the curriculum to help support gifted learning. These supports may be advanced classes, such as AP and Dual Enrollment, or may also include mentorships and counseling (Georgia Department of Education, 2020).

Significance of the Study

Gifted education is a segment of education that suffers from inequities found in underrepresentation of minority groups, especially low SES African American and Latinx students (VanTassel-Baska, 2018). It is essential that teachers become involved in the addressing of inequities in education, such as those in gifted services, to minority and low SES students in order to correct the achievement and equality gaps not only in schools, but in American society as well (Ford, 2014). Therefore, research can help highlight some of these disparities if the right questions are asked and analyzed.

Gagné defined giftedness as an innate ability within students to achieve and an ability

that needs to be fostered with the appropriate outside influences (environmental catalysts) and intrapersonal experiences in order to grow into talent (Gagné, 1985). Gifted students need appropriate curriculum in order to achieve positive growth to transition from gifted to gifted and talented status (Gagné, 2004). By using Gagné's definition and explanation of the significance of environmental catalysts, the research analyzed teacher perceptions of national and state legislation implementation in AP and Dual Enrollment classrooms to determine the effectiveness of said legislation in fostering positive growth through environmental catalysts for low SES African American and Latinx students, those most often the victims of inequities in identification and receiving of appropriate gifted services. This information gives insight for those seeking to make corrective approaches to legislation.

Teacher perceptions of efficacy in administration of gifted services through AP and Dual Enrollment classes in the state of Georgia may shed light onto appropriate use of state mandated gifted practices and appropriate use of empirical research findings for addressing the needs of gifted students, especially those from underrepresented populations. The researcher conducted a generic qualitative study to determine how AP teachers (those who provide gifted services for high school students) perceive their efficacy as gifted teachers, perceive inequities in African American and Latinx gifted education, and their own overall understanding of gifted requirements for their state.

Summary

The study of AP teacher perceptions of the implementation of National and Georgia legislation and its impact on environmental catalysts for the development of talent in gifted students expands upon the knowledge in the field of curriculum efficacy for high school low SES African American and Latinx students. The generic qualitative study extended

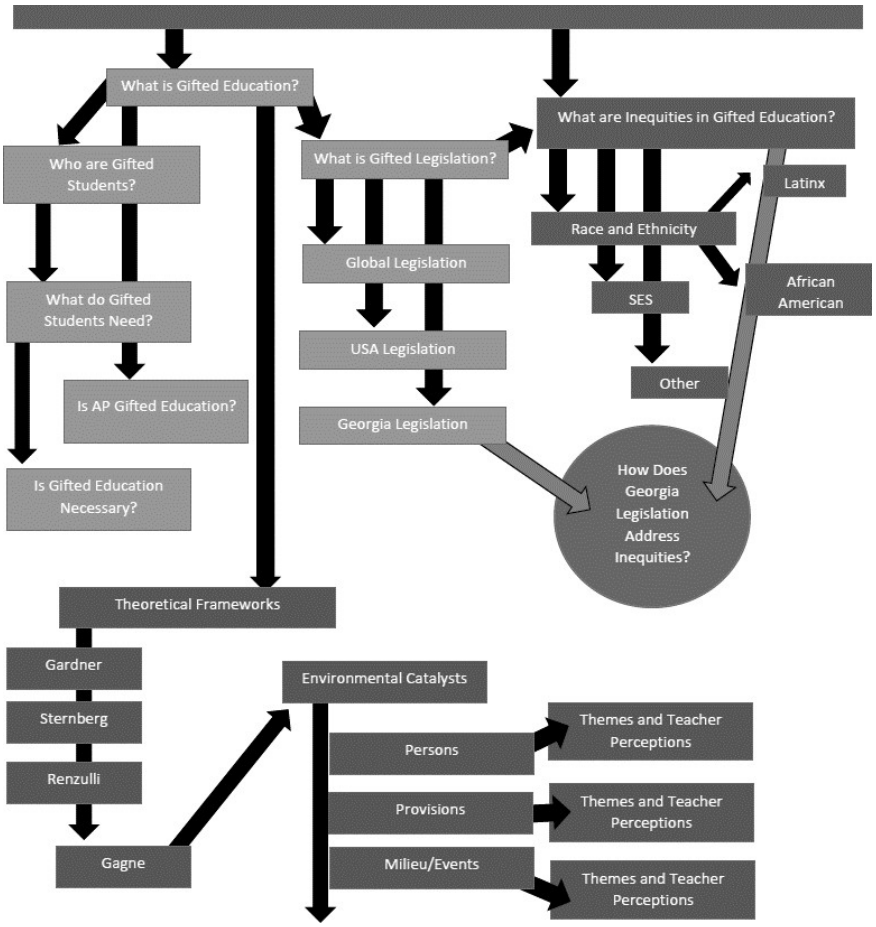
understanding of teacher metacognitive responses in their understanding and perceptions of gifted legislation and environmental catalysts that are positively or negatively impacting the growth of talent in gifted high school students, especially those of low SES African American and Latinx backgrounds. Qualitative teacher feedback also gave individualized perspectives on gifted programs and concerns about equity for students.

The study also collected data that shed light onto possible solutions in areas of underrepresentation by highlighting teacher concerns based on current issues within their classes and which they have observed in their gifted students. This study focuses on gifted education for high school students in the state of Georgia, which has been established as a state with disparities in representation of giftedness in African American and Latinx populations. This enhances the research available on the state level for Georgia. This also increases perception data collected on a particular state and state legislation in addition to national standards set forth for gifted education. Such information could potentially inform and help redirect legislative actions within the state to better rectify issues of inequity for low SES African American and Latinx gifted students.

Chapter II: Review of the Literature

Figure 2

Teacher Perceptions Thinking Map



The research topic being presented is a layered and complicated concept. In order to better illustrate the narrative, a thinking map (Figure 4) has been created to guide the reader through the process of identifying the main concepts of gifted education for high school students, recognizing the inequities in gifted education and presenting the theoretical framework that will guide the methodology. The first concept that needs to be addressed is, "What is Gifted Education?"

Theoretical Frameworks

Joseph Renzulli: Three-Ring Conception of Giftedness

Joseph Renzulli (1999, 2002, 2016) defined giftedness through the development of the Three-Ring Conception of Giftedness. According to Renzulli (1999, 2002, 2016), giftedness is above-average ability. Gifted students, according to Renzulli (1999), are above average performers in the Three Rings: ability, task commitment and creativity. Their above average performance can be observed in any combination of the three areas of giftedness identified in his Three Rings and does not require students to be of above average in ability in all three areas, nor do they have to have an equally high ability in each Ring. Based on his observations of differing areas of giftedness, he determined that there is no single assessment for identifying gifted students (Renzulli, 1999, 2016).

Gagné's (1985, 2004, 2011) definition and subsequent framework give more detail in the development of giftedness into talent. While Renzulli's (1999, 2002, 2016) definition does approach the concept from the point of view of multiple factors impacting giftedness, it does not include the detailed intrapersonal and environmental catalysts (milieu, persons, provisions, events) of Gagné's (1985, 2004, 2011) work, making it not as significant to this study.

Howard Gardner: Theory of Multiple Intelligences

A second viewpoint for defining giftedness is Howard Gardner's Theory of Multiple Intelligences, which divided and analyzed different talents within individuals. In Gardner's (n.d.) definition, the different areas of intelligence illustrate abilities or talents in specific academic or creative outlets (Gardner, n.d.). Unlike Renzulli (1999, 2002, 2016) and Gagné (1985, 2004, 2011), Gardner (n.d.) defined these talents as something found in every child to some degree, as everyone would have an intelligence, or multiple intelligences, that they are

more apt in than others. The Multiple Intelligences include: visual-spatial, linguistic-verbal, interpersonal, intrapersonal, logical-mathematical, musical, bodily-kinesthetic, and naturalistic (Gardner, n.d.). Therefore, giftedness would require a higher aptitude in one of Gardner's intelligences or in multiple intelligences.

Gagné's definition would reflect the argument that talent in an area is not necessarily developed just because one is gifted in a particular area, as the talent must be developed (Gagné, 1985, 2004, 2011). This makes Gagné's (1985, 2004, 2011) definition of giftedness more appropriate for this study. It does not define all persons as talented in some area(s), and upholds the National Association for Gifted Children's (2019) definition of gifted as only a percentage of the current population. It also explains in better detail why gifted students need additional services, which is to develop talents that their giftedness can foster if appropriately impacted.

Robert Sternberg: Triarchic Theory of Human Intelligence

Additionally, Robert Sternberg (Sternberg, Grigorenko & Zhang, 2008; Sternberg, 2000) has established the Triarchic Theory of Human Intelligence which defines intelligence as three abilities, including analytical, creative and practical thinking abilities. Sternberg (2000) requires gifted students to have high performance in each of the three measures as well as the ability to balance use of the three aptitudes. Unlike the definitions of Renzulli (1999, 2002, 2016) and Gagné (1985, 2004, 2011) and similar to Gardner's (n.d.) Multiple Intelligences, Sternberg (2000) developed a seven-part typology of gifted individuals based on their forms of giftedness in order to specify where the individual's talent or gifts could be found. These include the analyzer, the creator, the practitioner, the analytical creator, the analytical practitioner, the creative practitioner, and the consummate balancer (Sternberg, Grigorenko &

Zhang, 2008).

Despite the variety of gifted types provided by Sternberg, he does not accept the concept of differing levels of talent. This is seen in his definition requiring high performance in each of his measures, which is less in tune with Gagné's argument for talent growth. Therefore, Gagné's definition continues to be the best approach for this study of high school students and from which teacher observations can be argued as a prevalent source of information because it provides environmental catalysts to measure (Gagné, 1985, 2004, 2011).

Françoys Gagné: Differentiated Model of Giftedness and Talent

Françoys Gagné (1985, 2004, 2011), a Canadian educational researcher, found in his Differentiated Model of Giftedness and Talent (DMGT), believed giftedness is above average ability that can be observed in different areas of performance. The DMGT establishes that gifted students need additional impacts on their education, both intrapersonal and environmental catalysts that have the ability to foster the development of talent, so that a gifted student can reach the height of their ability by being both gifted and developing talent(s). Intrapersonal catalysts are those metacognitive events that a gifted student experiences and their internal changes or beliefs. Environmental catalysts are outside influences on the student and include milieu, persons, events and provisions (Gagné, 1985,2004, 2011). This is in opposition to some descriptions that state students are gifted *and* talented (Renzulli, 1999), because Gagné argues that talent must be developed through the DMGT. In addition, Gagné (1985, 2004, 2011) poses that the above average ability of gifted students is innate, meaning giftedness is something a child is born with. However, the talent associated with gifted students is not innate and must be developed through positive intrapersonal experiences and the appropriate use of environmental catalysts by outside forces, such as teachers and educational

experiences (Gagné, 1985, 2004, 2011).

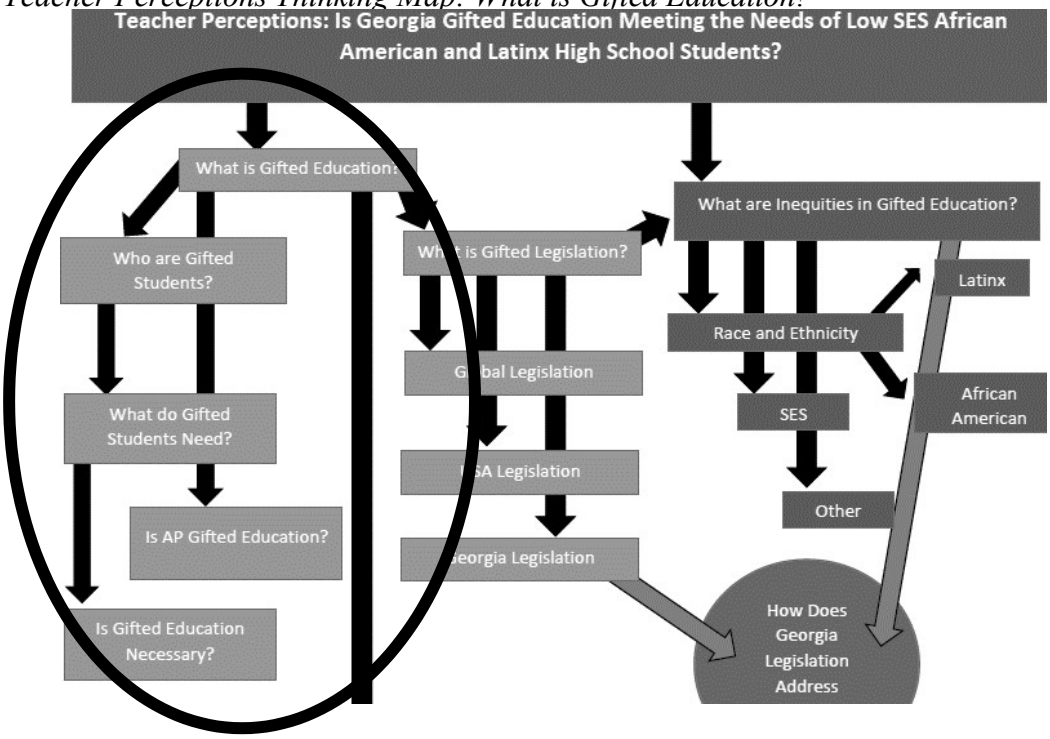
These above analyses of the leading definitions for giftedness have shaped research in the field of gifted education and can be seen reflected in The National Definition of Giftedness that is recognized by the federal government. The United States' federal government's definition for "gifted" is:

Students, children or youth who give evidenced of high achievement capability in areas such as intellectual, creative, artistic, or leadership capacity, or in specific academic fields, and who need services and activities not ordinarily provided by the school in order to fully develop those capabilities (National Association for Gifted Children, n.d.).

This definition includes the factors of high ability of gifted students, seen in earlier definitions, divides it into separate categories of giftedness, as seen in the definitions by Renzulli (1999, 2002, 2016) and Sternberg (2000), and directly references those gifted students need additional services. These additional services are clearly explained as essential in Gagné's (1985, 2004, 2011) DMGT. However, while cited and referenced by gifted programing across the country, this federal definition is not mandated to the states nor local school districts (National Association for Gifted Children, nd.).

Figure 3

Teacher Perceptions Thinking Map: What is Gifted Education?



Defining Gifted Education requires a clear understanding of who gifted students are. Establishing the characteristics that set gifted students apart from their peers is essential for exploring the key concepts of gifted legislation and gifted inequities that will follow the defining phase of this research as seen in Figure 5. The National Association for Gifted Children (2019) states that gifted students are those, "with gifts and talents perform - or have the capability to perform - at higher levels compared to others of the same age, experience, and environment in one or more domains." (National Association for Gifted Children, 2019, pg. 1, paragraph 2). Gifted students are identified as those who perform highly above others their own age in intellectual and creative outlets, including but not limited to academic classes. According to the National Association for Gifted Children (n.d.) it is assumed that students performing in the top ten percent of academic achievement based on relative peer performance are gifted. However, only an approximate six percent of students enrolled in public schools in the United

States are identified as gifted, according to the U.S. Department of Education's Office of Civil Rights (National Association for Gifted Children, n.d).

In a demographics report compiled by members of the Spalding County Gifted Model Review Committee, data was organized to report on gifted percentages of students in the state of Georgia as well. According to the data collected, gifted students as a whole numbered 177,877 in 2015, 179,828 in 2016, 181,899 in 2017, 181,053 in 2018 and 181,842 in 2019. The analysis of this population information shows an overall growth trend. As of 2019, 58.45% of Georgia gifted students were White, 18% African American, 10.49% Asian and 8.44% Latinx. Multiracial and Native American ethnicities were not identified as gifted percentages in this report. As a whole, the state of Georgia, according to the data in the report, had a total of 1,717,863 students in 2019, making the 181,842 gifted students account for approximately 10.59% of Georgia students in 2019.

Further analysis of these demographic data show that White students are disproportionally identified as gifted over students of color, with a 19.51% positive difference between the percentage of White students in Georgia and the number of White Georgia students identified as Gifted. Asia students are also more highly represented in gifted numbers in Georgia, with 6.22% higher percentage of representation than the percentage of Asian students in the state. However, African American and Latinx students are underrepresented based on analysis of the data. African American students in gifted are negatively disproportionately represented by 18.59% and Latinx students 7.56% (Spalding County Gifted Model Review Committee). This correlates with a report presented by Ford, Davis, Whiting and Moore (2021) which stated at the time of publication that African American and Latinx students in the United States are nationally underrepresented and that White and Asian students have an overrepresentation.

A culmination of this data identifies the students the intended population Georgia High School teachers who will be presenting their perspectives on gifted education legislation will be responding with formed ideas about students with innate academic performance ability. These students are identifiably underrepresented in the state based on the data collected and presented by the Spalding County Gifted Model Review Committee. All gifted students defined above require specific educational needs in order to reach their gifted and talented potential.

Gifted Student Needs

The next step for developing a clear definition of gifted education is to identify the needs of gifted children. Lockhart, Meyer and Crutchfield (2022) emphasized the fact that educational programs are mostly geared towards reaching standard requirements, and can neglect the needs for greater challenges seen in gifted students. Gifted students require specialized support to nurture their gifted talents and foster success (National Association for Gifted Children, n.d.).

Gifted students are also identified based on varied measures of student ability and creativity that currently reach beyond IQ (Steenbergen, 2016). Despite variation in organization, gifted educational practices are designed to meet gifted students' need for curriculum that will help them reach their highest performance (Lockhart, Meyer, & Crutchfield, 2022). The United States of America does not have a federally mandated gifted curriculum that each state and school must follow verbatim, however there are several pieces of legislation to guide and monitor gifted studies (TALENT Act, 2015). All states, including Georgia, have the opportunity to receive additional resources and funding from the National Association for Gifted Children, but this is also not a requirement for the states to do so (National Association for Gifted Children, n.d.).

Gifted student accommodations that have been shown to meet the needs of gifted students include early entrance to kindergarten, enrichment, acceleration, curriculum compacting, and dual enrollment (TALENT Act, 2015). Gifted services can also include accommodations provided within the traditional classroom setting, split time between traditional and gifted classes, full-time gifted classes with other gifted students, and advanced placement by grade or class (National Association for Gifted Children, n.d.). Advanced placement by grade or class refers to the additional provisions that gifted students need in their curriculum or opportunities to reach ahead in their education, as seen in Advanced Placement classes (Van Tassel-Baska, 2018). Gifted students also require specialized curriculum and support to nurture their giftedness, including interventions for students that address social and emotional issues as well (Jen, 2017). This may come in the form of workshops, mentorships or counseling, and other forms of direct communication with students to foster the appropriate educational and emotional steps in managing their giftedness (Jen, 2017). Gifted students also academically profit from inquiry-based assignments, Makerspace, advanced level activities in areas such as mathematics, metacognitive strategies, project-based learning, and by the teacher employing a variety of formative and summative assessment forms (VanTassel-Baska, 2021). The formation of gifted curriculum and interventions has nearly a century of research behind it. Appropriate use of gifted curriculum is shown to support and increase student success (VanTassel-Baska, 2019).

Additional options to aid gifted students include advancing students by grade levels or entrance time into school, testing to receive credits early, and participation in accelerated classes (VanTassel-Baska, 2018). Also, some approaches for reducing equity gaps in gifted education have also been proposed, such as using one identification exam in all identifications

of gifted students, implementing ability grouping, reward programs for schools that reduce gaps, and extended professional learning opportunities for teachers to become better versed in gifted education (Plucker, Peters, Schmalensee, 2017). Therefore, it has been established that teacher of gifted students in Georgia should be following the aforementioned legislation guidelines if they are gifted certified. These teachers' perceptions of the implementation of this legislation will give greater insight into the appropriate use and impact of these teaching methods and highlight if teachers are performing as positive environmental catalysts (Gagné, 1985, 2004, 2011). The greater question that will be answered, is how these perceptions will shed light on issues of inequity for low SES African American and Latinx students at the high school level.

Advanced Placement as a Gifted Accommodation Curriculum

For the purpose of this study, high school Advanced Placement (AP) teachers will be questioned, as AP classes are provided to gifted students in the county being studied. Research has been conducted on the validity of AP as an acceptable accommodation for gifted high school students. Finn and Scanlan provided a 2020 report on their findings as they are in the process of writing *Learning in the Fast Lane: The Past, Present, and Future of Advanced Placement* in which they argued that AP classes are an adequate and necessary provision for high school gifted students. Finn and Scanlan argued that AP classes offer the necessary academic challenge for gifted students, gives gifted students a way to illustrate their academic abilities through AP scoring, provides a college level experience and self-monitoring experience and can offer students a chance to be taught by teachers with more training in their needs (2020).

The Argument for Gifted Education

So, are gifted education and provisions a necessity? Why is gifted education legislated, and can evidence be found to support the need for this legislation? Debate in the field of education exists on the availability of gifted services for students of varying levels of academic ability (VanTassel, 2021). Some have argued that all students should be given access to gifted learning strategies as strategies such as the use of inquiry benefit learners from all academic levels, and some of the most current research by experts in the field of education have continued to voice a lack of clarity in whether or not gifted education should be a self-contained educational provision (VanTassel, 2021). The National Association for Gifted Children's Definition and Rationale for Gifted Education has argued that gifted education is valuable not only to gifted students who might not perform to their potential without gifted interventions, but to the nation on an economic and social level (NAGC). Barry Grant (2002) argued similarly, that gifted education not only benefits gifted children by opening ways for them to reach their potential, but is a benefit to the world by allowing such potential to be reached by gifted students.

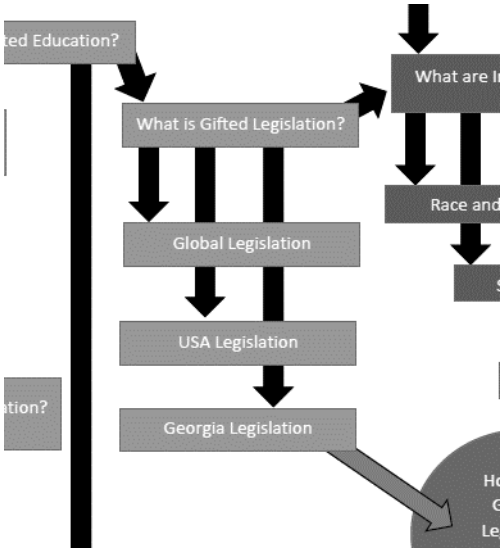
Gifted students need gifted education in order to be appropriately challenged, to have access to accelerated and additional learning opportunities as well as be provided mental and social support from their peers and teachers (Nobbe). In short, gifted education is a necessity for gifted children, and for the work forces which they will one day join. These gifted students have potential to be leaders and impact the nation in a positive way through their future contributions (Lockhart, Meyer & Crutchfield, 2022). Therefore, it could be argued that neglecting gifted children and their needs, would be placing limitations on both children and the future of society's performance. The United States government recognizes the need for gifted

education and has provided legislative guidance as a result.

Gifted Legislation

Figure 4

Teacher Perceptions Thinking Map: What is Gifted Legislation?



With gifted students, gifted education and the need for gifted education established, the directing model now turns to identifying the legislation that has been developed in the United States as a result of gifted research. Gifted legislation should mirror the needs identified and address gifted education models presented. Legislation for gifted education has been an evolving facet as will now be analyzed further. The analytical process for reviewing legislation for gifted students can be seen in Figure 4 above and focus on American legislation, then state and local.

National Gifted Legislation

The United States recognizes the significance of gifted education to national educational and global competitive success (ESEA, 2015). Nationally focused research and intervention practices in the United States date back to the early 1970s, when a nationally recognized

definition for gifted was established in the Marland Report and the National and State Training Institute on the Gifted and Talented was formed to aid in matters of gifted education (Lockhart, Meyer & Crutchfield, 2022). Then, in 1988, Congress passed the Jacob Javits Gifted and Talented Students Education Act (Javits) under the Elementary and Secondary Education Act (ESEA; National Association for Gifted Children, n.d.). The Javits Act is a federal program that does not provide financial support to local gifted programs, but instead funds research and development of gifted identification and assistance programs. It is the only federal gifted and talented program (National Association for Gifted Children, n.d.) and the focus of Javits is the identification and servicing of underrepresented gifted students, including students of color and low SES, in order to address achievement gaps (Javits Act, 2020). The Javits Act was continued with Every Student Succeeds Act (ESSA), under President Obama in 2015 (Every Student Succeeds Act, 2015). To date, the act has been extended into 2020 with $13,000,000 allotted to the program by Congress (National Association for Gifted Children, n.d.).

ESSA (2015) was revised during the renewal of ESEA from 1965 to better support students and serves as a replacement for No Child Left Behind (NCLB). According to the ESSA description on the National Association for Gifted Children website (nagc.org, 2020), ESSA supported gifted students by incorporating legislation from the To Aid Gifted and High-Ability Learners by Empowering the Nation's Teachers (TALENT) Act (S.363 & H.R. 2960)**.** The TALENT Act was designed to address the inequity in performance between the highest achieving students in the United States and those of other countries. This act is designed to aid gifted and other high performing students through four major points: national “excellence gaps”, aiding teachers in educating gifted and talented students, readily providing data to the public, and extending research and training classes for gifted education (TALENT Act, 2015).

The TALENT Act provided funding for schools to provide funding and training for kindergarten through twelfth grade in areas that include Title 1 schools, language programs and Title II works (National Association for Gifted Children, n.d.). In order to remediate "excellence gaps", the TALENT Act required Title 1 plans to include provisions for identification of gifted students, especially those in areas of low representation. States had to explain how they would aid schools in identification, and districts must analyze the gaps in excellence to determine improvements needed. Additionally, gifted professional development and student services were to be included in the Rural Education Achievement Program under ESEA and the TALENT Act (S.363 / H.R. 2960). For assisting teachers in providing for high-ability students, the TALENT Act (2015) requires states to explain the use of Title II funds to improve identification of instructional needs for gifted or high-ability students, support gifted students based on excellence gap data, and provide for instructional strategies. Achievement data is addressed through assessments that accurately measure advanced performance and by disclosing achievement to the public in order to make schools liable for excellence gaps (TALENT Act, 2015).

Lastly, the TALENT Act funds and requires identification methods and best practices in gifted education to be continually researched and further developed with funding from grants and the National Center for Research on Gifted Education. Additionally, the Secretary of Education receives and reports on state analysis of achievement data and excellence gaps as well as their methods of addressing excellence gaps directly to Congress (National Association for Gifted Children, n.d.; TALENT Act, 2015). This TALENT Act, while not mandated, does guide state gifted initiatives. This information shows that there is still concern for the disparities and inequities in gifted services within the United States.

This review of the national level legislation enforces the need to analyze how effective current legislation is in bridging the gaps in gifted education for low SES students of color. Additionally, the understanding that states are not required to follow national legislation as a blanket ruling stresses the importance of this study to focus on teachers from one state. This provides reinforcement that the study includes only one state, as Georgia's legislation may or may not confer with that of another state. This information will give the reader additional background on the legislation that teacher perceptions will be based on.

Georgia Gifted Legislation

Despite national legislation and guidance for gifted education, often states defer to local education agencies to make prominent decisions in gifted education, resulting in a variety of state approaches to gifted educational practices (Welsch & Zimmer, 2018, Lockhart, Meyer & Crutchfield, 2022). States and local school boards may define gifted education as they choose and make the majority of decisions about gifted education within their jurisdictions (National Association for Gifted Children, n.d.). VanTassel-Baska (2019) pointed out that a lack of political oversight in gifted programing is detrimental to the gifted education system.

For the state of Georgia, a closer analysis of state legislative stances on Gifted Education reveals more about Georgia's own attempts to serve gifted students. At the state level, The Georgia Association for Gifted Children website and Georgia's Department of Education identifies giftedness as, a student who demonstrates a high degree of intellectual and/or creative ability(ies), exhibits an exceptionally high degree of motivation, and/or excels in specific academic fields, and who needs special instruction and/or ancillary services to achieve levels

commensurate with his or her abilities. (Georgia Association for Gifted Children, n.d.; Georgia Department of Education, n.d.)

According to legislation by the Georgia Board of Education, students can be identified through methods such as referrals, test scores, IQ scores, creativity measures and motivation measures (Georgia Board of Education, n.d.).

The state of Georgia follows three legal documents for the production of gifted curriculum and practices: State Law OCGA120-2-152 Special Education Services, State Board of Education Rule160-4-2-.38 Education Program for Gifted Students, and Georgia Code Section 20-2-151 (Georgia Department of Education, 2018). These local school boards are expected to provide a developed curriculum for gifted students that is approved by the state and which, according to the Georgia Department of Education Georgia Resource Manual for Gifted Education Services (2019) focuses on developing cognitive, learning, research and reference, and metacognitive skills at each grade grouping, using principles of differentiation, in one or more of the following content areas: mathematics, science, English/language arts, social studies, world languages, fine arts, and career, technical and agricultural education.

According to the Georgia Department of Education, the curriculum should equate to an annual equivalent of five segments per week, or an amount of equal or greater time (Georgia Department of Education, 2018). The Georgia Association for Gifted Children states that its mission, "is to advocate for gifted children and youth by working with educators, parents, policy-makers, and the community to meet the needs of the gifted." (Georgia Association for Gifted Children, 2017). However, even the Georgia Association for Gifted Children noted in its own history that the association had not made rectifiable changes for the underrepresentation of African American students in gifted programs in the state of Georgia.

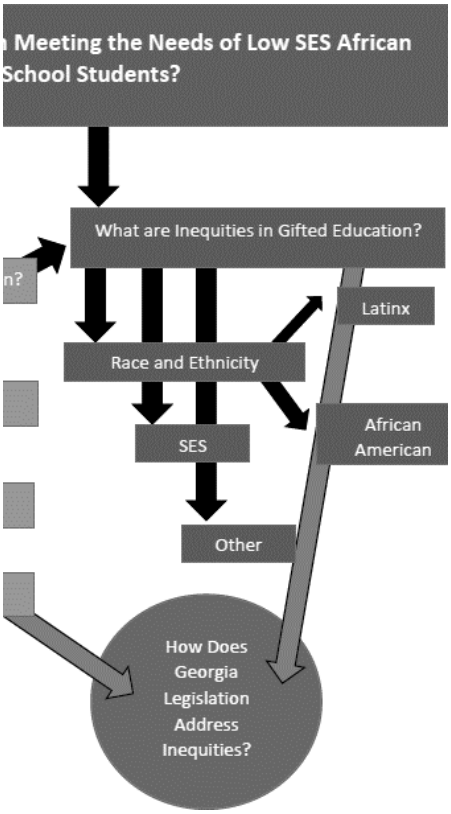
In a 1995 review by the Georgia Board of Education, the program was required to make changes to begin to alter the course of underrepresentation found in five districts after a call from the Office of Civil Rights to address the inequities in gifted education (Georgia Association for Gifted Children, 2017). Georgia Association for Gifted Children (2017) did not state further updated information on results of the alterations made to attempt to bridge the gap in gifted equity and there was no mention of inequities in Latinx populations, however this does not mean that there is equity for these students.

The legislation for the state guides the formation of gifted teaching strategies within it. Certified gifted teachers in Georgia are required to provide gifted students with the designated appropriate supplemental provisions and a number of different strategies. It is important to understand what forms of provisions and strategies should be known to the teachers of gifted students, as these are what teacher perceptions are going to be based on. In addition to determine teacher perceptions of gifted legislation, one must understand what the legislation is supposed to be providing to students in the classes AP teachers are providing (Georgia Association for Gifted Children, 2017).

Inequities in Gifted Education

Figure 5

Teacher Perceptions Thinking Map: What are Inequities in Gifted Education?



As seen in the previous section, legislation in the United States and Georgia has been designed to aid in gifted student development. Legislation has also acknowledged inequities and underrepresentation in the field. It is important to now specifically address what inequities still exist despite known definitions of giftedness and the established gifted curriculum legislated that should be addressing the needs of all gifted students. This portion of the thinking map in Figure 5 illustrates how gifted inequities will be described by race and ethnicity, socioeconomic status and other causes before the legislation and inequities research is synthesized to answer how Georgia legislation is addressing inequities found in the state.

Government led educational interventions acknowledge the disadvantages for low SES African American and Latinx students across the nation. For example, the federal TALENT Act was designed with the intention of addressing the lack of low SES students of color being represented in top achievers within the nation (S.363 /H.R. 2960). Gifted education is of limited access to students who do not come from White middle- and upper-class families (Gaztambide, Saifer & Desai, 2013). African American and Latinx students continue to be under-identified and underrepresented in gifted education (Ford, 2014).

Based on this information and the researcher's observations within the designated school district to be viewed in this study, the focus population of gifted students will be low SES African American and Latinx students. To narrow the focus of particular gifted services, the age group of focus will be high school students in a West Georgia school district, who, according to the Georgia Department of Education (2020) are intended to be served through Advanced Placement and Dual Enrollment Programs. The National Association for Gifted Children acknowledges underrepresentation in minority and impoverished children, noting they are less than half as likely to be identified for their giftedness (National Association for Gifted Children, n.d.) Inequities in student education in the United States can be seen with the most prevalence in children of African America, Latinx and low socio-economic student populations (Yaluma & Tyner, 2018).

African American and Latinx students from low SES families have continually been underrepresented in gifted education in the United States (Hodges & Gentry, 2021). According to Ford (2014), African American students are the most underrepresented minority group in gifted education, with 46.6% underrepresentation of African American students in gifted education in the United States based on demographic expectations in a 2006 data analysis.

Latinx students were at 37.3% underrepresentation in the same year (Ford, 2014). Additionally, Grissom and Redding (2016) reported that Latinx students account for approximately 22% of the nation's gifted student population ten years later, but only approximately 15% were receiving gifted provisions. Hodges and Gentry (2021) compared the participation of low SES identified African American and Latinx students in gifted programming using meal funding information and found that those low SES students (those receiving assistance for school meals) were less likely to be identified than those students who were not (Hodges & Gentry, 2021).

A 2021 report by Ecker-Lyster, Coleman-Tempel, Gregersen and Snyder cited findings from 2017 by Henfield to illustrate that approximately half a million Latinx and African American students were not receiving gifted education who should be based on disproportionate representation in the field at that time. The report explained that there was a 9% disparity in African American representation in gifted education in the United States and 9% disparity in Latinx representation as well. Ecker-Lyster et. al (2021) also argued that non-White minority students had a higher incidence of dropping out of gifted programing.

The National Center for Educational Statistics most recent reports on gifted student populations is from the 2011-12 school year. According to the reported data, 10.4% of Georgia public school students were reported as gifted in the state of Georgia in this time period. 9.6% of the male public school population was identified, and 10.7% of the female population was identified as gifted (National Center for Educational Statistics, 2012). Large disparities were observed in reports of students by race/ethnicity. According to the collected data, 15.5% of White Georgia public school students were identified as gifted; however, only 4.9% of the African American public-school population were identified as gifted, the lowest percentage of any ethnic group identified in the data (National Center for Educational Statistics, 2012).

Latinx students also had only 4.9% of their ethnic group represented in gifted programing (National Center for Educational Statistics, 2012). The race/ethnicity with the largest percentage identified as gifted was the Asian population, at 24.3% (Nation Center for Educational Statistics, 2012).

In Georgia, 85.7% of high poverty primary and middle schools report offering some form of gifted programs (Yaluma & Tyner, 2018). The state of Georgia does have programs designed to foster gifted education for students at the high school level within the state as well, such as AP and Dual Enrollment courses and gifted institutions. According to the State Board of Education Rule 160-4-2-.38, gifted services in the state of Georgia are led by the Local Board of Education (LBOE), which has domain over the determination of policy and local entities which educate gifted students in their designated area (160-4…). School systems are allowed to create their own gifted protocols to a large degree, and the Georgia Department of Education expresses this as a way for the school systems to identify and address individual needs for their schools (Gifted Education, 2019). Georgia plans submitted to ESSA in 2018 reported that the Georgia Department of Education provided additional training in gifted education, including providing information on cultural differences between gifted students (Kaul & Davis, 2018). Kaul and Davis (2018) also stated that Georgia was intending to gather additional feedback on the needs of its gifted students through meetings with stakeholders that included parents and students.

These issues in representation in gifted education continue to prevent students from minority and low SES backgrounds from bridging these inequity gaps. Possible reasons for the students not receiving their appropriate accommodations and gifted identification can include misunderstanding of cultural differences by educators, lack of parental involvement, prejudice

against minority and low SES students, and preconceived negative notions against student performance based on race or family background by teachers (Kettler, Russell & Puryear, 2015; Ford, 2014). Faulkner, Marshall, Stiff and Crossland (2017) reported that negative teacher perceptions of student ability based on the student's ethnicity has been shown to negatively impact their placement in higher performance classes. This teacher bias increases the achievement gap between White and minority students, as the perception of student ability that the teacher is connecting with outward appearance against students of color is preventing those students from receiving equity in education (Faulkner, Marshall, Stiff & Crossland, 2017).

The NAGC (n.d.) was created in 1954 under the intention of ensuring equality in gifted education for all students, and, in 2010, the association reorganized its purpose with the intention of increasing gifted representation for minority students (Ford, 2013). According to the National Association for Gifted Children (n.d.) students must be given significant support from both home and faculty in order to reach their gifted potential, especially when they are from underrepresented populations. In this study the underrepresented population focus will be low SES African American and Latinx high school students in Georgia. One way in which representation can be increased is through faculty members offering support for underrepresented students by becoming versed in gifted student needs. Gifted students perform at their best when their teachers are appropriately trained to teach gifted students. This training includes understanding of identification of gifted students, understanding of learning styles of gifted students, and knowledge of gifted curriculum (National Association for Gifted Children, n.d.).

The equity gaps in gifted education begin at the earliest stages of gifted identification. While this study focuses on high school gifted programs, it is important to note that the

inequities in gifted education begin well before the high school stage in education (Ford, 2014; Card & Giuliano, 2015; Kettler, Russell & Puryear, 2015). It could also be argued that by the time unidentified or underserviced gifted students reach high school, they have been victims of compounded inequity throughout their primary and middle educations. As it is, primary education, a time in which gifted identification can impact students during formative years of learning, is when many gifted students are originally identified as gifted (Wright & Ford, 2017). However, primary grade African American children are nationally the least likely among American students to receive any form of high-quality gifted education, with a study reporting perhaps no more than 25% of African American students having this opportunity as opposed to 36% of White students and 40% of Latinx (Wright & Ford, 2017). On top of this inequity in traditional primary education, African American children are even less likely to be identified as gifted and/or be given the appropriate gifted opportunities for talent development. One quote highlights some of the inequities found in teacher perception of giftedness in formative years, "Teachers were less likely to refer children to gifted programs when the students' name was associated with low-income status (Wright & Ford, 2017)." This illustrates that there is also a need for appropriately trained teachers with the right mindset based on appropriate training. Teachers may receive this training through professional learning or additional certification courses. This kind of training can lead to understanding for teaching gifted students for the curriculum appropriately (Stephens, 2019).

According to Renbager and Long (2019), gifted high school students receiving services have reported that AP classes have positively impacted their abilities to enter and perform well in higher education such as universities. The researchers also have stated that such access to advanced classes have been important for getting past disadvantages and into college

(Renbarger & Long, 2019). Therefore, gifted services for minority or impoverished secondary students can be crucial links to their post-secondary educations. Yuliany and Soendari (2019) also remind readers that gifted education is not something that ends in early school years, but that gifted students need consideration for talent development in their learning into post-secondary studies that helps them in both academic and emotional capacities.

Yaluma and Tyner (2018) reported that gifted participation in schools with majority low SES students was less than half of that of their higher income counterparts when reviewing national data on elementary and middle school institutions. This illustrates an achievement gap already apparent before students reach the high school level (Yaluma & Tyner, 2018). The early formation of the gap in gifted education also reiterates causes for growing gaps as students reach secondary school (Yaluma & Tyner, 2018). Lack of appropriate gifted interventions in early school years can hinder student engagement, and this has become apparent in young African American student populations (Wright & Ford, 2017). A qualitative study of gifted African American males by Flowers and Banda (2018) also revealed a pattern of students being unaware of what their gifted status actually meant, with misconceptions of high achievement equating to giftedness. African American students in this study did not understand what the true definition of their giftedness was, and some perceived it as equal to being a high achiever, not someone with specially developing talents from their unique thought processes (Flowers & Banda, 2018). Not understanding the difference in high achieving and gifted does not allow the student or their family to understand the specific needs of a gifted student for talent development, and is a disadvantage to their education. Such misunderstandings can also be of concern to Latinx gifted students, and can be connected to possible language barriers in understanding.

Identification methods for finding gifted students can increase inequity in representation as well. Verbal testing is one example of where bias may be found. As pointed out by Steenburrgen-Hu and Olszewski-Kubilis (2016), students may have lower verbal skills due to their background, which may bias the tester against them. Some states have made attempts to address inequity in student identification by moving to gifted testing without a verbal portion of a test to avoid bias that would come from likely preexisting inequities in language skills and vocabulary that are often found in minority and low SES students (Steenberger-Hu & Olszewski- Kubilis, 2016). However, the gaps in representation remain. Percentages of representation must be addressed appropriately however, and the use of quotas to establish required numbers of students in gifted education, or in other areas of education, is illegal (Ford, 2014). Concerns of representation at the individual school level have also been highlighted. A qualitative study by Flowers and Banda (2018) concluded that teacher perceptions of African American male students have negatively impacted identification of giftedness, and that more appropriate systems of mentoring and academic support from guidance counselors and teachers must be established in order to appropriately identify and support gifted African American males. Latinx students are also at risk for non-identification in greater percentage than White counterparts because of cultural differences such as language (Walker & Pearsall, 2012).

How Does Georgia Legislation Address Inequities?

Up until this point, the research has been analyzed and compiled to establish what gifted education is from the ground up. Gifted students have been identified as well as their educational needs to reach their full potential. Additionally, the current legislation has been detailed to provide an understanding of what the government mandates for the education of

these identified gifted children. Clear data has also been presented that shows inequities and underrepresentation exist in gifted education in the United States, and more specifically in Georgia. This knowledge helped determine the next main step in the research process, which is to determine how Georgia legislation addresses the inequities that have been seen for low SES Latinx and African American high school gifted students?

In order to answer this question, I will now return to the unexplored segment of the graphic, Theoretical Frameworks. The Theoretical Frameworks help define gifted education. There are multiple definitions of giftedness developed by educational researchers across the globe. A battery of these definitions was combined earlier in this chapter to provide insight into what gifted education is. It is now that I will provide an analysis of each of the leading definitions of gifted education to more precisely establish a framework for the purpose of this study. The analysis of the multiple definitions based on gifted frameworks also illustrates the evolution of the definition of giftedness and how different researchers have woven together ideas from amongst one another. These definitions will lay a framework for analyzing the empirical data later in this review. Among the most recognized gifted theorists who are analyzed in this process are Renzulli (1999, 2002, 2016), Gagné (1985, 2004, 2011), Gardner (n.d.), and Sternberg (2008, 2010). The following analysis will explain the reasoning for the selection of Gagné's framework for analyzing Georgia high school teacher perceptions of gifted education.

Viewed through Gagné's Framework/ Choosing Gagné's

Gardner, Sternberg (2010), Renzulli (1999, 2002, 2016) and Gagné's frameworks represent a variety of focuses on giftedness and talents amongst high-achieving students or students with the potential to be high-achieving. These gifted frameworks are referenced

throughout gifted legislation and best practices (NAGC, n.d.). A further analysis of each framework reveals that Gagné's (1985, 2004, 2011) is the most thorough and applicable to guide in assessing gifted educational talent growth.

Howard Gardner (n.d.) designed his Theory of Multiple Intelligences over a period of time, in which he determined that beyond visual, auditory and kinesthetic learning, there are actually a total of nine categories of intelligence. Gardner's (n.d.) Multiple Intelligences include verbal-linguistic intelligence, logical-mathematical intelligence, spatial-visual intelligence, bodily-kinesthetic intelligence, musical intelligence, interpersonal intelligence, intrapersonal intelligence, naturalist intelligence, and existential intelligence. Based on his focused studies in psychology, cognition and human potential, Gardner (n.d.) developed this list of intelligences as a framework by which to identify the unique learning abilities and talents of individual persons. Gardner (n.d.) recognized, similarly to the other three framework designers (Gagné, 1985, 2004, 2011, 2018; Renzulli, 1999, 2002, 2016; Sternberg, 2000) that intelligences are not all encompassing, and that there are myriad of combinations and strengths. However, with this framework, there is no specified level or segment of Gardner's framework that delineates giftedness. Multiple Intelligences apply to all persons. Therefore, Gardner's Theory of Multiple Intelligences is too generalized for this study.

Where Gardner exposed truths about students across the intelligence and ability spectrum, Joseph Renzulli's (1999, 2016) Three-Ring Conception of Giftedness focuses on the specified population of study, gifted students. This automatically makes his framework a better fit for this research because of its deeper understanding of gifted students, but it is still not the final measurement product, as it does not allow for observation of growth to talent. Renzulli (1999, 2002, 2016) defined giftedness, as discussed earlier, through this Three-Ring Model, in

which gifted students possess some combination of ability, creativity and commitment that designate them as gifted. The three areas, according to Renzulli (1999, 2002), are necessarily equally involved, and students can be impacted throughout their lives to change the manner in which they are impacted by or develop each portion of the Three-Ring framework. The framework explains what a child needs to be gifted, but not in the detail offered by Gagné to determine which factors, or catalysts as Gagné (1985, 2004, 2011) explains, impact a child and are needed in positive enforcement types to further develop talent. The Renzulli (1999, 2002, 2016) Three-Ring Concept of Giftedness is on the right track to being an appropriate framework for analyzing teacher perceptions of gifted practices for students, as it has been referenced and a guiding point for gifted education for several decades. However, Renzulli (1999, 2002, 2016) does not include the explicit environmental catalysts that have a direct and observable influence on gifted students that Gagné does (Gagné, 1985, 2004, 2011).

Robert Sternberg (2000) developed the Triarchic Theory of Human Intelligence. As mentioned previously, within this framework, a three-part measure of intelligence was created based on creative, analytical and practical capabilities within a person. Furthering his analysis of this theory, Sternberg (2000) delved into the specifics of his three areas of giftedness to specify upon seven forms of giftedness created from the amalgamations derived from this Triarchic Theory. These seven gifted identifications include the Analyzer, the Creator, the Practitioner, the Analytical Creator, the Analytical Practitioner, the Creative Practitioner, and the Consummate Balancer (Sternberg, Grigorenk & Zhang, 2008).

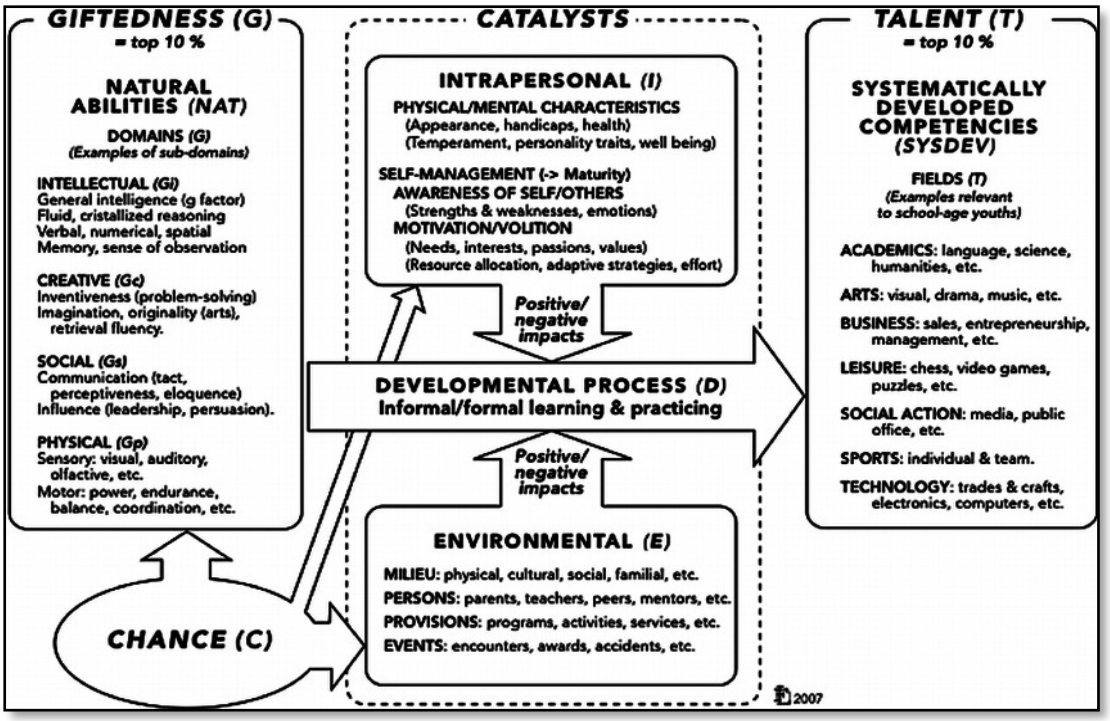
Like Gardner (n.d.), and as Renzulli (1999, 2016) and Gagné (1985, 2004, 2011) would agree, giftedness is not one all-encompassing designation, but a fluid designation based on a blend of intellectual abilities and higher performance. Sternberg (2000) focuses on

identification of forms of giftedness and talent in students. He describes examples of each of the seven gifted types he has formulated and explains what portions of their giftedness are nature versus nurture. For example, the analytical creator is adept at researching and making but does not translate their understanding well to other persons (Sternberg, 2000). He also referenced Renzulli (1999, 2002, 2016) and Gagné (1985, 2004, 2011) within this portion of his framework description and their multipoint observations of giftedness. However, this framework is far more dedicated to identification procedures and abilities of gifted abilities rather than identifying any form of catalyst that could further enhance gifted student education, as seen in Gagné (1985, 2004, 2011).

Gagné's (1985, 2004, 2011) framework offers the most detailed and explanatory framework for the continual development of gifted students. Whereas Sternberg (2000) and Renzulli's (1999, 2016) frameworks focus on the identification aspect of what gifted students are, and Gardner's Multiple Intelligences are too broadly open to all student abilities, Gagné (1985, 2004, 2011) provides an extensive understanding and procedural guideline for not only the identification of a gifted student, but the process by which a gifted student is molded into one who is also talented. Thus, Gagné (1985, 2004, 2011) gives the clearest frame for teachers to guide their metacognitive views of giftedness.

Figure 6

Gagné*'s DMGT (From* Gagné*,* Françoys*)*



Gagné's framework outlines the transformational process from gifted to gifted and talented. When viewing Figure 6, Gagné's DMGT (1985, 2004, 2011), an item outline of giftedness is in the first column. Giftedness, according to Gagné's model, are classified under two subsections, mental and physical. Mental gifts are further categorized as intellectual, creative, social and perceptual. Physical gifts include both muscular and motor control (Gagné, 1985, 2004, 2011).

The defined giftedness is then followed by a middle portion of the framework where transformation into talent is fostered and in which catalysts that impact student development through both intrapersonal and environmental means, or promotors of change, occur (Gagné, 1985, 2004, 2011). Intrapersonal catalysts include physical and mental traits of the gifted

student as well as the goal-management of the student (Gagné, 1985, 2004, 2011). Goal-management includes the student's ability to recognize the strengths and weaknesses of themselves and those around them, personal motivations, and the student's personal volition (Gagné, 1985, 2004, 2011, 2018). If these catalysts are negative, or otherwise inadequate in fostering giftedness, then the final phase of the DMGT, talent development, may not be reached (Gagné, 1985, 2004, 2011, 2018).

Environmental catalysts impact the gifted student differently than intrapersonal catalysts, such as self-management, which are interpreted by the student through internal vision, such as metacognitively, as these environmental catalysts are outside factors that can be observed by teachers (Gagné, 1985, 2004, 2011, 2018). These catalysts include Milieu, Individuals, and Provisions according to the 2008 DMGT diagram by Gagné. The environmental catalyst of Events can be found in earlier diagrams as a fourth environmental catalyst (Gagné, 1985, 2004, 2011, 2018).

Gagné's DMGT (1985) proposes that environmental catalysts can positively or negatively impact gifted students' education. If the student does not receive the appropriate influences through these catalysts, then the desired level of Gagné's DMGT (1985, 2004, 2011), both gifted and talented, runs the risk of never being reached. Gifted students require appropriate and positive impacts from environmental catalysts in order to reach their potential (Gagné, 1985, 2004, 2011, 2018), and these environmental catalysts can be observed by educators. Therefore, the perceptions of those educators can be measured. A gifted student receiving the appropriate combination of positive environmental catalysts in their education results in a student that is both gifted and talented, the highest potential for gifted students (Gagné, 1985, 2004, 2011, 2018). Talents can be cultivated in academics, science and

technology, arts, social service, administration/sales, business operations, games or sports and athletics (Gagné, 1985, 2004, 2011).

For the purpose of this study, the literature review will now focus on the empirical research on the factors of milieu, persons, events and provisions in recent studies. This section will highlight the impacts perceived from the environmental catalysts that students are introduced to in the school setting. Perceptions will vary from teacher to student, but these perceptions and the differences in them will help shed light on the significance of these factors and give credence to the need to address perceptions through Gagné's DGMT (Gagné, 1985, 2004, 2011, 2018) when analyzing the impact of legislation on gifted students.

The Need for Communication with Parents

Latinx students face issues with not being identified based on issues of language barriers, with many families not speaking English as a first language, or English not being spoken at home. This divide can prevent appropriate communication between parents and educational staff (Walker & Pearsall, 2012). Parents of gifted students need open communication with teachers and educational staff (Nowak, 2020). According to Nowak (2020), a good communicative relationship between the school and parents of gifted students help to bridge the gaps in underrepresented populations by helping to clarify understanding of giftedness, gifted identification and gifted learning, especially if teachers are appropriately trained in identifying cultural barriers in gifted education. The National Association for Gifted Children recognizes this need for communication with ESOL families, and provides additional resources, such as the "¡Ayude a su hijo dotado a tener éxito!" document, however this information would need to be made available or families would need to be made aware of its existence in order to benefit from it (NAGC).

Gifted students require additional supports in order to thrive (National Association for Gifted Children, n.d.) This study was developed to focus on the high school level gifted African American and Latinx student of low SES background, and to attempt to find a way to better identify a method of improving upon issues of the inequity that these students suffer. The first step in explaining who the students receiving inequitable gifted services are. One must understand what sets gifted students apart from their peers, and what is established as essential educational interventions, or gifted supplemental services. All gifted students should have equal access and participation within.

It has now been established that a percentage of students within the United States, identified as gifted, need additional services in order to reach their talent potential and prosper for both themselves and as part of the nation. Giftedness, as understood through the definition found in Gagné's DMGT, explains that students should be receiving the appropriate environmental catalysts in their education in order to reach their talent potential (Gagné, 1985, 2004, 2011, 2018).

Milieu

The first factor to be addressed is milieu (Gagné, 1985, 2004, 2011). This constitutes the locale of the student in and such determining factors as the physical location of learning environments, family, and sociocultural traits that are unique to ethnic and familial heritage (Gagné, 1985, 2004, 2011, 2018). For the studies that will be analyzed on milieu, issues based on urban or rural school location will be discussed as well as the SES of the location of the students and their schools, as both the population of an area and the overall economic status of a school zone are key factors in determining the characteristics of milieu. Barriers to appropriate gifted training based on a particular milieu's culture can include: families not having enough

information on what giftedness is, lack of parental involvement based on low SES status, incorrect teacher perceptions of giftedness, and lack of understanding of school function by the family (Robbins, 2019). Students with low SES backgrounds are less likely to live in families who can afford to provide their children with outside of school learning activities such as music lessons, literature collections and other learning experiences that cost money outside of what public school offers (Ecker-Lyster, M. et al, 2021).

The milieu portion of this study is focusing on the impact of the student's location or origin. While at first glance this area seems specific, it can also include cultural influences from the social or cultural location of a student's background (Gagné, 1985, 2004, 2011, 2018). Studies such as those by Gaztambide-Fernandez, Saifer and Desai (2013) relate to milieu, as students are being negatively impacted by a high poverty environment, and ethnicity according to Crabtree, Richardson and Lewis is aligned with low representation in gifted education (Crabtree, Richardson & Lewis, 2019). Additionally, Gaztambide-Fernandez, Saifer and Desai (2013) pointed out that specialized schools and programs for gifted students are often out of reach for minority students and the impoverished, drawing connections to how milieu (i.e., location or origin) can be a negative environmental catalyst if these services are denied to students based on their ethnic or low SES geographical status.

A 2019 convergent mixed-methods study on implementation of National Gifted Standards by VanTassel-Baska and Hubbard (2019) reviewed eight elementary and secondary gifted programs from large urban districts in the eastern United States under the lens of the National Association for Gifted Children. Through observations of teachers and available data using the Curriculum Review Form-Revised and the Classroom Observation Scale-Revised, the researchers found that barely more than half of the indicators for three of the NAGC

standards were met and less than forty percent of indicators were met for the remaining three indicators. In relation to the environmental catalyst of milieu, the researchers determined that learning environments were only satisfactory at 57.6% of indicators (VanTassel-Baska & Hubbard, 2019). Therefore, the milieu was not having the desired positive impact, and possibly a negative one (VanTassel-Baska & Hubbard, 2019). Observation of environmental factors found a need for diverse peer collaboration and the environment was also found to need better leadership for gifted education (VanTassel-Baska & Hubbard, 2019). Limitations of the study included unequal sample sizing and the use of multiple instruments. VanTassel-Baska and Hubbard also used teachers from different grade levels, not specifying implications by grade or age level (2019).

Graefe and Ritchotte (2019) performed a study on Latinx gifted students enrolled in AP classes. The study focused on what factors could predict how these students would perform on the AP exam at the conclusion of the class. The researchers sought to fill a gap in the research on Latinx gifted student representation, especially in high poverty areas. The researchers performed an exploratory quantitative study of student demographic and AP test results through district information made available for a single high-poverty high school. From analysis of Chi-square tests, the researchers concluded that there was no significant difference in White and Latinx gifted student AP test results and gifted Latinx students were more likely to pass an AP exam than non-gifted Latinx students (Graefe & Ritchotte, 2019). Therefore, this study gave the impact of milieu as a socioeconomic situation, by looking closely at the impact of high poverty in the lives of these Latinx students. Milieu as a factor of poverty echoes, as schools are milieu and homes are milieu, these areas are heavily impacted by poverty, and are less likely to offer the diversity and depth of support found in schools of higher SES populations, which this study

will analyze for the state of Georgia.

Using a critical systems theoretical framework, Crabtree, Richardson, and Lewis (2019) performed a quantitative study on a southeastern urban school district by analyzing enrollment numbers of gifted and AP enrolled students from the Department of Education. They found that 2.4% of students in high poverty schools received gifted services (Crabtree, Richardson & Lewis, 2019). AP enrollment was found to be lower in high poverty schools as well (Crabtree, et al., 2019). Additionally, students in schools with high poverty were less likely to receive gifted services if they were African American or Latinx, as only 6% of students in the low poverty schools receiving gifted services were of these two ethnicities (Crabtree, et al., 2019).

Additionally, cultural impact as a milieu factor could be seen when Flowers and Banda (2018) studied impoverished African American males using a purposeful sampling in a qualitative case study. The researchers sought to find major impacts on these subjects as they transferred into postsecondary education by analyzing the subjects' personal experiences from the point of view as an identified gifted student. The study found that African American males viewed giftedness differently than Caucasian majority counterparts, as they did not self-identify as gifted individuals. It was also found that gifted African American males perceived cultural barriers to gifted education, believing their education as gifted students and access to educational services was diminished because of their cultural background (Flowers & Banda, 2018).

Additionally, Jeffries and Silvernail (2017) found that additional cultural barriers prevent African American students from participating in AP courses that include bias from teachers, negative responses from their peers and a lack of opportunity for advanced classes earlier in life. And concerns of milieu impacting gifted students is something that has been studied from the

student perspective as well. In a qualitative phenomenological study by Tabron and Chambers (2019), the researchers interviewed 18 African American and Latinx students at elite colleges about their experiences in high school. In short, the students that were interviewed looked back on their high school experience as a location that valued things differently than their families. Their home milieu and their school milieu did not agree, and in fact were butting against one another, causing a lack of gifted provision interaction (Tabron & Chambers, 2019). So it is, that despite positive or negative impact on either side, it can be assumed that a gifted program for minority students could in fact pose concerns of a negative environmental catalyst in the form of a milieu that is foreign to their family life.

Another cultural milieu study reported the impact of gifted education on the narrative abilities of low SES African American children. Mills (2015) studied the narrative writing skills of 43 African American children from second to fifth grade in order to compare the narrative abilities of African American students receiving gifted services versus those who did not. According to Mills (2015), the students performed with little difference in ability in reading and writing skills except for gifted students having a higher vocabulary level. These students were impacted by milieu, as the researchers were referencing their cultural background as a social situation and highlighting their African-American heritage as a source for their differences in verbal and literary differences (Mills, 2015). By having a different cultural background, these students and their giftedness may not be correctly interpreted by teachers or other faculty, and placement exams would not take into account such cultural differences, another barrier to gifted accommodations.

Joni Lakin (2016) also conducted a study focusing on identification of gifted students from minority backgrounds. Lakin readdressed the former study by Card and Giuliano (2015),

and reported additional gaps to be added to the previous study on equity through identification processes. This study added to issues in minority student backgrounds and cultures. Their milieus, influence the gifted education students were exposed to, or not being exposed to. Card and Giuliano (2015) found that universal screening was perhaps the best system for identification of gifted students with equity. Lakin explained that to ensure equity in Gifted programs, individual school districts must be vigilant in protecting gifted programing and student identification (Lakin, 2016).

The educational milieu, the student's school, is also an important factor to consider as an environmental catalyst that can have an impact on talent growth. The better the milieu (school) is at presenting itself as a positive environmental catalyst for its gifted students, it might be assumed that the better the talent development may be. As mentioned with the introduction to milieu, physical location of a school in a specific population is also a significant factor in the impact of this environmental catalyst. The physical location of school settings can also be impacted negatively by withholding of funds for gifted programs.

As mentioned previously, the implementation of gifted programs is not regulated nationally. Individual state locations do represent issues in gifted disparities when addressing such areas as rural districts. This could be seen when Kettler, Russell and Puryear (2015) conducted a study in Texas to determine if inequities existed in gifted education within the state and if so, what they were. This was performed through a quantitative analysis of Public Education Information Management Systems and Academic Excellence Indicator System of the Texas Education Agency data from the 2010-2011 school year. The study concluded that there were disparities in opportunities for gifted students based on money provided for Programs for students from rural areas and low SES populations, with rural areas receiving far less financing

and more monetary opportunities being available to higher populated areas. The study found that there was not a significant impact on provisions of gifted opportunities for students based on ethnicity (Kettler, Russell and Puryear, 2015).

Another physical location study, based on rural schools, was found from Seward and Gaesser (2018). The researchers conducted a qualitative study using 19 rural high school gifted students who were in AP classes to determine areas in their high school experience where the students needed additional interventions from teachers and school counselors to perform effectively as they transitioned to higher education (Seward & Gaesser, 2018). While rural school focus in this study does not focus on African American populations, the connection is being drawn that this study is focusing on the state of Georgia. Georgia has a high rural population of African American students and correlations may be drawn in this instance.

The students were questioned in discussion groups and their responses were recorded by graduate students assisting the researchers. Based on the analysis of recorded transcripts by the interviewers, Seward and Gaesser (2018) concluded that gifted students were considered capable of progressing out of high school without assistance by teachers and counselors, but that was a misconception. According to Seward and Gaesser (2018), gifted students were not receiving the needed assistance in understanding and adjusting to transition into higher education or career paths. Emotional assistance is needed by gifted students to adequately assimilate into post- secondary life. This can be assisted by increased educational opportunities to increase understanding of giftedness and gifted curriculum for counselors and teachers that can be implemented. Appropriate interventions with mentoring for students and community members to appropriately serve these gifted students is necessary (Seward & Gaesser, 2018).

It should also be noted that milieu impacted by economic status is not limited tothe

American education system. International studies have also shed light onto the impact of milieu, as they described the impact of lifestyles and socioeconomic status on gifted students. They also show that inequities in gifted education for low SES gifted students is a global phenomenon. For example, a Kazakhstani study of teacher interpretation of giftedness was conducted based on student gender, ethnicity and socio-economic status as influencers (Hernandez-Torrano & Tursunbayeva, 2016). One hundred and thirty-two teachers participated in a mixed methods study in which they viewed student profiles and they made observations on the description of student's gifted status (Hernandez-Torrano & Tursunbayeva, 2016). Hernandez-Torrano and Tursunbayeva (2016) converted the trends in findings on student profile data to conduct an ANOVA model statistical analysis. The study found that teachers were more likely to identify gifted students if they were male and not from low SES backgrounds (Hernandez-Torrano & Tursunbayeva, 2016). Additionally racial disparity in identification was also noted (Hernandez-Torrano & Tursunbayeva, 2016).

Based on the analysis of these studies, milieu is a significant environmental catalyst on gifted students. In particular, low SES African American and Latinx students are negatively impacted by milieu factors associated with locations of poverty. These milieu factors are often perceived by teachers and mentors of gifted students as negative impacts on gifted growth into talent. The milieu catalyst can be associated with the environmental catalyst of persons, as there are often similarities between groups within the same location. For example, a school zone could be a milieu, and that school zone would likely hold students of similar background with similar catalysts impacting their personal and academic lives. These students would be impacted by the same teachers, same peers and same neighborhood influences.

Persons

The second area of Gagné's (1985, 2011) environmental factors of the developmental process for gifted students that will be examined is persons. This includes anyone who has a personal impact on student learning and gifted studies, be it family, school employees or classmates. When attempting to address underrepresented gifted youth, the environmental catalyst of persons represents the catalyst that can identify the gifted students. Additionally, persons are the ones who are going to administer other environmental catalysts upon a student (Gagné, 1985, 2004, 2011). In this study, we are focusing on teachers as environmental catalysts because the teachers will be reporting on their own perceptions. Even if the teacher perceptions are of the impact of someone else, it is the teacher as a catalyst that is being measured. For example, a teacher would provide the appropriate teaching strategies and event opportunities such as events. In this study, teachers are being questioned and surveyed on their perceptions, making this a reflective piece in which the environmental catalysts are being perceived by persons, which is another environmental catalyst in the DMGT model.

Teachers as Persons

Teachers are the focus group being surveyed and interviewed in this study. It is the perceptions of teachers which will be the focus of this study, making the research in the section on Teachers as Persons particularly significant, as it would be expected that similarities in teacher responses could be found during the questionnaire portion of this study.

A study conducted by Joseph L. Russell (2018) focused on high school teacher perspectives in gifted education in the state of Texas. This study focused on Renzulli's (2019) framework for gifted studies, which established the Three-Ring definition of what it is to be a gifted student. Russell (2018) sought to find how teachers of gifted students defined giftedness

as well as how the teachers perceived gifted education. Russell (2018) used grounded theory to analyze his perceived gap in understanding of high school teacher perceptions of giftedness through a qualitative open-ended survey of teacher responses. Russell (2018) acknowledged that the study he conducted was limited, as it focused only on Texas teachers' perspectives via the grounded theory through Renzulli's (2019) framework and used a small number of teachers (Russell, 2018).

Based on this writer's experience, teachers are still not fully immersed in gifted training, possibly limiting positive impacts on gifted students. This lack of gifted training is reflected in the researcher's own experience. AP teachers, the focus group for this research, are not required in the district being studied to have additional gifted training. While certification for gifted teaching is available, not all AP teachers partake. This may influence their understanding of gifted identification, gifted environmental catalysts and legislative implementation.

Attitudes about gifted students by their teachers can push gifted and talented connections to higher achievement, or lower if they are negative, and were further analyzed in an explanatory mixed methods-based study by Szymanski, Croft and Godor (2018). The researchers used the *Determining Attitudes Toward Ability* measure to complete a quantitative study based on data collected from a survey given to 350 teachers across grades ranging from elementary to high school on attitudes about gifted students and gifted education (Szymanski et al., 2018).

Szymanski, et al. (2018) argued that their work was designed to also help fill in the gap in the literature on teacher attitudes and perspectives on giftedness found in the work of Begin and Gagné (1994). Data analysis revealed that teachers had varying ideas about what giftedness and gifted curriculum should be, with differing beliefs being reported in how to identify

students, whether or not creativity was a part of gifted studies and found that individual needs were the greatest concern overall (Szymanski et al., 2018). Szymanski et al. (2018) did not give evidence on the relationships between the goals of the teachers of gifted students and their perceptions of gifted programs. They further illustrated overall that there is a lack of cohesion in teacher understanding of gifted students and requirements as well as a division in how teachers approach said students (Szymanski, Croft & Godor, 2018). Again, teachers were found lacking in significant gifted training or uniformity in educational understanding and definitions of Gifted curriculum.

Grissom and Redding (2016) also looked at the impact of persons on gifted students by studying teacher perceptions and identification of gifted students. Using national data, the researchers compiled a survey group of teachers from grades kindergarten through eighth grade who worked at schools with gifted programs (Grissom & Redding, 2016). Based on the regression analysis performed by Grissom and Redding (2016), they found that African American and Latinx students were in smaller percentages of students placed in available gifted programs within their school, as opposed to White and Asian students, with percentages of 2.2% and 3.5% respectively for African America and Latinx students and 5.3% for White students. Their study also found that teachers who were not African American were less likely to identify or provide gifted services for African American gifted children (Grissom & Redding, 2016). While the study by Grissom and Redding (2016) does focus on younger grades, it gives background into the impact of persons on African American and Latinx adolescents and sheds light onto their lower involvement in gifted classes as they enter high school.

As mentioned earlier, Joseph L. Russell (2018) conducted a qualitative study with a

constructivist approach to determine how teachers perceived giftedness and gifted education through two phases with a total of 20 teacher participants. In a closer analysis of the research, Russell (2018) found that teachers in the study connected student giftedness to intelligence, ability, inherent ability and creativity. Additionally, teachers responded in the questioning and interviewing that their knowledge of gifted education was a result of training provided within their school system. Russell (2018) concluded that his findings on teacher perceptions of giftedness could be compared to the model of giftedness proposed by Renzulli (1999, 2016), but did not bring into discussion perceptions based on Gagné (1985, 2004, 2011).

Allen (2017) sought to find the role played by teacher perceptions in underrepresentation of gifted students from minority populations using a qualitative interview method for collecting data. The study sought to find the impact of a student being low SES, language and/or an ethnic minority in gifted education (Allen, 2017). It gave greater insight into the deeper connections to negative environmental catalysts limiting gifted growth into talent for students who are underrepresented (Allen, 2017). Allen (2017) illustrated that it is not only because of the students' low SES or ethnic background, but because interpretations by the environmental catalyst of persons. These persons can create cultural barriers by judging difference such as language, holding negative views of understanding towards those who do not speak the same language as the person setting judgement on the student's gifted ability. Teachers can see barriers based on language difference between themselves and the parents and therefore cannot or will not build rapport needed for appropriate gifted discussions to occur (Allen, 2017).

Allen (2017) interviewed six teachers from a low SES elementary school over two interview periods. Allen's (2017) analysis of qualitative data revealed that those teachers needed

additional training in identification of gifted students from underrepresented populations through collaboration opportunities and professional learning. This means that teachers are not currently well equipped with the professional development or trainings needed for them to be able to accurately identify gifted students. Additionally, if they have some understanding of gifted identification already, they still needed additional resources to help them identify students in underrepresented populations. This discriminatory issue in gifted identification may be due to a language barrier, family understanding of giftedness or other similar reasons (Allen, 2017). Teachers also expressed concerns about testing, and how students with language barriers are inhibited by testing not designed to accommodate students with limited English abilities (Allen, 2017).

Rothenbush, Zettler, Voss, Losch and Trautwein (2016) also examined teacher perception impacts on student gifted nominations. This German study used data from a 2012-2013 collection of students who were participating in Germany's Hecter Children's Academy Program for gifted children through random selection within the student pool (Rothenbush, Zettler, Voss, Losch & Trautwein, 2016). Additionally, this Germany study revealed that there was a positive association between student socioeconomic status and the probability of the student being nominated for gifted services (Rothenbush et al., 2016). This study showed the impact of teachers as persons on student identification. The perceptions of the teacher about a student can be influenced by their peers, or classmates around them, as well as the student's milieu of socioeconomic status. Similar studies such as that by Johnsen and Kaul (2019) were also conducted in America.

Johnsen and Kaul (2019) completed a quantitative study to survey Texas teachers on their perceptions of gifted curriculum and practices that are research-based. They also sought to

find if teachers perceived barriers in schools where these practices were not implemented (Johnsen & Kaul, 2019). Johnsen and Kaul (2019) determined that teachers agreed most with the provision of ability grouping weekly for gifted students as a method of addressing gifted needs. However, only 48% responded in agreement with using ability grouping for gifted services, showing that there is still a lack in consensus for appropriate provisions for gifted students in the classroom (Johnsen & Kaul, 2019). Perhaps the most significant findings of this study was the teacher perceived barriers in gifted education found at the teacher level. According to the results of the survey, teachers that were not implementing gifted curriculum practices had little resources and/or lacked appropriate training to teach gifted students (Johnsen and Kaul, 2019).

A study by Berman, Schultz and Weber (2012) took a qualitative focused mixed methods research approach to determine preservice teacher perceptions of gifted students. The researchers collected qualitative data from second year undergraduate students enrolled in classes for teaching gifted students and therefore represented the perceptions of possible future teachers of gifted students. The students participated in a survey and open-ended questionnaire (Berman et al., 2012). Berman, Schultz and Weber (2012) found that the undergraduate students reported perceptions on giftedness that were associated with misconceptions reported by other researchers, including Renzulli (2019). In particular, the results found that the undergraduate students believed that all students are gifted in some area and that gifted students are capable of overcoming obstacles based on their giftedness alone. Both of these beliefs are wrong (Berman et al., 2012). This bears concern for future teachers who may enter the field without appropriate knowledge of gifted education.

Non-Teacher Persons

Teachers are not the only persons who are external catalysts to gifted student talent growth (Gagné, 1985, 2004, 2011). Any person can have an impact on student growth, from peers and academic acquaintances to family members (Gagné, 1985, 2004, 2011). For this study, it is important to understand that the teacher may also perceive the impact of other persons on students. The following studies also shed light onto the impact of persons other than teachers on student talent growth.

One study that focused on the impact of non-teacher individuals of influence on gifted students was conducted by Francis, Oliveira and Dimmitt (2019). The researchers conducted a form of audit study to determine if counselors were biased in the recommendation of students for such areas as gifted and AP enrollment (Francis, Oliveria & Dimmitt, 2019). The findings suggested that African American females were at a disadvantage for being recommended for AP (Francis, et al., 2019). While the persons involved in this case are academically connected to students through the school, similar to teachers, they do not have the continued contact with students and ability to perceive growth that a teacher would.

An additional case study of four former gifted students who dropped out of school shed additional light onto how the environmental catalyst of persons influenced gifted student performance. Camper, Hickman and Jaeckle (2019) interviewed four former gifted students, among them a Latinx and an African American. In this study, persons included parents and friends. Based on the findings of the interviews, the African American and Latinx students felt that the friends in their lives were not an impact on their decisions and education. However, parents did have an impact on their dropping out according to those who had bad relationships between student and parent (Camper, Hickman & Jaeckle, 2019). Based on these findings,

parents hold a significant impact as environmental catalyst persons in the students' lives (Camper et al., 2019; Vialle, 2017).

Vialle (2017) also focused on the significance of parents and family as person catalysts, or influence upon gifted students. While this is an Australian study, it is of high significance in helping to outline Gagné's environmental catalysts and illustrating what can be observed by teachers. Vialle's (2017) purpose for this research was to determine how parents address their children's giftedness by using the Actiotope Model of Giftedness. Vialle (2017) found that parents could impact their students' gifted environment if they had the funds to send them to an appropriate school. This shows that persons can impact the gifted students based on their financial status, and that low SES students had less of a chance of going to a private school with better gifted services. Vialle's (2017) research also showed that, equally tied to finances, parents have the option to enroll their children in extracurricular activities that can help them enhance their giftedness into talent. This shows that persons who have control over the life experiences of children in school can impact their other environmental catalysts by placing them in appropriate programing, and it also shows that the family's income can impact what other environmental catalysts parents can provide (Vialle, 2017). It could be inferred that, as the persons environmental catalyst is not always able to enhance gifted curriculum and experiences, it may be up to other environmental catalysts, such as milieu (i.e., the school) to provide options to address the inequities seen here.

Nonetheless, persons are a key environmental factor that can give actual feedback on gifted student performance and provide perceptions of environmental catalyst that impact talent growth. Persons, in the area of teachers, are able to provide appropriate provisions and adapt to milieu if the opportunity for teacher growth is there. Additionally, persons with long

term interaction with the students, such as their parents, are able to monitor and provide for the child over time in ways that can positively impact their talent growth. This can be from the person providing at home support or providing additional provisions via their economic ability (Camper et al., 2019).

Persons may also be disadvantaged to the point that they cannot help their students. It is more often that students of low SES backgrounds do not have prior understanding of gifted education from their parents, such as in the case of Latinx students who do not come from native English-speaking families (Walker & Pearsall, 2012). Identified gifted students are more likely to have come from a family where their parents are not low SES and where they have at least one college degree (Ecker-Lyster, M., Coleman0Tempel, L., Gregersen, S., & Snyder, J. 2021). Persons can also help bring options of provisions or events into gifted student lives. These provisions and events are also environmental catalysts that can have significant impact on talent growth.

Perceptions of Gifted Students

A student's label of being gifted also needs to be considered as a factor that impacts their educational experience. The gifted label can change perceptions of the student by teacher, peers and self. Research and a study by Kosir, Horvat, Aram and Jurinec (2016) concluded that generally, students labeled as gifted fair nearly equally socially as their non-labeled peers. The researchers did note that female students might be at a higher risk for social adjustment issues based on labeling than their male counterparts, and gifted girls were found to rank themselves lower in social standing and ability to their non-gifted peers (Kosir, Horvat, Aram & Jurinec, 2016). Teacher perceptions of gifted students also have been shown to impact their expectations of students (Russell, 2018). Students being labeled gifted can actually cause

misperceptions from teachers who are not well versed in gifted pedagogy, and those perceptions have and can change the expectations of performance from teachers (Russell, 2018).

Provisions and Events

The final segment of Gagné's framework to be addressed by analyzing the available research is provisions and events, which have been combined due to the lack of research available on events as an environmental catalyst. Provisions are the interventions and services being used for gifted students. In Gagné's (1985, 2004, 2011) model, provisions are the adaptations, accommodations and services that the student receives or is exposed to as an environmental catalyst and which shapes talent development (Gagné, 1985, 2004). Dimitriadis and Georgeson (2017) conducted a study on math related provisions for students in England and gave specific attention to the significance of Gagné's environmental catalysts, and concluded that 24 of 28 schools used specialized provisions for students gifted in mathematics to foster their abilities. Provisions were available whether policies were mandated or not (Dimitriadis & Georgeson, 2017). This also shows that provisions are necessary for gifted students whether they are required or not. Examples of provisions included ability-grouping, extended materials and the use of commercial publications or programing for gifted students (Dimitriadis & Georgeson, 2017).

Vreys, Ndungbogun, Kieboom and Venderickx (2017) conducted research on Belgian gifted provisions for primary students. The researchers sought to determine the effectiveness of training of teachers for providing gifted provisions, under the concern that inappropriate use of provisions harms development of giftedness. Inadequately trained teachers would be a negative impact on the environmental catalyst of provisions, setting back gifted students from reaching

their talent potential (Vreys, et al., 2017). Therefore, this could mean that if teachers of African American and Latinx students from low SES backgrounds were not appropriately trained, they would also be at an exaggerated disadvantage.

Vreys, et al.'s 2017 study consisted of a pre- and post-intervention survey administered to 91 educators through Qualtrics. According to the researcher's findings, 95% of teachers were not properly trained for providing provisions to gifted students. Limitations of the study include that only 2 of the 91 teachers surveyed were male and the study was focused singularly on Belgian education systems. Additionally, the study does not provide data on secondary educators, leaving a need for additional research at the secondary level (Vreys, et al., 2017). This research model could also be extended to American teachers to observe perceptions of provisions offered to their gifted students, which is the intent of this research process (Vreys et al., 2017). Similar findings would lead to the concerns that despite offering what is considered a gifted provision through AP teaching, the gifted students are not actually being appropriately provided for in provisions, negatively impacting their potential.

Welsch and Zimmer (2018) researched the impact of high school gifted services on students' futures in terms of post-secondary education and career. Welsch and Zimmer (2018) conducted a quantitative study in which transcript data was compared to success in life after school for gifted students. The results of the quantitative analysis showed that the subjects who participated in gifted programs in high school had higher socioeconomic statuses in later life (Welsch & Zimmer, 2018). The environmental factor of Gifted provisions changed the environmental factor of milieu. This article can help one to argue that underrepresentation of gifted students creates a pattern in underrepresentation, creating a precedent for minority students being left out of gifted education (Welsch & Zimmer, 2018). This sets the stage for

the continuation of lack of representation in present and future education. Even if the milieu, or location, of the gifted student can change positively because of the gifted services they are provided, some gifted students are not identified and are not getting these opportunities because of it.

A mixed methods study was conducted using 27 middle school students from a single Midwestern American school classified as urban to compare gifted students to students suspected to be gifted despite low test scores (Salisbury, Rule & Zanden, 2016). The students all participated in the reconstruction of a prairie settlement. Quantitative data was collected using pre-test and posttest assessments on the students and qualitative data was collected from teacher observations and student open-ended test questions (Salisbury et al., 2016). As a result of the data analysis, Salisbury, Rule and Zanden (2016) concluded that students who were suspected to be gifted by their educators, but who were not appropriately tested, benefited from gifted opportunities as much if not more than their identified through testing peers. This falls into provisions because these students were still receiving gifted services based on teacher perceptions. This study proposed that testing is not the only method to use for identifying gifted students and that teacher observation is another key aspect in identification of gifted students (Salisbury et al., 2016).

Card and Giuliano (2015) conducted research on universal screening and its impact on identification for minority and other underrepresented gifted students in a Florida school district. This screening is being considered a provision, as the screening is being considered a pathway for the students to receive additional provisions. The universal screening process for identifying gifted students begins with an academic screening test (Card & Giuliano, 2015). Students who score high enough on the exam are then tested individually before teachers and

parents are questioned on student characteristics (Card & Giuliano, 2015). If all areas are met, students are placed in the gifted program (Card & Giuliano, 2015). Using a quantitative study that compared parent/teacher identification to universal screening identification, Card and Giuliano (2015) concluded that universal screening is a more adequate form of gifted identification than parent and teacher recommendations. This is because this identification format does not hold some of the same bias that can be found when relying on perceptions of teachers or parents alone in identifying students. It removes the personal biases. This is seen with the 180 percent increase in underrepresented students being identified using this system over person identification (Card & Giuliano, 2015).

Warne and Price (2016) sought to determine the level of gifted accountability in Texas for enrollment in the state's gifted program, focusing on meeting the requirements for gifted students. Warne and Price (2016) used a single case study using ABA (phase A, Phase B and PhaseA2) format to observe change in the gifted program over time and to observe how that change was impacting those within the gifted program. By comparing data collected from 2002 to 2013 under the Texas Academic Excellence Indicator System, the researchers were able to determine that removing an accountability system from Texas gifted programing resulted in a decline in enrollment, and replacing the accountability system led to a resurgence in enrollment (Warne & Price, 2016). This study enforces the notion that gifted programs require accountability systems to promote student enrollment (Warne & Price, 2016). Therefore, accountability systems may also be a possible solution to help increase underrepresentation in areas with gaps in gifted education.

A study by Steenbergen-Hu and Olszewski-Kubilius (2016) sought to reevaluate a study by Davis, Engberg, Epple, Sieg and Zimmer published. The data Steenbergen-Hu and

Olszewski-Kubilius (2016) observed was used to determine if a pullout gifted program, or one in which gifted students are removed from the traditional classroom for one-on-one gifted training, helped to retain students in an urban district that was currently experiencing a decline in enrollment. This study therefore focused on the importance of provisions within the school for gifted student performance, as the pullout class is a possible provision to be provided to students for more individualized gifted learning experiences (Steenbergen-Hu & Olszewski-Kubilius, 2016). Both studies confirmed that an appropriate gifted program helped to retain students and prevent decline in student enrollment in scholl as student enrollment was higher with the presence of gifted programing. The secondary researchers of the 2016 study by Steenbergen-Hu & Olszewski-Kubilius argued that based on the data of the Davis, Engberg, Epple, Sieg and Zimmer (2010) study that there is a significant importance to understanding personal perceptions of giftedness in identifying students and that giftedness is a multifaceted concept of educational needs (Steenbergen-Hu & Olszewski-Kubilius, 2016).

Brigandi (2019) conducted a study to analyze a high school teacher's implementation of Renzulli's (1999, 2016) Type III Enrichment procedures for teaching ten ninth grade gifted students. The qualitative observation of the teacher appropriately administering gifted curriculum for advanced learners showed positive impact on the students' achievement (Brigandi, 2019). Therefore, positive growth for gifted students would be an increase in talent when provisions are appropriately used and if they are based on empirically researched methods for addressing gifted curriculum (Brigandi, 2019).

Miller and Dumford's (2015) research into creative thinking and arts programs can be interpreted as events. Miller and Dumford's (2015) particular student sought to enhance the research on environment impacting creativity, in particular experiences within the school,

making this article significant to Gagné 's environmental catalyst of events. While an art program being provided as an outlet for artistic talent development opportunities would be a provision, this particular study focused on the event catalyst, as the exhibition was an individual culminating incident (Miller and Dumford, 2015). Miller and Dumford (2015) in fact referenced the Gagné model as an influencing factor on their research and used his DMGT model to understand and report on environmental catalysts impacting creativity development (talent).

Findings of the study were based on survey data from college undergraduate and graduate students via an online platform (Miller & Dumford, 2015). Using regression analyses, the researchers discovered that exhibitions and other event-related experiences greatly impacted their development. There is also a connection in this study to the significance of persons once again, as students were noted to have mentioned the significant impact of professors on their growth (Miller & Dumford, 2015).

The study would help argue that environmental catalysts are significant in the growth of students' gifts, as multiple catalysts were actually reported on, despite the original seeming intent of the research to be focused on events (Miller & Dumford, 2015). In fact, this article shows that it is essential in opening up to the next phase of additional research, as it illustrates the significance of Gagné's environmental catalysts on talent development and leaves room for research on different perspectives, those of teachers, as well as on a different age group not studied here, high school students, who can still be greatly impacted by public schooling.

The analysis of the catalysts of provisions and events illustrates that gifted student learning is enhanced with positive and appropriate influences in these areas. Gifted students who are given opportunities to participate in extracurricular learning activities, as seen in the

art program discussed by Miller and Dumford (2015), have additional outlets to make positive connections to their own talent development. Educational facilities making provisions available for gifted students enhance the school's environmental catalyst impact in positively nurturing talent growth. It could also be therefore argued that providing events in which gifted students can participate enhances their opportunities to express their gifted creativity would also nurture talent growth through positive environmental catalysts. Examples of the impact of environmental catalysts can also be found in the concept analysis of other studies that touch on areas of the DMGT Model.

Summary

Gifted education represents the needs of approximately six percent of the American public-school population (National Association for Gifted Children, n.d). Students identified as gifted have innate abilities that place them as high-achieving in comparison to their academic peers. Gagné's (1985, 2004, 2011) framework outlines the natural abilities of gifted students and describes the environmental and intrapersonal catalysts that shape the possibility for gifted students to advance further into gifted and talented, the penultimate potential of giftedness in his model.

Despite extensive information available on identification of gifted students, excellence gaps remain within the United States for gifted students (Grissom & Redding, 2016). In particular, African American and Latinx students from low SES backgrounds are victims of under-identification. Georgia statistics confirm that these inequities are mirrored within state public schools (VanTassel-Baska, 2018; Gaztambide, Saifer & Desai, 2013). Lack of equity in gifted programs and questions about the adequacy of gifted provisions for these students continue to demonstrate an area of need in American educational services.

Gagné's (1985, 2004, 2011) environmental catalysts are areas of impact on gifted student progress that can be observed by teachers. By creating a study in which environmental catalysts and local legislation for gifted students are compared and reflected upon, the researcher can develop a new view within the literature for the adequacy of gifted education in AP and Dual Enrollment classrooms, a provision for secondary high school gifted students. In the state of Georgia, gifted legislation allows for district level control of gifted education. Gagné (1985, 2004, 2011) clearly defined the significant needs of gifted students as seen in his catalyst section of the Differentiated Model (Gagné, 1985, 2004, 2011). A mixed methods study that analyzes the perceptions of AP and DE teachers on environmental catalysts observed of their gifted students' educational opportunities and curriculum would shed light on the adequacy of the education being provided for gifted as well as the inequities that could be harming the students already suffering the most from under identification, African American and Latinx low SES students.

Chapter III: Methodology

Despite some improvements over the years in public education in Georgia, reports have stated that it continues to suffer from inequities in the area of gifted studies, especially for African-American and Latinx students of low SES backgrounds (Georgia Association for Gifted Children, 2007, Atlanta Journal Constitution, 2014). An analysis of research conducted on gifted educational practices at a global and national level has resulted in a clear understanding that gifted educational practices are needed to ensure that gifted students reach their full potential, as seen in Gagné's DMGT (Gagné, 1985 & 2004).

A specific study on gifted educational practices and their effectiveness for high school students in Georgia is not currently available to provide insight into teacher perceptions of gifted education. A generic qualitative study was performed in order to determine Georgia high school Advanced Placement (AP) teacher perspectives of the effectiveness of Georgia Gifted Legislation for low SES African American and Latinx students. This chapter describes the methodology that was used by the researcher to answer the research questions. The methodology not only describes the research process but also a pilot study used to create a modified instrument for the collection of data via survey.

Research Questions

The Georgia Board of Education and the Office of Civil Rights reported disproportionately lower number of students of minority and low SES background being recognized and receiving services for gifted education in 1995, from which attempts began to improve inequities for African American and other under-represented gifted populations (Georgia Association for Gifted Children, 2019). All gifted students in the state of Georgia are determined based on the provisions of State Board of Education Rule 160-4-2-.38 (2012) which

has led to AP classes being prescribed as an accommodation for high school gifted students.

For this study, the following research questions were developed:

1. What environmental catalysts do Georgia high school AP teachers perceive as impacting low SES African American and Latinx gifted student education as seen in the Georgia AP classroom (Georgia's Gifted Legislation opportunity)?
2. Based on high school AP teacher perceptions, how effective are Georgia gifted services for low SES African American and Latinx high school students?
3. How do Georgia high school AP teachers perceive the impact of environmental catalysts on low-income gifted African American and Latinx students?

Role of the Researcher

The researcher in this study has been a high school teacher in West Georgia for the past 12 years. The researcher has a bachelors in Secondary History Education and a Masters of Education in Secondary Social Studies. She is AP certified in United States History, World History Modern, and Human Geography and has taught each subject in a low SES school. Additionally, she obtained gifted certification through a three-course certification pathway via Georgia's Regional Educational Service Agencies (RESA). Additionally, the researcher is evaluated by the same requirements and standards as other Georgia and AP certified teachers in this study, holding three AP certifications as well as a gifted endorsement. The researcher has taught African American and Latinx students in the AP classroom at a high-poverty high school in the state of Georgia over a period of 10 years.

The researcher has adapted Gagné and Nadeau's *Opinions about the Gifted and their Education* instrument (1991). Questions were chosen to narrow the scope of the survey to focus on themes that relate directly to the research questions, with a focus on those questions that

address environmental catalysts.

The researcher was an observer who provided the adapted instruments to the AP teacher subjects, gathered the AP teacher responses, then analyzed the collected data. In relation to the AP teachers surveyed and interviewed, the researcher is a colleague of those being questioned, but did not know each respondent personally.

Research Design

A modified survey from the Gagné and Nadeau (1991) *Opinions about the Gifted and their Education* instrument was utilized to collect quantitative data from AP teachers in Georgia. The quantitative research question that the survey was intended to help answer was, "What is the influence of environmental catalysts on teacher perception of their effectiveness in meeting the needs of low-income gifted African American and Latinx students?" The mixed-methods question was, "How can the impact of Georgia legislation and environmental catalysts influence the effectiveness of teachers of Low SES, gifted African American and Latinx students?" The pilot study was used to test validity and reliability of the modified instrument and the decision not to use the survey is explained in the pilot study section of this chapter.

Based on the exploratory factor analysis described in the pilot study, the researcher determined that the instrument was not appropriate for the study, and the methodology was altered based on these findings. The study became qualitative only. The qualitative study was conducted using generic qualitative research. This research model was used in this study because other qualitative designs were not appropriate on their own to address the questions posed or the format of data collection (Percy, Kostere & Kostere, 2015). The generic qualitative study also supported the advancement of the timeline of the study, as generic qualitative studies are appropriate for limited time studies (Kennedy, 2016).

Pilot Study

Purpose. The purpose of the pilot study was to evaluate the validity and reliability of a modified instrument, Opinions About the Gifted and their Education (Gagné & Nadeau, 1991). High school teachers in two Georgia counties were asked to complete the pilot survey via Qualtrics, and those results were used by the researcher to conduct an Exploratory Factor Analysis (EFA). The analysis results determined interrelationships among the variables and constructs.

Pilot Study Participants. The researcher began by sampling high school teachers from a single Georgia school district, but the sampling pool was expanded to two school districts as a limited number of teachers responded to the survey. All high school teachers in the selected districts were emailed the survey via their public-school email addresses that were available on their school of employment's website. A total of 138 teachers responded to Qualtrics survey after accepted the electronic informed consent form that was embedded within the survey.

Table 1
Demographics of Participating Teachers

Demographic Measure	Number of Teachers	Percentage of Teachers
Certification		
Certified in Gifted Education	36	26.1%
Not Certified in Gifted Education	102	73.9%
Certified to Teach AP	50	36.2%
Not Certified to Teach AP	88	63.8%
Teaching Experience		
Experienced Georgia AP Teachers	47	34.1%
Not Experienced Georgia AP Teachers	91	65.9%
Teachers Employed in County "A"	121	87.68%
Teachers Employed in County "B"	17	12.3%
1-5 Years Teaching Experience	46	33.3%
6-10 Years Teaching Experience	24	17.4%
11-15 Years Teaching Experience	18	13.0%
16-20 Years Teaching Experience	20	14.5%

20+ Years Teaching Experience	30	21.7%
Personal Demographics		
Male	43	31.2%
Female	94	68.1%
Non-Binary	1	.01%
White	86	62.3%
African-American	40	29%
Latinx	3	2%
Pacific Islander/Native American/ Multiple/Unidentified	7	5%
20-30 Years of Age	22	14.5%
31-40 Years of Age	35	25.4%
41-50 Years of Age	44	31.9%
51-60 Years of Age	33	23.9%
60+ Years of Age	4	3.0%

The teachers participating in the pilot were all current Georgia high school teachers. However, the majority were not AP teachers or gifted certified. Table 1 also shows that the majority of participants were from County A. Most teachers in the participating group had taught between one and five years, they were more likely to be female, White, and between the age of 41 and 50.

Pilot Study Instrumentation. High school teachers in two Georgia counties were asked to complete an electronic survey via Qualtrics, sent to them via their school email address. The survey, titled "Georgia High School Teachers' Perceptions of Gifted Education: A Pilot Study", was built as a Likert scale instrument and was modified from the *Opinions About the Gifted and their Education* instrument (Gagné and Nadeau, 1991).

Modifications included selecting questions from each area of the original survey, rewording of questions for clarity and making questions specific to the state of Georgia. The total number of questions was reduced to 20 from the original 90. The choice of 20 questions instead of the original 90 was also a design point to lessen the requirements of those surveyed

in the hopes of increasing participation and alleviating burnout during the survey. The 20 questions were chosen by the researcher based on their inter-item correlation to the six factors that could be related back to environmental catalysts (milieu, persons, provisions, events): social value, status of services, need for support, characteristics, homogenous grouping and impact of interventions. At least two questions were chosen from each factor in order to analyze the collected data. Items that did not relate directly to the study were removed. The final modified survey consisted of a total of 28 questions. The first 8 questions were designed to collect demographic data, which is described in the participants section above. These demographic questions gathered data on gender, ethnicity, age, teaching experience and certification.

The final 20 questions were derived and modified from the survey, *Opinions About the Gifted and their Education*, instrument. Questions were selected to fit into the selected themes of: social value, status of services, need for support, characteristics, homogenous grouping, and impact of interventions. All items can be seen in Table 2 below.

The five-point Likert scale used for this pilot survey provided teachers with the following options for each of the 20 quantitative questions presented: (1) *Strongly Agree*, (2) *Agree*, (3) *Neutral*, (4) *Disagree*, (5) *Strongly Disagree*. The use of the five-point Likert scale was used to avoid interpreting relationships that do not exist with the mid-range option being present (Lietz, 2010).

Participant demographics were collected during the survey to determine influence of each demographic factor. Predictor variables were considered independent variables. Table 2 below illustrates items used to measure teacher perceptions of gifted students and gifted education in Georgia in the areas of social value, status of services, need for support, characteristics,

homogenous grouping, and impact of interventions.

Table 2

Item Constructs for Pilot Study

Item Number	Measured Construct	Item Question
1	Social Value	A complex technological society needs the talents of gifted persons in order to function well.
2	Social Value	The leaders of tomorrow's society will come from the gifted today.
3	Social Value	It is less profitable to offer special education to children with difficulties than to gifted children.
4	Status of Services	Georgia schools are already adequate in meeting the needs of the gifted.
5	Status of Services	In Georgia, it is not always possible for gifted children to fully develop their talents.
6	Status of Services	In Georgia schools, it is possible to meet the educational needs of the gifted without investing additional resources.
7	Need for Support	If students are gifted, they don't need help.
8	Need for Support	It is the parents who have the major responsibility for helping gifted children develop their talents.
9	Need for Support	The gifted need special attention in order to fully develop their talents.
10	Need for Support	Whatever the school program, the gifted will succeed in any case.
11	Need for Support	Gifted children do not need special education services.
12	Characteristics	Gifted children are often unsociable.
13	Characteristics	All children are gifted.
14	Characteristics	The gifted come mostly from wealthy families.
15	Homogenous Grouping	In traditional (non-AP) classes, teachers devote more attention to those who learn more slowly than the gifted.
16	Homogenous Grouping	By separating students into gifted and other groups, we increase the labeling of children as strong-weak, good-less, etc.
17	Homogenous Grouping	Most teachers do not have the time to give special attention to their gifted students
18	Homogenous Grouping	The best way to meet the needs of the gifted is to put them in special classes.

19	Impact of Interventions	When gifted are put in special classes, other children fee devalued.
20	Impact of Interventions	Special programs for gifted children make them more motivated to learn.

Data Collection. Research permission was received from the Columbus State University Institutional Review Board as well as the two school districts in which the surveys were administered (see Appendices G-H). Teachers were individually emailed a request for participation with details on informed consent. Emails for teachers were found via their schools' online directories. The emails explained the purpose of the study, background of the researcher and provided information on informed consent. The Qualtrics links to the survey were provided. The email also explained that information would be collected anonymously. Upon opening the link to the Qualtrics survey, participants who agreed to consent to the study were allowed to provide their responses to the 28 questions. Teachers were able to complete the survey in approximately 15 to 30 minutes. No incentives were included to complete the survey.

Data Analysis. The pilot survey was conducted to determine reliability and validity of the modified instrument, *Opinions About the Gifted and their Education* instrument (Gagné and Nadeau, 1991). Upon completion of the administration of the survey to two Georgia school districts, the data collected in Qualtrics was downloaded and analyzed via Statistical Package for the Social Sciences (SPSS) in order to conduct an exploratory factor analysis.

Assumptions of Normality. The data from the pilot survey was initially analyzed by using descriptive statistics in SPSS. The mean and standard deviation were analyzed. Skewness and kurtosis were examined for normal distribution. Skewness values should be between -1.0 and +1.0 to show normal distribution (Tabachnick & Fidell, 2007). Values between -2.0 and

+2.0 were acceptable for skewness and kurtosis and were considered normal distribution. The correlation between the construct factors and sampling adequacy were evaluated using the Kaiser-Meyer- Olkin (KMO) and Bartlett's Test of Sphericity (Seen in Table 4). The purpose of using these two tests was to determine correlation between factors and to see if there was adequate sampling. Normality was also evaluated using standard deviations and Q-Q plots. This examination showed homogeneity in survey responses for the 20 items, excluding the demographic questions.

Extraction of Factors. The factor extraction method used was maximum likelihood (Fabrigar et al., 1999). Variance in the survey items was examined based on underlying factors and a factor matrix was run. The factor matrix was used to evaluate factor loadings. The factor matrix is used to interpret the alignment of survey items to the factors, in this case the six factors seen in Table 2. The factor matrix showed a clustering of survey items, which meant that there were high correlations within the items that represented the attributes of a specific factor. A closer look at Table 4 demonstrates the mismatched correlations, leading to better understanding of the lack of validity of the survey items. Factors with eigenvalues greater than one were extracted using Kaiser's rule which states that the same number of factors retained as the number of eigenvalues that are greater than one. Eigenvalue is the amount of variance explained in the items by one factor and is used to determine the number of factors that should be retained (Kaiser, 1960).

Criteria for Extraction. Cumulative percentage of variance was run to obtain a Scree plot. The Scree plot creates a visual graphic representation of eigenvalues (characteristic roots) against the number of factors (on the y-axis and x-axis). This creates a downward sloped curve. The researcher can find the indication of how many factors should be observed in the analysis

when the curve plateaus and starts to flatten. As seen on the scree plot in Figure 1 for this study, the eigenvalues indicated the retention of six factors for further analysis (Fabrigar et al, 1999).

Communalities explain the extent to which an item correlates with all other items in the analysis. Each of the six constructs were examined for their variability in common aligned factors. The first set of communalities from the EFA and the extracted set were analyzed. The researcher used an anti-image correlation matrix to interpret strength of correlation for the other items in the matrix and those items that scored greater than .7 were included in factor analysis based on the correlation matrix (Fabrigar et al., 1999).

Rotational Methods. Rotational method reduces the number of factors that are needed to explain each of the variables in the study (IBM). Promax rotation was used because the factors were correlated as they belonged to the same survey which measured *Opinions About the Gifted and their Education*. The correlation based on the constructs/factors (latent variables). Promax rotation with a value of greater than .25 was considered a strong factor loading whereas factors of less than .25 were considered to be weak loadings. Those with less than.25 were analyzed by the researcher to determine the relationship between the item and underlying factor (Fabrigar et al., 1999).

Communalities. The communalities were determined with principal factor analysis in SPSS. The communalities explain the variance of each item by all the factors. A high communality means there is a good fit between the item and construct, but it does not distinguish which factor it is matched to. A good communality score is above .40 (Tabachnick & Fidell, 2007). Table 3 illustrates the communalities, seen in the extraction column, for each item in the pilot survey. There was no item that had a communality less than .436. The factor loadings ranged from .696 to .436. Items measuring social value (items 1, 2 and 3) had higher variance.

Items measuring characteristics (items 12, 13 and 14) had the lowest variance. Items measuring status of services (items 4, 5 and 6) also had a higher variance, but not to the degree of social value items. Items measuring homogenous grouping (items 15, 16, 17 and 18) had the greatest difference in variance, ranging from .469 to .696.

Table 3
Communalities: Total Variance Explained

Item Number	Extraction
1	.615
2	.666
3	.594
4	.562
5	.571
6	.636
7	.604
8	.529
9	.553
10	.456
11	.520
12	.470
13	.436
14	.499
15	.518
16	.469
17	.696
18	.588
19	.661
20	.579

Interpretation and Labeling. The researcher used the factor matrix that shows the correlations between the factors and the variables to interpret how survey items were aligned to the six factors based on Georgia high school teacher responses. Items were analyzed for correlation between similar factors. Each of the six factors had a composite score formed using the mean of their primary loadings on each factor. Then, a factor matrix was used to determine which survey items aligned to which of the six factors based on their factor loadings. Factors that were determined to be relevant were then named based on their common attributes as observed

by the researcher (Fabrigar et al., 1999).

Reliability Analysis. Reliability analysis is needed to determine how reliable each item in a survey is. In this case, a pilot survey was analyzed to determine if the data being collected was reliable and valid. The researcher used Cronbach's alpha to measure reliability and it ranged from 0 to 1. The closer an alpha value is to 1, then the better the internal consistency of the items being analyzed. As long as a value was above .7, internal consistency was good (Tavakol & Dennick, 2011). Survey items were evaluated for internal consistency using Cronbach alpha (Tavakol & Dennick, 2011). Upon the use of identified similar scale items for each of the six constructs, Cronbach's alpha was used to determine the degree to which that set measured the construct based on inter-item correlations (Tavakol & Dennick, 2011). Cronbach alpha was also used to eliminate items. Each of the items from the pilot study were evaluated for communalities, inter-item correlation, factor loading and Cronbach's alpha to determine each item's reliability and validity. Additionally, the use of Cronbach alpha resulted in addressing issues of negative Cronbach alpha values and therefor negative inter-item correlations. In these instances, the researcher had to reverse score the negatively worded items to match with the response pattern for positively worded items.

Exploratory Factor Analysis. Exploratory factor analysis (EFA) was used to analyze the data collected in the pilot study and determine construct validity of the 20 survey items and their alignment to the six constructs: social value, status of services, need for support, characteristics, homogenous grouping, and impact of interventions. If an item measures the construct appropriately, it should have a high inter-item correlation with the construct while other constructs are low inter-item correlation (Campbell & Fiske, 1959). A high correlation of a survey item to a construct indicates that the item measures the attribute of that construct.

Sometimes, one item would correlate with two constructs. In such situations, the highest correlation between the construct and the item will be retained. The six constructs, or factors, will be tested to see which survey items align with each factor. The survey items measuring a different construct should have low correlations with items measuring another construct to demonstrate discriminate validity. The survey items measuring the same construct should have high correlations with each other to show convergent validity. EFA was conducted with assumptions of normality, extractions of factors, criteria for extraction, and interpretation and labeling.

All 20 items in the survey were initially examined and analyzed in order to determine the Kaiser-Meyer-Olkin (KMO) test results seen in Table 4. No reverse scores were used for this analysis. KMO evaluates whether the sampling adequacy (sample sizer) for factor analysis. Table 4 shows KMO of .676. Based on Cerny and Kaiser (1977), a score below .6 is not adequate. The KMO value (Table 4) is .676 which indicates sufficient sampling adequacy (but not the desirable range of .8 to 1).

Table 4

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		**.**676
Bartlett's Test of Sphericity	Approx. Chi-Square	536.138
	Df	190
	Sig.	<.001

Table 3 also illustrates Bartlett's Test of Sphericity. The significance level of the Bartlett's Test of Sphericity was <.001, and therefore the correlation matrix derived from that data was

suitable for conducting the EFA, as it was a statistically significant test with value of less than .05 (Cerny & Kaiser, 1977). Figure 7 shows the scree plot which plateaus at factor number six. Hence, six factors were retained for further analysis.

Figure 4

Scree Plot of Teacher Perceptions of Gifted Education

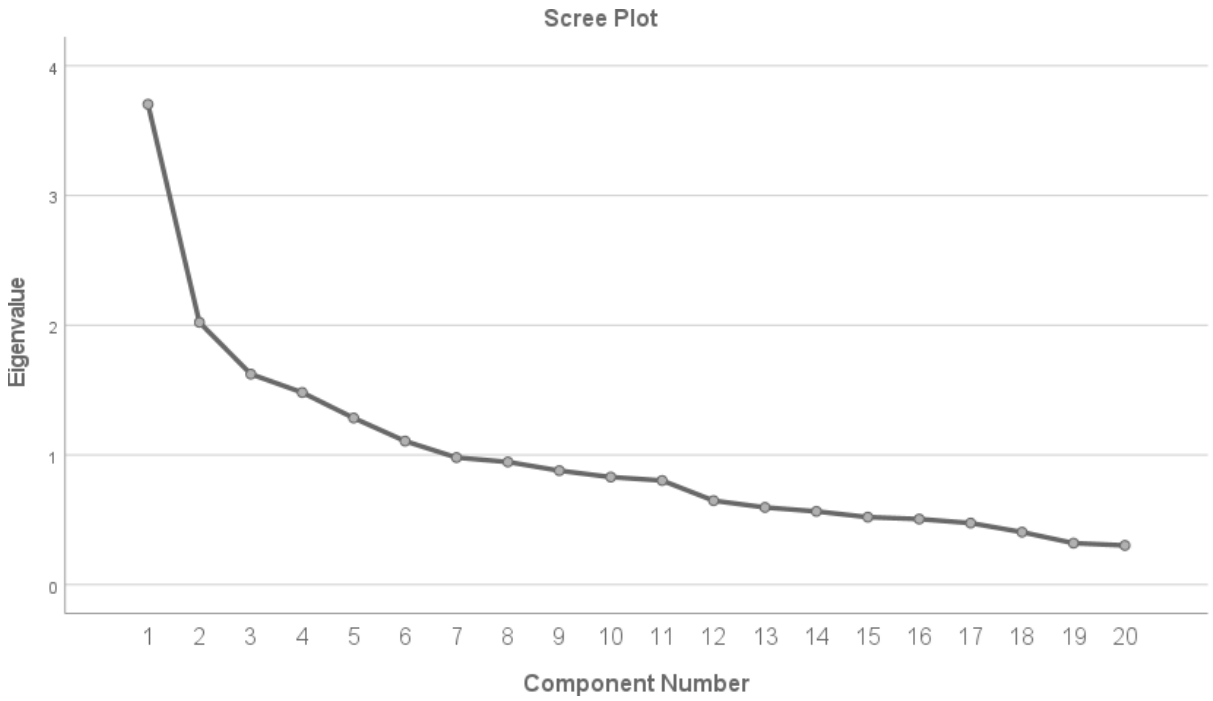


Table 5 shows the structure matrix (representing correlations between the variables and the factors) which was used. The structure matrix is necessary to analyze participant responses to the pilot survey to determine which factors and constructs matched the previously assigned components. Based on the results of the structure matrix, several factor loadings did not match the original measured constructs seen in Table 2. Based on the structure matrix, Factor 1 (social value) explained items 1, 2, 3, 4, 9 and 11. Factor 2 (status of services) explained items 5, 6, 7, 18 and 20. Factor 3 (needs for support) explained item 8. Factor 4 (characteristics) explained

items 12, 13, 14 and 18.

Factor 5 (homogenous grouping) explained items 10, 15, 16 and 17. There were no matches for factor 6 meaning that the items were not matching to their component and the factor should be rejected. These findings add to the researcher's decision to remove the survey from the study. The highest correlation between item 1 and factor 1 was the highest when compared to other five factors. Hence, item 1 aligned more towards factor 1-social value. Only positive correlations were considered. The highest correlations have been bolded in Table 4. Factors 1 and 2 had a clean factor structure because the items aligned to it had the highest correlation with that factor and lower correlations with other factors. Factor 3 also can be removed as it had only 1 item aligned to it.

Table 5

Structure Matrix Principal Factor Analysis: Oblimin with Kaiser Normalization

	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6
ITEM 1	**.799**	.045	-.072	-.013	.037	.037
ITEM 2	**.680**	-.013	-.123	-.170	-.060	.429
ITEM 3	**.607**	-.301	-.327	-.376	.164	.072
ITEM 4	**.520**	-.032	-.104	.133	.147	-.344
ITEM 5	.025	**.754**	.092	-.056	-.051	-.166
ITEM 6	-.092	**.628**	-.131	.241	-.212	-.213
ITEM 7	-.095	**.555**	.253	.338	.157	-.103
ITEM 8	-.156	.273	**.714**	.112	.215	-.155
ITEM 9	**.228**	-.136	-.713	.030	.073	-.093
ITEM 10	-.109	.163	-.692	.001	**.342**	.037
ITEM 11	**.479**	.193	-.515	-.310	.042	.139
ITEM 12	.064	.181	-.062	**.764**	.100	-.085
ITEM 13	-.078	.154	-.037	**.651**	-.145	-.085
ITEM 14	-.175	-.152	.323	**.525**	.207	-.042
ITEM 15	-.070	-.053	.016	.152	**.696**	-.126
ITEM 16	.442	-.084	-.179	-.353	**.523**	.307
ITEM 17	.375	-.056	-.376	-.452	**.489**	.162
ITEM 18	.103	.113	-.071	-.139	-.040	-.711
ITEM 19	-.358	.226	.103	.282	.034	-.663
ITEM 20	-.139	**.459**	.280	.223	.041	-.557

Reliability Analysis. In the theoretical model, the researcher selected each item to correlate with one of the selected domains or theoretical factors: social value, status of services, need for support, characteristics, homogenous grouping, and impact of interventions. Items were analyzed to determine reliability by the Cronbach Alpha of each construct.

Construct A was measured by three items which resulted in Cronbach Alpha of .455. The reverse score item A3 was removed which increased Cronbach Alpha to .661. Construct B was measured by three items which resulted in Cronbach Alpha of .376. Item B1 was removed which increased Cronbach Alpha to .517 with two items. Construct C was measured by 5 items which resulted in Cronbach Alpha of -.075. Item C4 was removed which resulted in Cronbach Alpha of .328 with a total of four items. Removal of item C2 brought Cronbach Alpha to .472 with a total of three items. Construct D was measured by three items resulted in Cronbach Alpha of .057. Construct E was measured by 4 items which resulted in Cronbach Alpha of .207. The removal of item E2 brought Cronbach Alpha to .516. Construct F was measured by 2 items which resulted in Cronbach Alpha of -.222.

Cronbach Alpha is scaled between 0 and 1 and high internal consistency is found when the score is closer to 1, and internal consistency is considered "good" when it is above .7 (Tavakol, & Dennick, 2011). Based on the Cronbach Alpha findings in the pilot study, there was no good internal consistency within the instrument based on the pre-determined domains of the original *Opinions about the Gifted and Their Education* even with the removal of survey items based on item-total statistics (Gagné & Nadeau, 1991).

Model Findings. The researcher's EFA pilot study was conducted and revealed that the modified instrument, based on Gagné and Nadeau's original, was unreliable. Orthogonal and oblique are the two rotational methods that can be used to analyze data when conducting EFA

studies. Oblique rotation was used for this study because factor loadings are based on the assumption that the factors are correlated and maximum likelihood follows this structure. The researcher implemented Promax rotation as factors are correlated and easier to interpret. The researcher's findings that the six factors did not match item loadings was echoed in the analysis conducted by Cross, Cross and Frazier (2013).

Extended research has been found to supplement the researcher's decision to determine the modified instrument as unreliable. Szymanski, Croft and Godor (2018) found that the Gagné and Nadeau instrument that was adapted for this study has been used over time but that there still is not a specific instrument that covers a wide enough range of gifted issues. These researchers created a new instrument, which is known as Determining Attitudes Towards Ability (DATA) based on their own research on teacher perceptions of gifted education and by adapting the survey items from Gagné. The results indicated that this tool also needed additional validation (Szymanski, Croft & Godor, 2018). A confirmatory factor analysis was conducted by Cross, Cross and Frazier (2013), and found that this structure reported by McCoach and Siegle could not be achieved with the Gagné instrument (2013). Finally, Gagné (2018) himself determined that there was psychometric weakness in the instrument. He posed personal beliefs of those surveyed may have impacted the reactions of those tested. Gagné also explained that while there was not a validated tool yet, future research could help to continue the research process to eventually find a good version. Three versions can be reviewed, including a 34-question version in which the psychometric properties were not tested (Gagné, 2018).

Generic Qualitative Research

Following the analysis of the pilot study data, the researcher determined that a change in the research design was necessary due to the questionable results of the survey which was the

quantitative data tool. The researcher began to assess qualitative designs as the quantitative instrument was invalidated. Generic qualitative research was found to be the appropriate design for this study (Caelli, Ray, & Mill, 2003). The researcher used a generic qualitative approach to gather and analyze data that would be different when compared to ethnography, case study, grounded theory, phenomenology or narrative research (Kennedy, 2016). The shift to a purely qualitative study due to poor EFA results led the researcher to focus the data collection of teacher perceptions through a generic qualitative approach (Percy, Kostere, & Kostere, 2015). Percy, Kostere and Kostere (2015) explained that a generic qualitative study is appropriate for a researcher who is focused on, "outer-world content of their questions… (pg. 78)". In this study, a generic qualitative analysis is a study that analyzed the teacher opinions and reflections on AP education for gifted students.

Other forms of qualitative research were not appropriate for this study for the following reasons. Firstly, this was not a case study. Secondly, ethnographic research was not appropriate because the researcher was not looking at social-cultural perceptions alone (Percy et al, 2015). Grounded theory was not appropriate because Gagné's theoretical framework was utilized (Percy et al, 2015). Lastly, a phenomenology was not appropriate for this study because the researcher was seeking perceptions on external factors about student learning, not the teacher experience itself (Percy, et al, 2015). Kennedy (2016) also pointed out that the researcher's views are influential in determining the choice of a generic qualitative study based on their views of the study topic. This researcher's evolution from an intended mixed methods study to a qualitative study supports the use of a generic model.

Additionally, Dr. Ronald Persson's VSAIEEDC model (variation, specification, abstraction, internal verification, external verification, demonstration and conclusion) for

generic qualitative research was employed in this dissertation. Persson's model required the researcher to approach the collected data through variation, specification, abstraction, internal verification, external verification, demonstration and conclusion (Kennedy, 2016). The use of VSAIEEDC model to collect data based on the qualitative research questions assured the researcher met the requirements for a generic qualitative study to include reflexivity and rigor, as explained by Kennedy (2016).

Main Study

Population and Participants. The researcher interviewed 12 teachers for this study. De Viers et al. (2015) was able to establish saturation with only six subjects. For the generic qualitative study, Georgia high school AP teachers were interviewed. All but 2 teachers were gifted certified. Teachers had to have received an AP training and certification in order to be part of the appropriate sample for this study, as these teachers represented those who are appropriately certified to teach Advanced Placement credit courses. These teachers had experience teaching AP in the state of Georgia. The researcher recruited teachers from two West Georgia school districts, School District A and School District B, using emailing requests via school emails found on county and school websites. Teachers were emailed if they were currently listed as high school teachers in their respective counties, A or B, and were asked to participate if they met the AP requirements.

Location. Participants in this study were drawn from two West Georgia school districts. The first intended district of focus, School District A, is home to seven high schools from which eight teachers were recruited. According to a School Grades report from 2020, 75% of students in School District A are economically disadvantaged, 58% are African American and 10% are Latinx. An additional four teachers were recruited from School District B, also located in

western Georgia. School District B is 39% economically disadvantaged, 43% of students are African American and 6% are Latinx. School District A is also the place of employment of the researcher, and was chosen with the intent of evaluating high school gifted services in the area in order to possibly apply findings in the classroom.

Instrumentation. The refined study was a generic qualitative study, and consisted of the semi- structured interview composed by the researcher (See appendix J). Participants were invited to the study via email and given opportunity to consent to participation. Participants were interviewed via Zoom platform and recorded for transcription. The consent and recruitment process form can be seen in Appendix J. Most interviews took around 30 minutes to complete. The interview consisted of 18 questions based on the research questions and Gagné's environmental catalysts.

The researcher developed the 18 questions based on the research questions and Gagné's environmental catalysts. Questions were influenced by the original survey, *Validation Survey Items* (Appendix G) and were discussed with the dissertation chair and methodologist for clarification before finalization of the questions. Items were designed to determine faculty interaction with, and knowledge and interpretation of gifted education, to determine the interviewee's knowledge of Georgia gifted legislation, to question teacher perspectives on AP education for gifted students of multiple ethnic backgrounds and from low SES backgrounds, to address the environmental catalysts of Gagné and to understand perceptions on the environmental catalysts from each student group in the study. Further questions about teacher perceptions of shortcomings in legislation for low SES African American and Latinx students required faculty to provide individual experiences about gifted students from diverse backgrounds.

The interview was designed to include triangulation in the study. The use of triangulation in this qualitative study helped to examine the validity of the collected data. Triangulation can occur in one of four methods, method, investigator, theory and data source (Carter, Bryant-Lukosius, DiCenso, Blythe, Neville, 2014). For this study, the researcher used data source triangulation by interviewing teachers from different school districts within the study and theory triangulation by the interview design to analyze through Gagné's environmental catalysts. Data source triangulation requires the researcher to be able to compare multiple perspectives. Persons interviewed provide multiple perspectives. Also, having teachers from different schools provided perspectives from different school environments in the region. Theory triangulation uses different theories for analyzing the data, and that was done in this case with the environmental catalysts of Gagné, as well as by looking through the lens of different programs targeting gifted education (Carter et al, 2014).

Data Collection. A generic qualitative study requires a structured collection of data (Percy, et al, 2015). For this study, a semi-structured oral interview was used. Generic qualitative studies are supported by data collected in such a semi-structured format and is also appropriate for using a priori knowledge (Kennedy, 2016). Additionally, a generic qualitative study uses a larger representation of the population (Percy, et al, 2015). For this study, teachers were interviewed from multiple schools to increase representation of the area. Participants were recruited through email invitation using all email addresses that were currently available through county school district websites in 2023. Only those counties that gave IRB approval were emailed. IRB approval was also gained from Columbus State University in addition to participating counties. Teachers were asked to participate only if they were AP teachers in the designated schools.

The interviewer began the interview process with a practice interview to engage in preliminary coding, determining a priori codes, and to reflect on the process and questions to assess if there were any issues of bias that need to be addressed. The practice interviewee was selected by the researcher as a teacher known personally to her. This teacher met the requirements and was aware of the study in progress for some time and was willing to offer assistance in this area. This teacher has also left the high school arena and would not be able to meet the criteria for participation otherwise. The practice interviewee was not included in the main study.

The researcher made corrections deemed necessary and proceeded with the main study. These corrections included clarification of the language used and helped the researcher to set the pace for questioning for future interviewees. This also gave the researcher an idea of where additional definitions and explanations about gifted education or Gagné's environmental catalysts may be needed. Teachers who accepted the invitation via email were given opportunity to choose a date which worked best for them to complete the interview once they had completed the consent requirements. Teachers were given the opportunity to join a zoom link and reminded that they were being recorded for future transcription and that they had the opportunity to stop the interview if they wish to do so and cancel their participation. Reminders were also made about confidentiality of information and the removal of personal identifiers to maintain confidentiality of the interviewee and any persons who they may have accidentally identified directly in their interview.

The interview was conducted using the questions found in the appendices. Teachers were encouraged to continue their thoughts if they wished to expand upon their statements. The interviewees were thanked and reminded of contact information for the researcher if they have

any future concerns or wish to follow up on the conclusion of the study.

Following the interviews, the researcher partook in a reflexivity activity, a personal journal and memo recording for metacognitive reflection. These notes helped with the review of the collected data and with avoiding potential bias in the review of the data and for future data collections (Ortlipp, 2008). Through this process, the researcher noted that empathy towards fellow AP teachers was something that had to be considered in order to reduce personal bias during data analysis. The researcher was also able to a personal reference point, their own definition of gifted education in the AP classroom based on personal teaching experience, in order to avoid using that personal perception as a fact-based point of reliance. It was also to monitor that those definitions for giftedness and student needs were coming from the work of Gagné in particular. The researcher was able to use these self-reflection tools to limit bias in the qualitative report and to avoid presenting from a "teacher-sided" point of view, focusing instead on a general outsider interpretation.

Data Analysis. Once data was collected, the generic qualitative study continued with thematic theoretical analysis (Percy et al, 2015). For this study, the predetermined themes being used makes it a theoretical thematic analysis which came from Gagné's environmental catalysts. Steps for the theoretical thematic analysis were based on Percy et al., 2015 article and the VSAIEEDC described by Kennedy (2016). The oral interviews were performed and then transcribed from recordings, Zoom videos. A priori codes were determined before the interviews based on Gagné's environmental catalysts. The a priori codes were: milieu (home milieu and/or school milieu), individuals (parents, teachers, other), provisions, and events.

Generic qualitative studies can be effectively analyzed using a cognition-based analysis method, which is the VSAIEEDC model of analysis, and was created by Roland Persson.

Persson named the method based on an acronym of the steps of the method: variation, specification, abstraction, internal verification, external verification, demonstration and conclusion (Persson, 2006). The VSAIEEDC model has also been deemed an appropriate method with which to approach generic qualitative studies and it provides reflexivity and rigor to the study in which it is implemented. Persson's original design of the VSAIEEDC model was intended for gifted and talented research, which is a basis of this study (Kennedy, 2016). Persson (2006, p. 16) stated that he created the model to, "bridge the gap between traditional psychometrically oriented research in the study of giftedness and talent and the need for researching the more individual aspects of giftedness…".

Persson (2006) broke the model into three levels of analysis. VSAIEEDC makes up the first level of analysis. VSAIEEDC can be followed by a second and third level of analysis in which the researcher continues to analyze transformed data at the subsequent levels and does not have to follow a linear format (Persson, 2006). The first step, variation, was used to determine what areas of the data were similar and different. This is the initial step because it is a look scan through the collected data to see what is known at the beginning of the research study and can be addressed by simply looking for what is the same and what is different (Kennedy, 2016). For this study, variation occurred after the transcription of the Zoom interviews. The transcribed text was reviewed and annotated to point out similarities and differences within the text.

The second step is specification where the researcher identifies characteristics in groups of data with constant comparison analysis. The data that has been through variation is then further separated into categories (Kennedy, 2016). These categories should be subdivided sections that are based on identified characteristics (Persson, 2006).

The third step is abstraction where the researcher externalizes commonalities from the

data by depicting codifying specific portions of the data. The researcher uses this step to "…identify words, descriptions and phrases and evaluate them… (Kennedy, 2016, p. 1375)." The analysis at this step requires the researcher to convert the data by conceptualizing it and creating concise points (Persson, 2006). The researcher set definitions of the intentions and how these phrases were categorized. During this portion of the review, a peer debriefing was used in the coding process to help with the reliability and validity of the study by offering a second set of eyes to review the collected data. These findings can be found in the section below, *Peer Debriefing*.

Internal verification is used to determine if codes (including a priori) are logical and feasible according to the researcher and are comparable across the data. The researcher must self-evaluate if the representations that have been evaluated are logical and feasible. This is a time when the researcher should consider personal bias in the review of the data (Kennedy, 2016). For this study, the researcher included reflective journaling in the internal verification process to determine any personal bias that needed to be addressed.

External verification tied the findings back to the original research on the topic. The researcher must compare the data to find corroborating evidence from earlier research sources to determine validity of the collected data (Kennedy, 2016). According to Persson, this does not include comparing the feasibility to "established theories" (2006). The researcher referenced the data analyzed in the review of the literature and employed an additional person to code the data collected from the Zoom interviews.

Exploration follows verification steps and is the "visual overview of the reduced data in search of frequency related regularities or irregularities (Persson, 2006, p. 34)." In this step, the researcher prepared data to be graphed or charted for the next step, demonstration.

Demonstration applies processes such as co-occurrence analysis to conceptualize frequencies and irregularities. The information is presented in graphs and/or charts. Graphs and charts include representations of frequency analysis, cross-comparison analysis and cluster analysis (Kennedy, 2016). The researcher created these charts and graphs based off of the findings from the Zoom interviews following the steps of variation through exploration.

Lastly, the analysis concluded with data saturation, and finalizing the drawing of information to be reported from the data. The results perceived from the study are then reported upon. The researcher will make a report that shows what was determined from the study and what may be found from additional research (Kennedy, 2016).

The transcriptions of the Zoom interviews were reviewed by the researcher and key information from Gagné's themes and the research questions were highlighted using a color-coded, symbol and notation approach by a solo reviewer, the researcher. According to Saldana (2009), coding will be a short phrase or a symbol to represent a particular type of data being recorded. The coding was helpful in condensing the collected interview data into summarized points. The researcher transcribed the interviews into textual data. The printed data was then coded by hand, starting with precoding, or determining codes that are expected to be present based on the research topic, and then revising coding based on major patterns that arose (Kennedy, 2016). Coding was conducted with an analytical review process in which data was filtered based on its context to the research questions and codes were created by the researcher to fit these needs (Saldana 2009).

An outcome of the coding, according to Saldana, will be themes (2009). For this study the focused themes were the environmental catalysts: milieu, persons, provisions, and events. These themes helped to categorize major ideas that are repeated within the textual data from the

interviews. The themes helped determine the number of codes for the finalized review of the material.

Themes that did not match Gagné's theory were highlighted and reported. Each theme was analyzed by the researcher and reported on. Reliability was reviewed through a peer debriefing process discussed below. Semi-structured interviews provided extensive data from a small interviewee pool. A pooled estimator of kappa was used to summarize the interrater agreement. This allowed the researcher to determine the reliability of the qualitative data collected from the interview results (De Vries, Europe, Elliott, Kanouse, Teleki & Health, 2015).

Reflexivity was used to avoid bias. The researcher's use of reflexivity to be objective included the use of metacognition in the analysis and writing phase. The teacher reflected on personal experience to reflect and ensure that personal stories did not bleed into the reporting of other teacher experiences. This included multiple editing cycles of earlier drafts and journaled notes to remove subjective statements. An example of a reflexivity and awareness of objectivity would be analyzing the transcripts of interviews with teachers who the researcher has worked with. The researcher made notations during the reporting process to remove personal thoughts on the issues in the school and report only the interviewed teacher's perspectives.

The use of reflexivity also brought the researcher's personal expertise to the study. The researcher's personal background included both Gifted and AP trainings and certifications as well as over ten years of teaching experience from the beginning of the research process. This personal knowledge benefited the research process through reflexivity and the ability of the researcher to apply this knowledge to the analysis process in order to better understand and explain the collected data and communicate with other AP teachers in order to make deep

connections. For example, the discussion of teacher rosters, which is mentioned in chapters 4 and 5, brought in the researcher's personal experience with having experienced other instances of seeing students placed on rosters of teachers without that student in the class. Students have been placed on the record of a gifted certified teacher but not in that teacher's actual classroom, but with a teacher who was not gifted certified. The researcher's personal knowledge and experience helped to convey this information as well as open up future questions about this policy.

Peer Debriefing. Peer debriefing was used to determine reliability and validity of the qualitative interviews. The researcher obtained a second observer who has already obtained a doctoral degree in curriculum and instruction. This secondary coder was chosen because of their personal knowledge in the research of curriculum and instruction and based on their trustworthiness and ability to be objective as seen by the original researcher over many years. The secondary coder also has background knowledge of education as a former high school teacher and current administrator, giving them deeper knowledge of curriculum and education terms and concepts. This second researcher was given a breakdown of Gagné's environmental catalysts and the basic background of the study with the preceding terms. Both the researcher and the observer read through the transcripts (seen in Appendix J) and coded for the major themes of milieu, persons, provisions and events. Additional comments were made on areas of question or possible additional themes. The four main codes were then counted for occurrence and recorded by the researcher. The count of the researcher's findings can be seen in Table 6. The second coder's findings count can be seen in Table 7.

Table 6

Observer 1 Coding Results (Researcher)

Interview Session	Milieu	Persons	Provisions	Events
Session A	18	2	14	4
Session B	11	5	12	0
Session C	7	1	9	1
Session D	7	2	15	1
Session E	11	9	20	1
Session F	12	6	13	1
Session G	10	12	14	2
Session H	13	7	13	3
Session I	13	4	11	1
Session J	7	9	11	1
Session K	12	10	11	6
Session L	12	8	19	6
Total	133	75	189	27

Table 7

Observer 2 Coding Results

Interview Session	Milieu	Persons	Provisions	Events
Session A	25	3	19	6
Session B	13	6	14	0
Session C	11	2	14	0
Session D	6	1	18	1
Session E	13	10	15	1
Session F	8	2	10	1
Session G	5	8	12	2
Session H	9	5	9	4
Session I	12	6	10	1
Session J	8	7	8	2
Session K	10	9	11	2
Session L	11	7	19	5
Total	131	66	159	25

The researcher then compared their findings with the second coder to determine the number of disagreements in the counts for the environmental catalyst themes found in the interviews. These results can be seen in Table 8. The Kappa Coefficient results were then determined using these findings. Those results measured the agreement between the observations of the researcher and the second observer in order to determine reliability of the interview.

Table 8

Determination of Observational Differences

Interview Session	A	B	C	D	E	F	G	H	I	J	K	L	Total
Milieu (Researcher)	18	11	7	7	11	12	10	13	13	7	12	12	133
Milieu (2nd Observer)	25	13	11	6	13	8	5	9	12	8	10	11	131
Disagreements	7	2	4	1	2	4	5	4	1	1	2	1	34
Persons (Researcher)	2	5	1	2	9	6	12	7	4	9	10	8	75
Persons (2nd Observer)	3	6	2	1	10	2	8	5	6	7	9	7	66
Disagreements	1	1	1	1	1	4	4	2	2	2	1	1	21
Provisions *(Researcher)*	14	12	9	15	20	13	14	13	11	11	11	19	189
Provisions *(2nd Observer)*	19	14	14	18	15	10	12	9	10	8	11	19	159
Disagreements	5	2	5	3	5	7	2	4	1	3	0	0	37
Events *(Researcher)*	4	0	1	1	1	1	2	3	1	1	6	6	27
Events *(2nd Observer)*	6	0	0	1	1	1	2	4	1	2	2	5	25
Disagreements	2	0	1	0	0	0	0	1	0	1	4	1	10

Table 9

Kappa Coefficients for Environmental Catalysts

Environmental Factor	Observation Data				% Agreement Pa	Kappa Coefficient
Milieu		Agree	Disagree	Total	34 + 97/ 264 = .4962 * 100 = 49.6%	0.463 (Moderate Agreement)
	Agree	97				
	Disagree		34			
	Total			264		
Persons		Agree	Disagree	Total	21 + 45/ 141 = .4681* 100 = 46.81%	0.29 (Fair Agreement)
	Agree	75				
	Disagree		21			
	Total			141		
Provisions		Agree	Disagree	Total	37 + 122/ 348 = .4569 * 100 = 45.69%	0.28 (Fair Agreement)
	Agree	122				
	Disagree		37			
	Total			348		
Events		Agree	Disagree	Total	10 + 15/ 52 = .4808 * 100 = 48.08%	0.28 (Fair Agreement)
	Agree	15				
	Disagree		10			
	Total			52		

Kappa Coefficient was used to determine interrater reliability of the interview based on the work of Hallgren (2012). To find the Kappa Coefficient the equation *Pa – Pe*/1-*Pe* was used. To determine the Kappa Coefficient for the environmental catalyst of milieu, the researcher began by determining the percentage agreement between the two observers, of *Pa*. This was determined by adding the total number of agreements (97) to the total number of disagreements (34) and then dividing by the total count of milieu codes in the interviews (264). The following equation was computed: 34 + 97/ 264 = .4962. Therefore, the total percentage agreement for milieu was 0.4962 x 100 = 49.62% and *Pa* = 0.4962. *Pe* was determined by dividing the total

number of times Observer 1 had noted milieu by the total number of times milieu was notated as present, 133/264 = 0.504 times. Observer 2 noted that milieu was seen a total of 131/264 = 0.496 times. Probability of attaining agreement would be 0.504 x 0.496 = 0.250. Probability of attaining chance agreement would be (1 - 0.504) x (1 - 0.496) = 0.496 x 0.504 = 0.250. κ = (0.4962 – 0.0625) / (1-0.0625) = 0.463. With these conditions, a Kappa Coefficient of 0.463 is considered moderate agreement.

To determine the Kappa Coefficient for the environmental catalyst of persons, the researcher began by determining *Pa*. This was determined by adding the total number of agreements (75) to the total number of disagreements (21) and then dividing by the total count of milieu codes in the interviews (141). The following equation was computed: : 21 + 45/ 141 = 0.4681. Therefore, the total percentage agreement for persons was 0.4681 x 100 = 46.81% agreement and *Pa* = .4681. *Pe* was determined by dividing the total number of times Observer 1 had noted persons by the total number of times persons was notated as present, 75/141 = 0.53 times. Observer 2 noted that persons was seen a total of 66/141 = 0.468 times. Probability of attaining agreement would be 0.53 x 0.468 = 0.248. Probability of attaining chance agreement would be (1 - 0.53) x (1 - 0.468) = 0.47 x 0.532 = 0.25. κ = (0.4681– 0.25) / (1- 0.25) = 0.281/0.75 = 0.29. With these conditions, a Kappa Coefficient of 0.29 is considered fair agreement.

To determine the Kappa Coefficient for the environmental catalyst of provisions, the researcher began by determining *Pa*. This was determined by adding the total number of agreements (122) to the total number of disagreements (37) and then dividing by the total count of milieu codes in the interviews (348). The following equation was computed: 122 + 37/ 348 = 0.4569. Therefore, the total percentage agreement for provisions was 0.4569 x 100 = 45.69 %

agreement and *Pa* = 0.4569 *Pe* was determined by dividing the total number of times Observer 1 had noted provisions by the total number of times persons was notated as present, 189/348 = 0.543 times. Observer 2 noted that persons was seen a total of 159/348 = 0.457 times. Probability of attaining agreement would be 0.543 x 0.457 = 0.248. Probability of attaining chance agreement would be (1 - 0.543) x (1 - 0.457) = 0.457 x 0.543 = 0.248. κ = (0.4569– 0.248) / (1- 0.248) = 0.209/0.75 = 0.28. With these conditions, a Kappa Coefficient of 0.28 is considered fair agreement.

Finally, to determine the Kappa Coefficient for the environmental catalyst of events, the researcher began by determining the percentage agreement between the two observers, of *Pa*. This was determined by adding the total number of agreements (15) to the total number of disagreements (10) and then dividing by the total count of event codes in the interviews (52). The following equation was computed:15 + 10/ 52 = 0.4808. Therefore, the total percentage agreement for milieu was 0.4808 x 100 = 48.08% and *Pa* = 0.4808. *Pe* was determined by dividing the total number of times Observer 1 had noted milieu by the total number of times milieu was notated as present, 27/52 = 0.519 times. Observer 2 noted that milieu was seen a total of 25/52 = 0.481 times. Probability of attaining agreement would be 0.519 x 0.481 = 0.250. Probability of attaining chance agreement would be (1 - 0.519) x (1 - 0.481) = 0.481 x 0.59 = 0.28. κ = (.4808 – 0.28) / (1- 0.28) = 0.28. With these conditions, a Kappa Coefficient of 0.28 is considered fair agreement.

Based on these Kappa Coefficients, the interviews produced fair to moderate agreement between observers. The highest agreement rate of moderate was found in milieu as an environmental catalyst theme This was also the area with the highest number of codes throughout. A possible explanation for not having higher agreement could be the researcher's

deeper investment in the topic and Observer 2 having only introductory level information on the subject.

In order to overcome moderate to fair agreement, the researcher invoked the use of reflexivity activities, including memo use and journaling in order to provide non-bias analysis. The researcher also provided possibilities for why the agreements were not higher, such as the difference in knowledge of the subject held by the two coders. Additionally, numerous sample quotes were used in the analysis and summary to provide arguments for the findings. By implementing VSAIEEDC, using reflective techniques mentioned above, and providing arguments for possible causes of less than desirable Kappa results, the researcher was able to overcome issues with these findings.

Summary

Chapter III showed that the researcher's initially intended research method and explained the evolution from an explanatory mixed methods study to a generic qualitative study. A mixed methods study was initially desired, but as seen in the EFA of the pilot study, the instrumentation was not acceptable, and the methodology has since been revised.

This researcher moved forward with a generic qualitative study in which Georgia high school AP teachers were interviewed via Zoom with a semi-structured interview on Georgia's legislation for AP student education and Gagné's environmental catalysts as perceived by those being interviewed. The data collected was analyzed using a theoretical thematic analysis and Persson's steps for generic qualitative data analysis, VSAIEEDC.

Chapter IV: Findings

The researcher began this dissertation with the intent of analyzing teacher perceptions of gifted education for high school students. In particular, the researcher wanted to focus on students that are most-often underrepresented in the gifted field, low-socioeconomic status African American and Latinx children. The research questions that were developed in order to analyze the issues of gifted education for low-SES African American and Latinx high school gifted students are as follows:

1. What environmental catalysts do Georgia high school AP teachers perceive as impacting low SES African American and Latinx gifted student education as seen in the Georgia AP classroom (Georgia's Gifted Legislation opportunity)?
2. Based on high school AP teacher perceptions, how effective are Georgia gifted services for low SES African American and Latinx high school students?
3. How do Georgia high school AP teachers perceive the impact of environmental catalysts on low-income gifted African American and Latinx students?

Participants

To answer these questions, the researcher prepared an interview with 20 items to pose to high school teachers of AP classes in western Georgia in order to gather qualitative data to analyze teacher perspectives on environmental catalysts and Georgia gifted services for low-socioeconomic African American and Latinx students. Participants in the study consisted of a total of 12 high school AP teachers in West Central Georgia. Of those teachers, eight participants were employed in one county, County A, and four were employed by a second county, County B, as seen in Table 10 below. Forty-two percent of participants were male, and 58% were female. All participants self-identified as White in ethnicity. Participants were recruited via their

employing county email and provided demographic data via email with a signed consent form and answered a battery of 18 interview questions. The interviews were recorded on Zoom by the interviewer/researcher and transcribed for coding and reporting.

Table 10

Participant Demographics

	County A	County B	Total
Number of Participants	8 (67%)	4 (33%)	12 (100%)
Males	4 (33%)	1 (8%)	5 (42%)
Females	4 (33%)	3 (25%)	7 (58%)
Ethnicity: White	8 (67%)	4 (33%)	12 (100%)

Teacher age ranged from the 20 to 30 years of age category to 60 years of age. One teacher was between 20 and 30, 4 teachers were between 31 and 40, 5 were between 41 and 50 and the remaining 3 were between 51 and 60 years of age. Years of teaching experience varied and can be seen in Table 11. All twelve teachers have been trained in and taught AP classes. One teacher from each county has taught AP without Gifted Certification.

Teacher names are not included in the study, they have been replaced with pseudonyms from Teacher A to Teacher L. Teachers A through H are from County A, and Teachers I through L represent County B. County A is a larger county than County B, both being located in West Central Georgia. School names have also been changed.

Table 11

Years of Teaching Experience

	1-5 Years	*6-10 Years*	*11-15 Years*	*16-20 Years*	*>20 Years*
County A	0 (0%)	2 (16.7%)	2 (16.7%)	2 (16.7%)	2 (16.7%)
County B	1 (8.3%)	1 (8.3%)	0 (0%)	1 (8.3%)	1 (8.3%)
Total	1 (8.3%)	3 (25%)	2 (16.7%)	3 (25%)	3 (25%)

County A, located in West Central Georgia, was reported on by eight employed AP teachers. Data collected in this county included some teacher perspectives based on employment in other Georgia counties; however, no teachers indicated having been employed at any time by County B. County B, also located in in West Central Georgia, was reported on by four employed AP teachers. Overall, this county employs fewer educators than County A and serves fewer students than County A as well.

Coding the Findings

Once the qualitative data was gathered via recorded zoom sessions, the researcher transcribed each session into a Word document that was then analyzed by both the researcher and a second coder who was given a brief overview of Gagné's environmental catalysts and a priori codes to seek out when coding the interviews.

Peer debriefing was used to determine reliability and validity of the qualitative interviews, as seen in Chapter 3. Both the researcher and the observer read through the transcripts (Appendix J) and coded for the major themes of milieu, persons, provisions and events. Additional comments were made on areas of question or possible additional themes. The count of the researcher's findings for the *a priori* codes can be seen in Table 4. The second coder's findings count can be seen in Table 7.

Table 12 provides a breakdown of the overall themes that were found via coding. The a priori codes were able to be broken down into sub-themes of teacher perceptions of environmental catalysts there are 3 subthemes here, right? This description gives the impression that there is only 1, and that there was also data present that provided coding of teacher descriptions of their own classrooms and teacher perceptions of gifted curriculum and education.

Table 12

Themes of the Qualitative Data

Major Themes Gagné's Environmental Catalysts	Sub-themes discovered within Major Themes
Milieu	1. Teacher perceptions of the AP classroom: A. teacher descriptions of the AP classroom/curriculum differentiation for Gifted students B. the description of the AP classroom/curriculum for low SES African American and Latinx Gifted students 2. The Gifted roster 3. Off campus catalysts
Persons	1. Persons at the school A. Teachers B. Other faculty members C. Classroom Peers 2. Persons outside of school A. Parents B. Neighborhood peers
Provisions	1. AP as the provision 2. Teacher training as a provision A. Training for teachers of low SES students B. Training for teachers of African American and/or Latinx Gifted students 3. Additional provisions needed according to teachers 4. Mentorship/internship 5. Time devoted to Gifted
Events	1. Environmental catalysts impacting Georgia AP students

Milieu as An Environmental Catalyst

For the purpose of this study, milieu refers to the student's environment. This can be the classroom, the culture, home life, etc. This environmental catalyst was described to teachers in the interview process along with other environmental catalysts reported by Gagné. Teachers remarked on the impact of the environmental catalyst of milieu through direct questioning and in references throughout their interviews. Teachers references their perceptions on the impact of milieu on gifted student talent development in multiple ways.

Some teachers made reference to milieu as the classroom, or classroom environment, referencing the classroom itself as well as the classroom culture that is developed in the AP classroom by the teacher and students. Teacher A referred to the classroom environment as having the ability to be a positive environmental catalyst, stating, "…social engagement is really high…where kids feel like they can express themselves with their teacher and their peer group." Teachers perceived the environment provided by the teacher's classroom as one which gives students a way to grow their talent. Teacher E said, "to me that can also just kind of be described as like learning environment…AP students, particularly gifted students, they won't realize their talents without that. They come in with what's in their brain and it's up to you to give them the environment where they can soar." This perception was held by multiple teachers who emphasized that it was up to the teacher to make classroom milieu a positive catalyst. As Teacher B stated, "it really depends on the teacher, like what kind of environment are they creating in the classroom." However, one teacher did not see milieu being clearly addressed for these students. Teacher C reported on gifted needs, "I think we don't really directly address it in the school environment."

The school as milieu was also discussed, in particular if the school milieu was one of overall poverty. Teacher A explained that a lower population at a school of low-socioeconomic

students also negatively impacts available funding for gifted and other services. Teacher D had also taught in another school in District A where there was a higher population of low-socioeconomic African American and Latinx students and at that school they believed that there was only 1 AP class available at that school. However, when teaching in another school in District A without a high population of low-socioeconomic students, there were an estimated 16 AP classes available for students. However, this point brings up the question if enrollment is low due to lack of availability of AP classes in general. Teachers B and D both reported a more recent increase in student diversity in their schools which is beginning to make a positive impact on inequity in AP classes, but not solve it.

With this being said, the major areas where teachers perceived the ability to positively impact African American and Latinx gifted student talent development was in the classroom milieu and with the impact of the teacher as persons. Teacher C stated their major area of impact is with milieu, explaining, "I've also taught AP world, and you can bring in a lot of the milieu in there." Teachers perceived great impact in areas where they hold control. "The Milieu is the big deal. A big deal. And, if I had supportive parents, like really supportive parents, it was…I could get the job. I didn't teach AP there, but I could get the job done. If I had parents that didn't care, you could hang it up." This statement provides an introduction to the barrier between the milieu in the classroom and the milieu at home that teachers perceived as a barrier to gifted education for low SES and African American students as will be further elaborated on below.

Teacher Perceptions of the AP Classroom

In the state of Georgia, gifted high school students can receive gifted services by being enrolled in AP classes. Throughout the process of interviewing 12 Georgia AP teachers, personal perspectives were observed about the general perception of the AP Classroom in West Central Georgia and the environment which it provides for all students, including those identified as

gifted. These AP teachers gave details on their classroom practices and how they see themselves interacting with both traditional and gifted students, with special emphasis on low SES African American and Latinx traditional and gifted populations.

Description of AP differentiation for GIFTED. The subtheme of teacher perceptions of the AP Classroom were perceptions of the gifted students and the curriculum as it pertains to gifted students. Teachers in County A that described their own interaction with gifted students included some of the following functions: test preparation providers, facilitator or guide functions, and discussion leaders. Teachers of AP reported themselves as test preparation providers. Teacher L stated, "You're talking about an AP Class, we're trying to prepare them for a test." This quote provides a view of the teacher as putting their focus on test preparation for all students, including gifted, and focusing on that test above possibly anything else. Many teachers see themselves as facilitators for their students as well. In the facilitatory role, Teacher B phrased this as gifted students in their classes, "…kind of self-regulating their own learning and their interests and the teacher can help facilitate that." Three teachers stated that their interaction with their gifted students is the same, or no different, as interaction with traditional students. One of those three, Teacher H, explained that their interaction with their gifted students was not different because of the stringency of AP standards not allowing for gifted differentiation. Teacher H explained that the requirements/standards of AP classes "…have to coincide with each other and they are very time sensitive time oriented so you don't get to allow the student to explore and to grow the knowledge in the subject area." Additionally, Teacher C explained that from their perspective, the only difference in how gifted students are approached is, "there's differentiation in the grade book and that's it."

County B responses display similar interactions. Teachers provide AP level content to a mixture of traditional and gifted students in the same classrooms. Teacher I is a facilitator that promotes the use of Project Based Learning (PBL) in their AP Computer Science course. Likewise, Teacher K stated, "…I'm more of a like facilitator and a guide…" Differently than other teachers in both County A and County B, County B's Teacher L works with gifted students who are on a signed contract of performance in their AP classes. Teachers who also perceived facilitator interactions in County A included Teacher A, who believed that the engagement of AP classes was good for practicing higher-level critical thinking and other educational study skills that will prepare gifted students for post-secondary options in a way that they cannot in a traditional level class. Teacher B, G, H in County A also perceived gifted education at the high school level positively.

While there were teachers who believed that gifted education was of value to high school students, there were others who disagreed. In County A, Teachers C, D, E and F did not see value in the gifted education offered for high school students. Teacher F stated that high school gifted education, "…adds 0 value to gifted education students in high school, unless it means they're selected for more advance classes." Teachers C and E gave similar reasons for their negative view, with little offering for gifted high schoolers available. An outlying explanation given by one teacher in County A as to why they perceived gifted education at the high school level negatively was found with Teacher D, who explained their belief that, "…gifted education tends to be more detrimental to students, particularly from mental health perspective, than it is beneficial. They have this sort of unnecessary competitiveness amongst them…"

In County B, all four teachers interviewed found an added value to gifted student education at the high school level. They positively viewed the option of AP as meeting needs for

gifted high school students. Teacher L explained, “I think it does simply because it presents a more challenging curriculum.” Comparing the two counties, all four County B teachers perceived value of gifted education offered for high school gifted students, while County A had four positive perceptions and four negatives. Together, two-thirds of teachers interviewed perceived gifted education for high school students positively compared to one-third who did not. Of the one-third of teachers who negatively responded, there were instances within some of their responses that insinuated a better option was needed for these students that just does not exist. Teacher D stated, “I don’t think anything about Georgia’s gifted identities or services are equitable.” They went on to elaborate by saying, “I think they’re very heavily based on referral and very heavily that referral tends to come from parents and pressures from parents to teachers to refer their children into gifted testing and the gifted programs.

Description of AP for low SES African American/Latinx Gifted Students. Lastly, AP teacher perceptions created a subtheme of perceptions of the AP classroom for gifted low-SES, African American and Latinx students in their classes. In county A, teachers may not have seen inequity in their own classroom (Teacher F), but all teachers still believed that there was inequity overall for low-socioeconomic African American and Latinx students. This correlates to the 2021 report by Ford, Davis, Whiting and More that expressed an underrepresentation of African American and Latinx gifted students in the United States.

Teachers also remarked on the overall inequity observed in the AP classroom for African American and Latinx students of low SES backgrounds. Teacher D stated, “It’s incredibly inequitable.” They went on to describe a class in which only two of their students were African American compared to an approximately 40% African American population at their school. Those interviewed teachers also provided deeper introspection on their perceptions of the AP

classes they teach which are intended to provide for gifted students, including those who are being inequitably represented and served.

Teacher E saw inequality coming from early childhood education, with a lack of identification through the school or lack of parents in that population having their students referred. There is also a perception that language barriers may exist for non-English speakers which prevents their referral or ability to be identified through testing in an English-based identification system. Teacher H reported inequity by mentioning the language barrier concern for Latinx community leading to students not having the appropriate identification, similar to the report of Kettler, Russell and Puryear (2015) and Ford (2014) which argued that schools not understanding cultural differences, like language barriers, can lead to underrepresentation. Teacher A also elaborated that they believed that gifted students in general get less attention, and that more attention goes to regular and inclusion education.

In County B, Teacher I described inequity by describing one of their AP Computer Science classes having 25 students, only 4 of whom were not Caucasian. Additionally, few of the students in the class were low-socioeconomic. Teacher J likewise reported a White, non-Latinx majority student population in their classes. Teacher K specified that they saw the biggest inequity for African American males, having had no African American male students in their 2 AP Language classes that year. This may be related to findings by Flowers and Banda (2018) whose study found giftedness to be viewed differently by African American male students, perhaps indicating that some African American male perceptions of gifted opportunities lead to some students opting out of gifted or AP options. Perhaps this accounts for at least some of the African American males who are not in the course. The outlying reporter was Teacher L, who did not see inequity in representation of gifted students in their school. Therefore, across two

Georgia Counties, there was an overwhelming majority of interviewed teachers who acknowledged inequity in gifted education for low-socioeconomic status African American and Latinx gifted students. Particular subgroups that were described included African American males and Latinx students with English as their second language. This correlates to the report of Ecker-Lyster, Coleman-Tempel, Gregersen and Snyder (2021) who found nearly half a million African American and Latinx students not represented in gifted education. Ford (2014) agreed that African American students were the most underrepresented in gifted education. Walker and Pearsall (2012) had also highlighted the issues of ESOL barriers to gifted education.

The Gifted Roster

Multiple teachers from County A referenced their gifted rosters, those in which students who are labeled gifted are listed for school and other differentiation purposes. These rosters were referenced with negative connotations by multiple teachers. These rosters are perceived by some as a list of students who were at some time tested for giftedness and then left on a gifted roster. As Teacher D stated, "We slap a gifted label on a rostered student and then we put them in the classroom and then we don't address their gifted identity specifically after that point." It was also reported that some students are also being placed on rosters under the name of a gifted certified teacher who is not their actual classroom instructor, "I'm the gifted teacher of record for kids who aren't even on my role, because they just assign them to like a gifted roster because they're gifted and so I don't even teach the kid but they're assigned to me because I'm endorsed." These teachers are referencing gifted rosters as a representation of a group of students who are being underserved, or not served at all. Teachers perceive a group of students who are gifted based on the roster they appear on, but that roster is the only differentiation that those gifted students are receiving. They are not being given a separate learning plan as say a student on a special

education roster in the same class might. Gifted students are listed as gifted, and not being monitored for receiving gifted differentiation. And as is seen in teacher perspectives about gifted opportunities in the AP classroom, these gifted high school students are most likely not getting any differentiation compared to their AP classmates.

County B teachers also referenced gifted rosters. Similar to County A teachers, County B's Teacher K referenced lack of difference between perception of gifted students and traditional students in AP classes, "They're just on different rosters, but they're in the same class." Teacher L voiced concerns about a changing gifted roster, and? inconsistency in gifted students who were being placed in and removed from their class during the school year. Overall, the teacher perspective of gifted rosters is one of indifference. The gifted students are placed on a teacher's AP roster if that teacher is certified for gifted and/or AP teaching. And as mentioned, in some cases an alternative teacher is listed as the holder of the roster, but that teacher is not even in contact with the gifted students. The milieu becomes a haphazard placement based on criteria requirements, not a guarantee of the appropriate gifted services intended to be attached to that roster. Students are listed as gifted, they are attached to a teacher who is gifted certified on a roster, and that seems to be as far as it goes for many high school gifted students.

Milieu: Off Campus Catalysts

Milieu was also perceived as an out of class environmental catalyst by many of the teachers interviewed. Teachers perceived the home environment having a great opportunity to provide a positive environmental catalyst for all students, but those perceptions highlighted those students from low-socioeconomic backgrounds were not as likely to have the opportunity be positively impacted as their higher income family counterparts are. Teacher F explained, "Especially, for me the big thing is background. So, if you come from a poor family your parents

may or may not have gone to college…" Teacher F went on to explain how cyclical poverty can be a detriment to AP students in that, "Parents may not show you at home. 'You need to spend this many hours studying every week'…. maybe parents work multiple jobs They're not there at home to like, encourage the kids to like, 'have you done your studying or your work?'" These teachers' perceptions were similar to the argument made by Robbins (2019), that a lack of parental focus on enforcing or protecting student education or, parent understanding of what giftedness is, can be a barrier to appropriate gifted education. It is possible teacher perceptions were preconditioned by such reports, or similar rhetoric, to believe that low SES students will come from a negative home milieu and automatically attribute a negative connotation with home milieu and student performance. Teachers certainly perceive AP student performance more positively in correlation with perceptibly positive home milieus, as seen below.

A perception of a home milieu that supports education continued to be a theme in teacher reporting. Teacher L stated, "As far as the familial goes, you know, typically our AP kids…I'll say 70% of them, those are the parents that are concerned about what their kids are doing in school." As Teacher F continued, they explained that the home milieu then combined with the classroom, as, "AP students are definitely not taught how to be AP students by most teachers. And as a result, they suffer for it." These comments by AP teachers begin to shape the conclusion that the perception of AP teachers is that that low SES African American and Latinx students are at a disadvantage in terms of having appropriate supports for AP and Gifted educational resources compared to gifted students in schools with higher income populations.

AP teachers are also perceiving that the social climate that students are living in are impacting their gifted opportunities, in many cases negatively for low SES African American and Latinx students. Teacher G said that, "If you come from a neighborhood where if you're the

nerdy smart kid you get beat up on your way home every day, you're going to stop being the nerdy smart kid." This argument shows a perception that students from low socioeconomic African American and Latinx backgrounds may be discouraged from participation in gifted studies such as AP classes because of their milieu. Teacher A had similar remarks, stating, "sometimes they come from a background where it may be more important to be the tough guy, or the clown or you know funny guy or whatever than the smart guy." Teacher J's perceptions also highlighted that milieu can delay gifted identification and options for students of poverty, "…so their environment does have a play maybe in how early their like, abilities kind of show up." They explained that milieu may not stop students from being identified as gifted, that they would rise to the top eventually, but not as fast as those students who came from a milieu that supported early gifted learning. Teacher K had similar perceptions, "my students who have like parents and come from backgrounds where you know, like the parents read to them when they were little, and they've been to museums, they've been out of County B, because we have students who haven't really gone very far, they do have I believe an easier time. Like, when we're reading books it's easier for them to imagine themselves in, and put themselves in other people's situations and stuff like that. They have more of the background experiences."

These perceptions illustrate a mentality of teachers perceiving barriers to giftedness and gifted education based on a student's home milieu. These perceptions show bias that the low SES African American or Latinx student is not going to be on the same performance level as their alternative background peers. This in and of itself could be producing a barrier between some AP teachers and their students. If some teachers are holding a mindset of a barrier between their ability to provide appropriate AP/Gifted education and their attempts to breach that barrier, it can keep those students from having equitable gifted education. A preconceived notion that the

inequity cannot, or will not, change because of this seemingly impenetrable barrier that teachers are perceiving may be the actual barrier.

The perceptions reported by the teachers from West Central Georgia paint a picture of two main opportunities for milieu to positively impact gifted student talent development. Based on the reported data, teachers perceived students from low-socioeconomic backgrounds to have less chances to be positively impacted. Ecker-Lyster, M. et al (2021) explained that low socioeconomic background students were less likely to have families who could provide such opportunities for their children. Students who had less opportunities for early learning experiences, such as trips or reading at home, are perceived to be at a disadvantage compared to students who come from a milieu of higher income with parents who are familiar with higher education practices. The milieu from which students come can even cause social stress on students to not try to reach their potential. These perceptions show that teachers have the opportunity to positively impact their students in their classroom. AP teachers can provide an environment of safety that students can grow their talent. However, the analysis of these interviews suggest that teachers perceive that the classroom cannot reach into the home milieu. AP offers a positive environmental catalyst of milieu if the teacher is appropriately addressing student needs, but there may be disparity in talent development due to differences in the milieu of students at home. What is not provided in the interview results, is a clear proposition for how to cross this barrier and open communication and cooperation between the two sides of milieu.

Persons as Environmental Catalysts

Teacher perceptions of the impact of persons as an environmental catalyst included views on teachers, parents, counselors and peers. The National Association for Gifted Children (n.d.) instructed that support is needed from both the family and the school faculty in order for gifted

children to reach their talent potential. Teachers are the first persons to view. Teachers are the persons providing the AP class instruction and whose perceptions are being measured. And as an omen to the importance of the teacher as an environmental catalyst, Teacher F explained, "AP students are definitely not taught how to be AP students by most teachers…and they suffer for it."

Persons At School

Teachers. AP teachers who were interviewed spoke of the significance of the gifted student's teacher as being a positive or negative catalyst, having the ability to impact student identification, learning and interest in their class. "I think who [the teacher] is, is absolutely critical," stated Teacher E. The teacher perceived the student teacher relationship that was built as crucial to the learning experience. Two teachers may have the same training and knowledge, but their interpersonal skills or curriculum delivery could make all the difference. And Teacher F said, "Oh, the teacher is huge. Number one. You're the big motivational factor as the teacher." Teacher B referenced the AP teacher as a "gatekeeper" who can make decisions on whether or not a student is capable of participating in AP programs. Accordingly, Teacher I said that they had spoken to other AP teachers to recommend students. Teacher H described how teachers are able to, "have more of a play in what students they choose to push into AP programs…" These perceptions of teacher impact on student talent development relates to Szymanski, Croft and Godor (2018) and their reporting on student attitudes about teachers pushing gifted students to higher performance with positive relationships and vice versa.

But Teacher H continued that, "…gifted students typically are not included in that because they're not what you would classify as those academic favorites of teachers." Teacher H's perception of gifted students not being preferred for AP by some teachers shows a negative

environmental catalyst from persons for those teachers who have bias against gifted students taking AP courses, which are supposed to provide for their gifted needs. Teacher G said, "…there's also bias with the teachers and so forth and so on. Some, whether they're intentional or… subconscious biases, you know the stereotypical bias would be you know, the math teacher that doesn't push Susie nearly as much because she's a girl but pushes Joe more because he's a boy…and not just gender but also ethnic and racial backgrounds." Teacher G's perception included conscious and subconscious biases of teachers impacting student learning and talent development.

The teacher as the deliverer of the AP curriculum was also perceived as an environmental catalyst that could have a positive or negative impact on the gifted student. As Teacher C stated, "It's like without the right teacher they would crash and burn." Further explaining the difference between a positive and negative influence, Teacher E explained, "…you can get one teacher and get great crazy awesome experiences, and you can get another teacher that's like, just straight lecture…" They went on to describe the positive environmental catalyst of an AP teacher who engaged the gifted students with creative curriculum in opposition to the AP teacher who approaches all students, despite their diversity, with the same college delivery curriculum.

The positive catalyst can also come from the classroom culture that the teacher provides. Teacher K stated, "But what my AP kids like is the fact that I treat them like adults, first of all." Teacher J added, "Because I do feel like there are teachers that would encourage them to take it and like take those classes and if the student like has a good relationship with those teachers, they're probably going to feel encouraged to take the classes. But if not, they probably won't."

Other Faculty. Mentioned to a lesser degree, teachers also perceived guidance counselors and peers as having impacts as environmental catalysts. Teacher I stated, "…without

the counselors a lot of kids would not even think about taking an AP course…" Teacher J said, "If you have parents that don't encourage it, like they might not know it's available and that's something especially like for guidance counselors. If guidance counselors don't make them aware of what's available to them..." then those students will be without the proper options to apply for AP or other opportunities. Teacher J was explaining that counselors should be able to help guide students into AP courses if they are a good fit, especially for those students who may not have the academic guidance at home to help them on the right academic track for their ability or need. Francis, Oliveira and Dimmitt (2019) suggested disadvantages for some students, African American females, due to bias that may be found in the identification process by counselors who are improperly identifying gifted or AP ready students due to improper training or lack of proper attention to student needs.

Classroom Peers. Teachers perceived peers as having a heavy influence on student participation in AP classes. Teacher J stated, "But also like their peers, like if their peers are not in those classes and they don't have friends in AP classes, then they probably are not going to want to take them." Teacher A approaches the impact of peers, "I try to tell my kids a couple of times a semester, like never ever be embarrassed to be the smartest kid."

Peers in the AP class were seen to offer a positive environmental catalyst for their gifted classmates. Teacher A stated they saw, "peer-to-peer mentorship" that "provided those leadership opportunities for those exceptional students that they may not have found in a regular education classroom." This shows that the AP classroom can give gifted students interaction with persons that they might not get in a traditional class, and that the interaction those peers provide is a positive catalyst to grow student gifted talents. And Teacher A also explained that gifted students, "need that type of interaction to excel."

Teacher K also commented on the positive catalyst of peers in the classroom. The teacher stated, "…of they're in a peer group where the students themselves care and they're trying to like, improve themselves, they usually do better." These teachers are perceiving a reflective effect for students in AP classes. These classes are a place for academic achievement, and the AP class offers an array of classroom peers who are illustrating high achievement goals and critical thinking.

Persons Outside of School

Parents

Teachers also described their perceptions of the impact of parents on gifted high school students. Teacher D spoke of their perception of parental impact as, "It's kind of a double-edged sword." They explained that the parents added negative stress to students as opposed to positive improvement in engagement. But Teacher F perceived parents as having a positive impact in correlation with the AP teacher, "So, the parent encouragement at home, the teacher encouragement at school, those are essential for like, getting them through the course." Teacher G explained, "Different parents emphasize education in different ways. Particularly based on their personal backgrounds. And, you know, if there are parents that don't know what AP is they're certainly not going to try and push their student to do it if they don't know what it is." This echoed the 2012 findings of Walker and Pearsall, in which it was discussed that a lack of knowledge about gifted education at home can be detrimental to gifted identification and services. Also, Ecker-Lyster, Coleman, Temple, Gregersen and Snyder (2021) had stated that students with parents who had gone further in post-secondary education had better access to identification because they had more experience and access to more resources.

Neighborhood peers

Teacher G stated that, "If you come from a neighborhood where if you're the nerdy smart kid, you get beat up on your way home every day, you're going to stop being the nerdy smart kid." This reflection exposes the teacher perception that persons outside of school can be a negative catalyst to student performance. Applying this assertion says that students may come from an environment where they are encouraged not to express their giftedness. The implication in the interview poses that this could be more of an issue in low socioeconomic status neighborhoods.

> Teacher K discussed concerns about peers outside of class as well. Teacher K said:
>
> Now I've had a few students who are low socioeconomical and minorities who like, they're trying to be different than their peers. But they're still friends with people who are not in the gifted program, and they can still do fine. But usually, like I tell mine a lot of who you are is who you associate with.

Teacher K's statement showed additional concerns that non-gifted, non-AP peers could be negative catalysts for students. This teacher's perspective focused on minority students in this situation as well.

These teacher perceptions show that there is a similar concern amongst teachers in regards to persons who they, the teachers, are seeing as outsiders. Persons who are not in the school seem to be repeatedly seen as negative, or having a large chance of being negative, impacts on low socioeconomic African American and Latinx gifted students.

Provisions as Environmental Catalysts

AP as the Provision

On top of that, teachers perceived an inability to change who was identified or to nominate students, "…as a high school teacher it is almost impossible to determine that because

the screening happens in elementary school (Teacher C)." From personal knowledge, the researcher has seen the opportunity for high school teachers to nominate students for gifted testing in their county (A); however, while it is not true that only elementary students are tested, the process is vaguely approached and takes so much time that for high school students it is almost not worth attempting.

Overall, County A teachers perceived AP as an inadequate gifted accommodation. Teacher A perceived that AP, as well as Dual Enrollment (DE) classes, are an appropriate offering for gifted students and mentioned the ongoing debate amongst educators between which, AP or DE, was more appropriate for students. Teacher B explained that they perceive AP as appropriate accommodation for gifted students, but it depends on the teacher and their class structure as to whether or not gifted students will be receiving the appropriate challenges. Teacher F believed that all gifted students should take AP as long as they are receiving the appropriate guidance in how to manage their work behavior. In County B, all teachers perceived that AP was a good option for gifted education. However, Teacher J perceived a caveat in which they do not believe that AP classes are helpful to student learning if they are in areas outside of the student's gifted niche.

The perception that AP is not an appropriate accommodation for gifted high school students was shared by County A's Teacher D, Teacher E and Teacher H. Teacher D perceived that AP is not an appropriate accommodation, and is not meeting the diverse needs of gifted students. Teacher E stated that, "AP classes don't serve giftedness." Finally, teacher H believed that AP is not an appropriate gifted accommodation, and that it should be a choice. Similarly, Teacher J in County B perceived that AP was only helpful if appropriately taught and Teacher K expressed the need for the AP classes to be based on student areas of talent.

Based on teacher perceptions from County A, other accommodations that would benefit gifted high school students would include increased options in academic and non-academic electives based on gifted areas (Teacher A, C, D, G), DE and International Baccalaureate (IB) options (Teachers A, B), independent projects based on student interest (Teacher B, E, H), smaller classes (Teacher E), mental health and social emotional learning opportunities (Teacher F), special class structure based on differentiation for gifted students (Teacher H). County B teacher perceptions revealed that additional accommodations for gifted high school students should include more diverse options in gifted student areas of interest/talent (Teacher I, J), a tracking program for gifted students (Teacher J), targeted motivation (Teacher K), and gifted contracts (Teacher L). These recommendations suggest that teachers perceive gifted high school students in Georgia needing more outlets and monitoring to grow their talent.

Teacher Training as a Provision

A significant preparatory step in providing AP classes and gifted services to students is the training that teachers receive in order to address the needs of all AP and all gifted AP students. A properly trained AP and gifted certified teacher is a provision for students. Overall, ten of the twelve interviewed teachers reported holding gifted certification or endorsement. One teacher explained that they were currently receiving training consisting of three courses through West Georgia RESA. This training is for gifted certification/endorsement and is available to teachers in the research area, West Central Georgia.

Teachers in County A had varying degrees of training and self-efficacy in gifted education. All teachers who were interviewed had completed required AP training in their specific area or areas of teaching. Gifted certification or endorsement was held by all but one teacher in the County A cohort. Teachers described their gifted training as online courses offered

by their county or through West Georgia RESA, and Teacher D earned a gifted certification through their "…master's degree in curriculum and instruction and as a part of that master's degree I took 4 gifted courses."

However, despite the vast training that teachers seemed to have received, the perceptions were that the training's adequacy was lacking. Teachers had perceived a need to research how to address gifted student needs on their own. Some teachers from County A reported their understanding of current gifted practices coming from personal research and other forms of professional learning outside of gifted certification or AP training. Teacher E explained that they keep up to date on current gifted practices through social-media, such as Twitter. Teacher F considered their current enrollment in graduate school as a way to keep up to date on current practices.

Fifty percent of County A teachers reported that they perceive that they are not up to date on current practices in gifted education. These teachers did not report any additional research done by themselves or through professional learning. Teacher C stated, "I would say I'm utterly unversed even though I'm gifted certified, I'm utterly unversed in current gifted practices." In County B, one of the four teachers is not currently gifted certified, but that teacher is in the process of gaining certification through West Georgia RESA. Of the gifted certified teachers, Teacher L gained certification through RESA, with additional training through their Special Education background. The other teachers did not feel up to date, with Teacher K explaining that they were seventeen years out from their gifted certification training.

Based on the comparison of teacher responses from both County A and County B, a pattern emerged. In this pattern, most AP teachers hold certification or endorsement in gifted education; however, despite this endorsement, teachers feel that they are not up to date on

current gifted practices overall. It is up to the individual how much additional research or remediation they themselves have, be it through personal research or post-secondary elected course work. This conclusion would mean that teachers believe that they are not fully aware of gifted needs, which would mean that could be a negative impact on gifted services for low socioeconomic status Latinx and African American students, and all gifted students for that matter.

Based on the data gathered from County A and County B on teacher perceptions of high school gifted education and the AP classroom, Georgia high school AP teachers are not fully prepared to provide for gifted students at the high school level. From the teacher responses, it can be interpreted that gifted high school students from all social and ethnic backgrounds in West Central Georgia are in need of additional outlets for their giftedness. Students need more electives, more opportunities of choice, and more attention to their social-emotional needs. While some teachers perceive AP to provide appropriate curriculum for some gifted students, it has been made clear that AP offerings are not equally accessible. For example, some schools lack AP classes, especially those with higher populations of low-socioeconomic African American and Latinx students. This observation was made based on the number of AP offerings mentioned by teachers in the study in comparison to which schools they were teaching at during the interview process.

When AP classes are offered as an opportunity for gifted students, teachers have expressed that the training for that curriculum has not provided special instruction for providing for low-socioeconomic African American and Latinx students. Teachers perceive that both AP and Gifted trainings are needed.

Training for Teachers of Low SES African American and Latinx Gifted Students.

Teachers were questioned to determine how adequately they believed the trainings provided for AP educators to help them meet the needs of low-socioeconomic status African American and Latinx students in Georgia. Most teachers did not see specific training provided by AP training to address needs of students of low-socioeconomic status or African American or Latinx students. Teachers B, D, E, F, G, and L stated that they did not have specified or adequate instruction for addressing gifted students or students from low socioeconomic African American or Latinx families at their AP trainings. Teacher F said, "There's no training, there's no training even for gifted students." Teacher H said, "They don't have it. I mean just straight out do not have it, there's not a lot of experience with it because those schools tend to be so isolated that teachers who do have large amounts of experience and are advanced certified, choose not to teach in schools that have those lower socioeconomic status students."

Teacher A explained they believed AP training did not address issues of diversity because, "I think that a lot of times there is so much of this we have to get this standard this standard or this standard that we are losing sight of the specific needs of that community." Teacher C explained that while they also did not receive specified instruction for students in underrepresented groups, they have had discussions that might show a change in training, stating, "So, when I did it, it seemed fairly inadequate, but several of my colleagues are going through it now and they say it is a far bigger chunk of the training." Teacher I explained that they believed that teachers had to have the combination of AP and Gifted training in order to properly address their low-socioeconomic status African American and Latinx students. Teacher J explained that outside of required training for AP and Gifted Certification, AP does offer additional trainings, "I know they have that type of training, because I get emails about it but…" These responses show

that, at least until more recently, AP teachers were not receiving specific training to provide for low-socioeconomic African American and Latinx students. There may be additional trainings outside of the basic requirements, but those would be up to the teachers to seek out and attend, perhaps pay for as well.

Some teachers are also reported that they perceive the AP creators, College Board, to address these areas now through improved provisions. Teacher B explained that College Board, the designer and implementer of AP curriculum, is trying to make changes to help with discrepancies for underrepresented students, "Um, so I think we're, they're trying to address some of the discrepancies but again, due to local and state officials I don't, it just kind of depends on that if it is going to be allowed to." So, while these provisions are being addressed to a degree, they are perceived to be unattainable by students in some areas. Another provision that was mentioned in the hopes of creating a positive environmental catalyst in the area of milieu was from Teacher E. Teacher E proclaimed their positive catalyst to focus on was, "Provisions Food! Having food, allowing, and like allowing students to have free breakfast and free food is the biggest thing that I can see effecting in my AP classes for kids of low socioeconomic classes." Teacher E was referencing snacks she had made available in her own classroom.

Additional Provisions Needed According to Teachers

Provisions, which could include accommodations or other outlets for gifted students to grow their talent were not as highly recognized in the perspectives of the teachers interviewed. When questioned about their perception of provisions, Teacher E said, "I don't necessarily think that's as critical as the human piece to me…I think that the personal side would be more impactful just from the time I was there (at the gifted school) and what I saw." There were teachers who believed that provisions should be a significant environmental catalyst in AP

classes, including? Teacher A who stated, “Yeah, I think that’s it, is the biggest thing is to have the actual services available for them and that’s where I see probably the biggest deficit.”

Teacher A’s comments on provisions illustrated a theme that arose in the data collected, that provisions were a catalyst that need improvement for AP classes. Teacher B said there were no provisions coming from AP classes to gifted students. Teacher L mentioned a literacy grant that their school was able to use to provide books for their AP classes, “The biggest thing that we’ve had that’s helped AP is we’ve had this literacy grant.”

Some teachers mentioned provisions that were needed for AP classes to provide appropriately for students in the classroom. Teacher C explained what is needed for AP students, “we have to teach them how to write…the advantage goes not only to the good reader but the fast reader…time management is the thing.” Therefore, the provisions that Teacher C believed should be included in an AP course to improve talent development would be additional lessons for students on appropriate writing skills and time management, things that are not necessarily directly included in AP curriculum, but teachers who are providing positive environmental catalysts in the area of provisions should be considering.

Other AP classroom provisions that were mentioned included AP Classroom. AP Classroom is a website of study guides and other educational tools provided by College Board to present or review the curriculum. Teacher F described the AP Classroom provisions as, “…cookie cutter…White based review resources on AP Classroom … are pretty boring for most kids to watch and you know more traditional students are going to have more success with that.” So, while AP Classroom is providing additional provisions, some teachers are perceiving these provisions as ineffective in addressing the needs of low-socioeconomic African American and Latinx students, but as only one teacher pointed this out, more data is needed to be conclusive.

The researcher has observed two courses offered by this AP Classroom and found that there is some credence on the basic principles of this program.

The provision types that were mentioned by teachers found outside the AP classroom included extracurricular programs such as National Honor Society and Beta Club. Teacher D said, "…like National Honor Society has a lot of overlap with gifted programs for example." But the teacher also explained that it is not a requirement, and not just a gifted student focused provision. Teacher I had a similar perspective. They believed that these extracurricular options could help as a provision to improve social and work ethic areas, "which I think does translate into our classrooms. Because it turns out that I end up with a lot of students … my Beta Club kids and they're part of the other clubs and the kids that are typically taking my AP are also involved in a lot of other things." This shows that there are themes of gifted students being involved in extracurricular provisions that can improve their talent development, but that these are voluntary.

Extracurricular activities were also considered a provision. Activities could have been aligned with the classroom or as an external choice of the family. Teacher G believed field trips were important provisions for gifted students in the AP class, but explained that their school did not offer field trips specifically for gifted students. Teacher K described a personal reference to a student they had taught that had attended a summer program at Harvard. Teacher K reflected that, "…those kinds of experiences and they're able to just have that more background knowledge and yeah. A lot of our students just don't. There's not a lot that reaches out to them to do that." This highlights that some provisions are based on family ability to provide them for their children. This teacher was explaining that the students from low-socioeconomic African American and Latinx backgrounds were not able to have these provisions, and they were not

provided by their AP classes, but only by family capability, creating a divergence in provision opportunities.

Part of the classroom environment includes how students are grouped. Teachers were questioned on their perspectives of grouping gifted students into clusters and there were a variety of answers. Teacher H simply believed that the gifted students should be grouped together. Teacher A believed intelligence and learning types needed to be addressed, Teacher B and Teacher I believed student interest guides grouping, and Teacher F said grouping depends on personality. Teacher J said grouping should be by how the students work together. Teacher D argued for gifted type. Teacher K also said by their strengths. Teacher C said, "I don't really have an opinion because again I haven't seen it on the ground." Similarly, Teacher G said they do not use grouping. Teacher E said grouping, "…should depend on what you're doing. If you're exploring a new topic and kind of doing a project-based deal, then, you need to have them all be kind of into the same thing. Um, because then they are more likely to engage with it." Finally, Teacher L said that the teacher doesn't have much say because the students are placed in their class by administration.

Teachers interviewed had no perception of RTI impacting or being used for gifted AP African American or Latinx students, or any gifted AP students. When asked about their perceptions of the use of RTI for these students, Teacher A responded, "None." Teacher B said, "I cannot answer that question either." Teacher F added, "Yeah, no. No, that's not even a thing. I wish it was." Teacher C and Teacher E both explained that at their respective schools RTI plans are not really used. Teacher D stated, "I'm not super familiar with how we implement RTI with gifted." Similarly, Teacher G said, "I don't know what the RTI plans are for gifted students in Georgia." No teachers mentioned positive perspectives of RTI being used, or being correctly

used. Teacher L for example said in regards to RTI for gifted students, "…I don't think it works effectively."

Mentorship/Internship

Another example of a provision for gifted students is the use of mentorships or internships. Teachers were questioned on their perceptions of the use of internships or mentorships for their gifted students. Teacher B said, "I'm assuming it's a good thing but I wouldn't know about it." Teacher G had the same response, "Honestly, I don't know anything about them." Teacher D had a similar response, "I think we don't do this but we should do this." This response showed a positive perspective on the possible impact of a mentorship or internship. Teacher A also saw them as a positive catalyst, stating, "Well, I think they are extremely important, you know, to be able to take on leadership roles in a smaller environment to set them up for success as they mature into adulthood." Teacher H explained the positive perspective as, "Oh gosh, those [internship/mentorship] are absolutely key because that's what those students want. They want experiences. Teacher I and Teacher J also thought that mentorship/internship options would increase student understanding of future opportunities.

There were examples of teacher perspectives backed by observations of mentorships or internships being used. For one, Teacher C explained an outlet for this use in the AP class, "…one thing that College Board is doing that probably provides this to the gifted and non-gifted peers is they're moving a lot of the classes to include a personalized learning project, and they started with AP computer science and it's also a big deal in Seminar and Research, so that fits the bill um, to some extent." Teacher E described a senior project option that would allow for work with a mentor. Teacher F also explained an option that was done at a previous school they had taught at with positive impact, "I mean it's something we've done with at my old school. I

taught at a Title 1 middle school here in [Georgia City A] and we did mentoring for our at risk youth, or at promise youth as they're called now." Teacher K also had seen the use of mentorship or internship, "We have a program here of what is, [County B Mentees] that a lot of our gifted students are in. It's open to anyone but, and they work a lot, they have mentors, but they go out and do a lot of stuff in the community. And I think that's good just, well for any students." Teacher L also has seen this first hand, "So, we did a think several years ago where we were exploring mentorships and things like that and we had such a hard time with community support with mentors, and community, and even to this day with internships. All the internships aren't geared toward gifted AP kids, they're geared toward kids that are getting a high school diploma and getting to work. And we do have a lot of success with that." The perspectives of Teacher L would argue that it is very hard to implement a mentorship/internship program but that it would be beneficial to all students.

Time Devoted to Gifted as a Provision

Time can be a provision in and of itself. When time is set aside for gifted specified learning, it can provide students with gifted-based lesson types and interventions. Some teachers do not intentionally devote time to gifted instruction. Teacher C said that it, "Depends on the school and the structure. Here, it is based, its zero and it works." Teacher C therefore perceived that at their school, teachers do not provide specialized services or time for gifted education and that it was a functional option. Teacher G had a similar perspective. They stated in reference to curriculum provided for gifted students, "Well, if you're asking my opinion, I don't necessarily think it needs to be anything different." Also, Teacher L expressed, "Well because our classes are combined. I mean like I said I have a roster of regular and a roster of gifted in the same class. I mean, there's no option to regulate more time. You know, I mean it's got the same 90 minutes

per class, you know. So, I, not saying that it doesn't need to happen, but I mean, you know, it doesn't." And Teacher K stated that it was not occurring in their classroom because their course is not teacher direction based.

Other teachers did not say that they were against gifted education devoted time, but explained that the AP curriculum as being too intense, or structured, to allow for gifted instruction time as they would like. For example, Teacher B said, "We have not been able to do that. I can tell you that, except in AP, and it's not because they're gifted that we're giving them instruction, it's just the requirements of the course that it's a more rigorous course, and that's really it." However, Teacher E said, "it should be imbedded into your instruction, it should be something that you do as part of your instructional planning so that its seamless and nobody really knows that you're doing."

Some teachers responded with a desire for time dedicated to gifted based education. Teacher H exclaimed, "If we're talking about are we going to schedule it into the schedule, I mean it would be wonderful if they were able to get gifted enrichment in every course that they took." Also, Teacher A stated, "You know I think if it is possible, you know the whole day at it, I don't think it needs to be limited." Teacher J was okay with fifty percent of core time delegated for gifted instruction. Teacher D expressed, "If the gifted program is to be like maintained and altered to be more effective for students, I think there should be a program put in place that utilizes an elected, elective gifted course for students who are classified as gifted which would essentially function as the same equal to a standard course time." Teacher F gave an example of a specified class for gifted high school students, "Oh, I think it should be like either a 9th grade class, I think it should be a 9th grade class." Finally, Teacher I described their perspective of

appropriate time use for gifted instruction as, “in a fully gifted class …I think in a gifted course I think 75 to 100% should be focused on the gifted education.

Events as Environmental Catalysts

The teacher perceptions of the impact of the environmental catalyst of events were somewhat limited. Some teachers had little or no commentary for perceptions of events being a significant environmental catalyst. Teacher B’s response to questioning on events to impact gifted students was, “None.” Teacher C said, “Not, I have no perspective on that.” Teacher F expanded, "I mean, man, not at all. I’ve never even heard of an award or an event for any AP student other than us getting an award for when 50% of our Black students pass.” This illustrates a portion of teachers having a perception of the environmental catalyst of events as simply not being a catalyst to high school gifted students. However, this was not the case for all teachers interviewed.

Teacher J did report a positive perception of events on gifted students, mentioning field trips having the potential to be a positive. Teacher A described positive impacts from events, “I think that those are very important because they do give that positive reinforcement of success for students.” Teacher H also had positive perspectives on events, explaining, “Events and awards are the two things that I think of the most when I think about AP course development because those students are generally use to high academic achievement so they’re constantly on the outlook for an award, they look for certificates, they look for praise they look for things like that.” Teacher L’s perspective gave further detail on this notion of events relating to high academic achievement. “And I’m going to tell you, in high school today, it’s a game. If you want to be valedictorian, which will get you, … into the school. You’re going to get into Georgia Tech if you want to go there. You’re going to get into Georgia. If you’re the salutatorian… you’re

probably still getting in. So, what we've got here is … We've got kids that are driven that way. The kids that want scholarships, the kids that want recognition, the kids that want to be the val and the sal, the distinguished honor graduate, all this. They're the ones that are going to be getting into AP classes."

One teacher, Teacher D, had a view of events from a negative perspective. In reference to awards as an event, they stated, "They are unnecessarily competitive for scholar awards." Teacher I also perceived a possibility for negative impacts, "So, if it's a negative event, so like an accident or something I think that does. AP classes typically cover a lot more information in shorter periods of time, so missing a one class could mean a lot and a lot to catch up on. Um, one of my few students that failed my course this year had some stuff go on in her personal life." Those negative events like accidents could therefore hinder a student's learning or take away from their time to grow in class. It could become a physical barrier or a mental barrier to education as the student recovers. And teacher E agreed, perceiving that a bad event was going to, "hurt a lot more than positive events."

Environmental Catalysts Impacting Georgia AP Students

A connective piece between the classroom and home that was found was mentioned by Teacher A, who said that the teacher's roll in the classroom understanding the student's personal milieu, "how that economic need is and as teachers for us to understand it as well. Um, how can we best assist and support a student who may come from a family where education is valued without it being at odds from a teacher perspective? That's where I would like to be more supportive, and maybe that's where again having that type of professional development like, just some framework to even operate under, um how you best assist those students." Because as Teacher E explained, "…I don't know that families necessarily know what it means to be gifted.

I don't really know that they recognize that that means that kids don't think the same way?" And this means that to aid the classroom milieu, something is needed to help bridge that gap between environmental catalysts on campus and off.

Teacher A described an option for the teachers of low-socioeconomic African American and Latinx gifted students to increase their positive impact on talent development in the classroom by considering the environmental catalysts of home milieu and persons that cannot be addressed in the classroom directly and by providing alternative options based on needs of students from alternative backgrounds in contrast with what is perceived as a traditional AP situation. Such options would possibly address this concern, also voiced by Teacher L who said, "Well, I just, once again I think that the parents aren't educated well enough as to what AP and gifted programs can do for their kids." And the concern with home milieu and parents as persons continued. Teacher I said, "Um, I think parental involvement. It is one of the main things that I can see the kids who had strong parents pushing them forward, when they did see an absence or a deficit, they were much more likely to complete the work in a timely manner than the kids that maybe didn't have the parental help at home of them checking up on them." But there is not much information presented by teachers for what steps can be taken to address those issues of home milieu. Many teachers focused on the classroom or school milieu as a separate entity from the home milieu. In concluding this section, it raises questions if teachers perceive a barrier of impenetrability here and how to tear it down.

Summary

Teachers in two West Central Georgia schools reported on perceptions of gifted education for low socioeconomic African American and Latinx gifted high school students. They reflected on their perceptions of AP preparation for the educators and on the impact of Gagné's

environmental catalysts on gifted student talent development. Through 12 interviews, the researcher discovered that there was not a clear consensus on the effectiveness of training teachers were receiving for gifted AP students. While some teachers were able to increase their own understanding through self-guided study, or extended learning through graduate studies, this was not a commonality. Therefore, it can be argued that Georgia AP teachers perceive themselves to be not fully prepared to provide for low socioeconomic status African American and Latinx gifted high school students.

Additionally, based on teacher perceptions of provisions and curriculum for AP, teachers do not believe that AP classes are fully equitable for low socioeconomic students, African American or Latinx. There are discrepancies in the availability of gifted services for students from these backgrounds, and there is a lack of AP (gifted service) classes in low socioeconomic high schools. Teachers also did not perceive RTI to be implemented effectively for gifted students, nor mentorships, internships, or time.

Based on teacher perceptions of the impact of Gagné's environmental catalysts, AP classes are not offering a wide enough base of opportunity to address the needs of low socioeconomic African American and Latinx students to reach their full gifted potential through positive environmental catalysts. There are also barriers perceived by teachers due to socioeconomic status of schools, language barriers in ESOL families, and teacher ability or personality.

Chapter V: Summary of the Study

Study Summary

Low socioeconomic status African American and Latinx Gifted students are underrepresented in Gifted education. For high school students, this discrepancy is found in the Advanced Placement (AP) classroom, Georgia's high school provision for gifted students (Georgia Department of Education, n.d.). Despite national legislation and guidance, the federal government allows individual states, including Georgia, to create their own gifted policies and delegate implementation to individual districts. Georgia, like many other states, continues to show inequity in gifted education for minority students and deficiencies in gifted instruction (Crabtree, Richardson & Lewis, 2019).

The purpose of this study was to examine equity or inequity in gifted education for West Central Georgia high school students. A generic qualitative research study was completed which analyzed Georgia AP teachers' perceptions of gifted educational practices (Percy, Kostere & Kostere, 2015). The study included teachers from two Central West Georgia school districts where teacher perceptions of state legislation and Gagné's environmental catalysts was be gathered. Legislation and Gagné's environmental catalysts from his Model of Giftedness were used to create 18 interview questions (Appendix H) for a generic qualitative study in which interviews were conducted with AP teachers to find major themes in inequities based on legislation and environmental catalysts from teacher perceptions. Interviews were completed via Zoom and recorded for transcription. Ronald Persson's VSAIEEDC model was used to complete the generic qualitative research through the steps of variation, specification, abstraction, internal verification, external verification, demonstration and conclusion (Kennedy, 2016).

Teachers reported several examples of environmental catalysts impacting AP student performance. Twelve high school teachers from West Georgia counties gave varying accounts of how they perceived environmental catalysts impacting their Gifted AP students' talent development through a focus on Gagné's environmental catalyst of milieu, persons, provisions and events.

Milieu Summary

Teacher perceptions revealed major themes in the environmental catalyst of milieu in the sub-areas of the AP classroom, the gifted roster and off campus catalysts. Nine of the 12 interviewed teachers perceived a significant impact being made by milieu of any form. Teacher perceptions were able to been broken down into their perceptions of what was going on in the classroom milieu, which they were personally observing, and then into the home milieu, what they perceived to be happening outside of their own knowledge. Teachers saw the AP classroom as a milieu in which students were receiving an advance curriculum, but overall, this curriculum was not gifted specific. Current studies have suggested that the classroom environment (milieu) can provide gifted services through curriculum and instruction approaches, differentiation in assessing students and the content and delivery provided by the teacher (Glison et al, 2023). There were many instances in which teachers referenced students being in AP classes that were not focused on their gifted strengths, or in which teachers perceived their AP class to offer no gifted differentiation. Glison *et al.* (146) suggested that AP itself may be the differentiation as an accelerated course. Overall, teachers perceived a significantly lower number of low socioeconomic status African American and Latinx students enrolled in AP courses overall, whether they were identified as Gifted or not.

Teacher perceptions of milieu outside of the school was a heavy divide between

positive and negative home environments. Teachers perceived supportive and education favoring homes as positive catalysts and essential to AP student performance for all students, but had many negative perceptions about home environments of lesser performing AP students with little or no connection between class and home. A barrier of communication, or perhaps mindset, became apparent.

Persons Summary

Persons who were perceived to have an impact on talent development were teachers, other faculty, classroom peers, parents and neighborhood peers. All 12 teachers perceived persons as having a significant impact on all Gifted students. They saw influencers for positive and negative. A positive impact was often associated with an AP teacher or faculty member who supported student learning. It was also seen with peers who strove for higher achievement in the classroom milieu. Negatives were more often associated with the persons found in the home environment, adding to the barrier perception in the analysis of the findings. Additionally, other research points out that negative perceptions of teachers are negatively impacting Gifted representation. White (2018) reported on the underrepresentation of Gifted African American students and researched the perspectives of teachers in relation to this underrepresentation and found that 3 of the 6 teachers they interviewed believed that teacher perceptions were capable of negatively impacting Gifted representation among African American students. In both this study and that of White (2018), there is evidence to suggestion teachers' negative perceptions having a negative impact on African American Gifted students.

Provisions Summary

Teachers perceived the environmental catalyst of provisions as being implemented through AP, time for gifted differentiation, teacher training, mentorship and internship, and as

additional provisions that were needed but not necessarily available. Seven of the twelve teachers interviewed perceived provisions as something that was missing for Gifted students, or inadequate. In general, alternative provisions based on student choice, aside from AP offerings, were perceived as something needed for high school Gifted students.

An especially significant provision is the Gifted education being provided by the teacher, and research shows that lacking in more areas than just West Georgia. Reid and Horvathova (2016) studied Gifted training for teachers in Slovakia, Austria, Belgium and Finland and found that teachers in many areas are not receiving the necessary training to properly provide education for their Gifted students.

Events Summary

The catalyst of events, or occurrences outside of the typical classroom experience impacting student learning, revealed the fewest results in teacher perceptions, with minimal references. Three of the 12 teachers interviewed said that there was no impact of events on their gifted students. Others explained that events were not available to all students. There was a perception of events as a catalyst that is not available to all students for reasons ranging from what is available through their school, to what opportunities are afforded to them by their families. Events play a significant role in the development of Gifted students and their talent development, with a study by Yilmaz and Durdukoca (2023) teachers believed activities outside of the classroom were beneficial to their Gifted students and that parents were also favorable to the results of environmental catalyst of events in the form of learning experiences away from the classroom.

Overall Summary

Analysis of the perceptions of these catalysts reveal that many West Georgia teachers

do not believe that AP classes meet the environmental catalyst needs for low socioeconomic African American and Latinx student to reach their full talent potential. Additionally, there is conflicting interpretation of legislation areas of RTI, time usage, clustering etc. Overall, perceptions are that gifted students are not receiving gifted instruction through the AP classes. Teachers perceived a need for more options for student outlets, including provisions such as additional field trips, improvements in communication of gifted needs to persons/parents and home milieu. Also, more variety and availability of class and study options are needed. Georgia gifted high school students attending schools with high poverty populations are, based on teacher perceptions from the study, not only less likely to be identified, but also less likely to have any opportunity for varied gifted outlets if they are. These high-poverty population schools have far less AP options than those of the schools where teachers with low-poverty populations were providing AP classes. An impoverished African American or Latinx high school student is therefore in a situation of inequity doubly, having neither the same afforded opportunities for identification, or the more expansive AP programs of their higher income peers. Therefore, based on AP teacher perceptions, West Georgia is not providing effective gifted services for low SES African American and Latinx high school students. These students have less opportunities to be identified, as well as less opportunities to participate in what is considered a gifted accommodation by the state, AP coursework (VanTassel-Baska, 2018). On top of the disparity in identification and AP availability, those students receiving AP coursework may still be in a classroom that teachers perceive as a milieu that is no more beneficial to a gifted student than any other due to lack of gifted differentiation. Johnsen and Kaul (2019) found that teachers perceived a lack of resources and training for teachers of gifted students. This supports the notion that a lack of gifted training is an issue for many teachers.

Perhaps the most significant quotes from the interviews came from Teacher E and Teacher K, who replied: “Can AP address all the catalysts? There’s no magic bullet, you can’t do all things with any, with all of it. And I don’t think that all AP classes are built the same. I don’t think that all AP classes can be…” and Teacher K also said that, “I don’t know if you can address all environmental factors in an AP class to be honest with you.” Quoted simply by Teacher G, “All environmental catalysts? Oh, dear God no.” And other teachers, including I and K, agreed that Gagné’s environmental catalysts could not, or were not, being addressed by AP classes for low socioeconomic status African American and Latinx students, or all gifted students in general. This means that according to Gagné’s DMGT, Georgia’s Gifted African American and Latinx high school students, and in fact all of Georgia’s Gifted high schoolers, are being deprived of what they need to transform from gifted to gifted and talented students (Gagné, 2004). Jawerth (2021) agreed that Gagné’s model is an appropriate tool that is already being partially applied to address the needs of gifted students in Australia, but that the model needs to be more accurately implemented. An accurate implementation of Gagné’s model would therefore be an appropriate option for other Gifted students as well.

Implications of the Study

The teacher perspectives of two West Georgia school districts revealed concerns with equity in identification and the providing of gifted services to low-socioeconomic status African American and Latinx high school gifted students. Perspectives also reveal an overall concern that AP is not an adequate provision for high school gifted students to receive appropriate talent development. Based on this study, it would be recommended that the state of Georgia, or individual districts in Georgia, readdress their use of AP as gifted education for high school students. By addressing the areas of environmental catalysts, gifted students could be more

adequately served to reach their talent objectives (Jawerth, 2021).

Milieu Implications

This study shows that teachers perceived home milieu as an obstacle that they cannot, or will not, address, often referencing parents or home culture as a reason for issues in student performance or gifted access. Some teachers seem to be allowing a barrier to be formed in an area that should be addressed with attempting to alleviate inequity in identification and service for low-socioeconomic African and Latinx students. Teachers could provide more options for informing families of giftedness and provision needs at home to advance student talent development would be of value, with communication between school and home seen as an appropriate step by Carrillo (2021).

Additionally, the implications of the findings of teacher perceptions of milieu would suggest that gifted training could be offered to families earlier on, especially to families in the focus group of low-socioeconomic African American and Latinx students (White, 2018 & Carrillo, 2021). If more information and transparency is offered through the individual districts, more families and teachers could be in a position in which this perceived barrier is lifted, and communication starts and is fostered at an early stage with assistance from higher levels of the educational system. This could be a way to help cross cultural and language barriers. It could also be a way to provide more training for teachers to better understand their students' families and to increase talent development.

Persons Implications

Teacher perceptions in this study have illustrated that teachers perceive a lack of proper training for the persons providing the Gifted services in the form of AP education. Being a Gifted high school teacher was seen by many as an inadequate gifted certification process with a

focus on a non-differentiated AP curriculum. Teachers were perceived to have the ability to be a positive catalyst as persons, but it was not really associated with their ability to provide a Gifted differentiated curriculum. The positive catalyst of a good teacher was seen as someone who was able to help all of their students, whether they were identified as Gifted or not. The teacher was seen as a positive catalyst for improving student interest and understanding in ways that were not based on the teacher's use of gifted interventions or differentiation, but as an overall positive impact on all student learning. Graefe (2024) found that a positive relationship with the student's teacher helped engage the Gifted student.

Teachers also perceived persons at home, especially in low-socioeconomic African American and Latinx environments, were less equipped to be a positive environmental catalyst of person. The low-socioeconomic background limits the ability of the person to be a provider of extended gifted opportunities outside of the classroom. Teachers perceived there to be a statistical factor in these families having a lesser chance of understanding what a Gifted student needs to succeed as well. Carrillo (2021) interviewed the parents of Latinx Gifted students, and reported on the significance of addressing the needs of these families. It is important, based on both this study and that of Carrillo (2021), to foster family involvement for Latinx Gifted students to increase their identification and receiving of appropriate environmental catalysts to reach their potential. School districts could offer additional outreach to families to help them offer these opportunities to their students, or they could also increase teacher training to address potential biases causes this belief in teachers. As seen in White (2018), negative teacher perceptions can exacerbate inequity, so addressing training for teachers and parents would be beneficial. Indeed, all persons involved in the Gifted student education should be properly prepared to meet their needs, according to the World Council for Gifted and Talented Children.

Provisions Implications

Provisions were lacking overall. The provision being studied was AP courses for high school students. It was clear that teachers perceive these AP classes to be inefficient for not only low-socioeconomic status African American and Latinx Gifted students, but for all high school gifted students. Teachers' need for additional training and support in Gifted AP differentiation was also found in the study. The World Council for Gifted and Talented Children explained that a proper provision for gifted students is to have appropriately trained and monitored Gifted educators. Laine and Tirri (2015) and White (2018) agreed that teachers need more training to adequately provide for Gifted African American students.

Another issue that was revealed in the study was that of accountability and transparency of school districts as to how or where funding for gifted education services was being utilized. According to an article by Tagami (2023), an audit shed light onto the fact that Georgia schools were suspected to have received gifted funds amounting to $9.7 million. According to the article, this money was an overpayment, because the teachers being included in the count to receive this financial aid were not actually qualified to teach gifted education. The Global Principles for Professional Learning described provisions for teachers of Gifted as such items as training, manuals and other literature. This also brings up questions of funding for Gifted resources in the West Georgia districts that were interviewed, because an interview with a County B teacher, funding for gifted students was mentioned as being used for additional class resources in the form of books. However, County A teachers did not mention being privy to funding, and the researcher, as a teacher in County A, also has not been made personally aware of gifted funding resources.

A research article published by Williams (2023) based on the audit report showed that

Georgia's Gifted services the gifted differentiation being offered within different Georgia districts needs to be reviewed and updated. However, in response to this, the Georgia State Department of Education said that it was up to the individual districts to determine how they deal with Gifted education.

Events Implications

Based on teacher perceptions, events offer few opportunities to grow gifted high school talent development. If a student comes from a low-socioeconomic background, they have even fewer chances than their financial counterparts of receiving event opportunities. These can include artistic or other extracurricular endeavors (Miller & Dumford, 2015). Additionally, AP teachers did not perceive the AP class to be the part of the school experience that offered the events unless by chance a fieldtrip was imbedded in the AP curriculum. According to the results of the interviews, more events need to be made available to students for perceptions to be measurable, as many teachers did not see events occurring. Grants or gifted funding could be funneled into event opportunities in the local community to help build individual gifted needs.

Overall Implications

In summary, gifted high school students in Central West Georgia are not receiving the talent development that they deserve. Gagné explained that gifted students need positive environmental catalysts to grow from gifted, to gifted and talented (Gagné, 2004). Based on the analysis of the teacher perspectives, AP is not offering this opportunity, especially not to low-socioeconomic African American and Latinx students. The accommodation provided for gifted high school students, is simply not adequate. Teachers lack the appropriate training. The training for gifted education is limited, inadequate in the teacher perception, and lacks extended learning opportunities for the teachers unless they themselves seek it out on their own. An AP teacher is

supposed to have Gifted Certification in the state of Georgia, but two of the 12 teachers interviewed were teaching AP without that certification. AP training has not helped these teachers to prepare for gifted students or provided training for specific needs of low-socioeconomic status African American or Latinx students in their basic certification courses. And some teachers have simply stated that they are not differentiating in an AP classroom.

These findings are similar to those conducted in Australia by Jawerth (2021), who argued that gifted education in that country is in need of reform, something it has not had in over a decade. Australia claims use of Gagné's model for its gifted and talented development in schools, but the findings of Jawerth (2021) argued that the model was not being properly implemented, and that the school systems were not properly monitoring or addressing gifted student needs by properly implementing Gagné's model. This illustrates that the issues found in West Georgia are similar to issues found across the globe. Gifted students are not receiving up to date and appropriate gifted services as perceived by teachers and others.

While this study has implicated that AP really is not the best option for gifted high school students, it has also pointed out that even if it was, low-socioeconomic status African American and Latinx students are not receiving equal access. These students are less often identified and less likely to have AP opportunities in their school as seen by the teacher reports in this study. Schools with higher populations of African American and Latinx students, simply did not have many opportunities for AP courses as compared to the higher-income schools.

Low-socioeconomic status African American and Latinx students are less likely to be identified as Gifted (Plucker, Peters & Schmalensee, 2017; VanTassel-Baska, Bonner & Goings, 2019; VanTassel-Baska & Hubbard, 2019; Walker & Pearsall, 2012; Wright & Zimmer, 2018; Yaluma & Tyner, 2018, Ecker-Lyster, M., Coleman- Tempel, L., Gregersen, S., & Snyder, J.,

2021). The opportunities for gifted education (AP courses) are limited in the Georgia districts interviewed when this disproportionately lower representation group of students reach high school. And, if a low-socioeconomic status African American or Latinx high school student makes it into an AP class in one of these districts, the teacher may not perceive it to be of any use to their gifted and talented development anyway.

Gagné has offered a model for gifted and talented development that is a viable option to improve gifted education for these students (Jawerth, 2021). Application of an updated program, at least at the high school level, would benefit from the model designed by Gagné by providing the appropriate positive environmental catalysts for all gifted students. Laine and Tirri (2016) also explained that teachers should be differentiating for their Gifted students, which as seen in this study, was not happening within all of the AP classrooms interviewed. As a positive finding though, Laine and Tirri (2016) also suggested more opportunity for independent studies, which was seen as an opportunity in many of the interviewed AP teachers' classes. The opportunities for individual studies and research could be expanded upon for high school gifted students in all of their courses.

Recommendations for Future Study

Several recommendations were developed over the course of this study. The first concern that arose in this study was the issue of research limitations needing to be addressed. The researcher would like to consider increasing teacher participation to increase the diversity in the participant pool. All teachers who volunteered in the study were White. A future study could increase the number of districts to which invitations for participation are sent in order to increase perspectives from teachers of different ethnic backgrounds. The study did not intend for a single ethnicity to be questioned, but based on teacher response to request for interviews, this was the

data that was available at the time. The availability of only White teachers limits the generalizability of study's results to a larger population of teachers in Georgia. Additionally, the entire state of Georgia could become a larger research pool if additional researchers were added to the study in order to get a state-wide perspective on this topic. Eventually this could also become a national study. Another way to increase participation is to include parent perceptions, or student perceptions in order to have comparative data about perceptions of environmental catalysts that the teacher cannot observe directly and perhaps shed more light onto the issue of the perceived barrier between school and home. The diversity in participation is to involve the voice of parents in their perceptions on gifted legislation in Georgia.

Analysis of the collected data also brought up the issue of English to Students of Other Languages (ESOL) student identification. Multiple concerns arose through the analysis of the data about the identification process and testing for ESOL students as well as concerns about parent interaction when English is the second language, or perhaps not spoken at all. Allen (2017) also voiced concerns about language barriers in the families of Gifted students. The researcher wants to consider how teachers/schools can increase ESOL representation and reduce inequity in identification and communication with the ESOL milieu earlier in child's education. The study could be expanded to gather data from families of students who are in ESOL programs or to ESOL teachers about options for gifted education and gifted identification.

The researcher also began to contemplate the use of the DMGT for all students. As the DMGT is used to grow the talent of gifted students, the notion of using the DMGT or implementing the use of positive environmental catalysts for all students arose. Future research could be conducted to determine if the DMGT can apply to, and enhance the education of non-gifted students as well.

Lastly within the qualitative study, the researcher was drawn to an additional question about gifted education in terms of relationships between teacher parents and gifted students as well as teachers who were formerly identified as gifted themselves. Some teachers reported having been identified as gifted in their own childhood or as being parents of identified Gifted children. For example, Teacher A stated:

> Speaking from personal experience as somebody who went through a lot of those programs as the parent, someone who went through those programs and as the teacher of some of those programs I think the social engagement is really high.

The researcher would like to know how these connections might impact Gifted education or the perceptions of it.

Outside of the generic qualitative study, the pilot study can be readdressed and a new quantitative measurement can still be designed that would have reliability and validity. Future research can address the problematic factors found in the scale within the pilot study. For example, only factor 1 (social value) and factor 2 (status of services) had a clean factor structure. However, factor 3 (needs for support) and factor 4 (characteristics) had issues with a clean factor structure. Cronbach alpha values were also low, making the scale low in reliability. Future work needs to be done to develop better survey items that represent the attributes of factor 3 and factor 4.

The pilot study, which invalidated the survey, could have failed for multiple reasons. One issue may have been with the sampling. Teachers were only drawn from two counties. Teachers also were not draw from only teachers who were gifted certified, which may have prevented them from having the necessary base knowledge to comprehend the survey items as intended. There could have been issues in the cultural understandings and the differences in school cultures

impacting teacher perceptions, causing invalid results. Additionally, the survey may have been compromised in the previously mentioned narrowing from 90 to 20 questions. In hindsight, it would have been better to use one of the later versions of the survey that have been tested, or a later version of Gagne's tool, and piloted it with a smaller group before going into a full survey taking valuable research time.

Limitations of the Study

This study was based on the responses of teachers from only two of the 159 counties in Georgia. Despite population sizes, this study obviously cannot speak directly for the teachers of the other 157 counties in the state and only gives a glimpse into the views of the midwestern section of the state. A study that reached into a higher number of counties may reveal some significant differences. Based on the researcher's recent findings at the 2024 Georgia Association for Gifted Children's conference, at least one county, Richmond, is working to increase gifted identification equity. This and other possible individual district initiatives could offer some stark contrasts that were not found in the interviewed districts. This also highlights the fact that this research is focused on only one of the fifty states, and extended research would need to be done to speak for expanded regions or the nation as a whole.

Limitations were found in the number of teachers volunteering to participate in the generic qualitative study. Based on sources and collection of data, the researcher was confident in moving forward with 12 participants. Fusch and Ness (2015) explained that there is enough data to have saturation when the information being collected can be replicated and when there is no more new coding happening. LaDonna, Artino and Balmer (2021) echoed this. They explained that saturation was met when the researcher believes they have heard all that they can about the topic. Overall, the researcher began hearing the same information from teachers in both

counties for the majority of the interviews. County B proved to be harder to get participants, the first set of emails reached only a couple of interested individuals and several responses from teachers able to be found on the district sites were mostly them stating that they were not AP. It took snowballing with other AP Troup teachers to reach the 4 that were willing to participate (some had not been included in the online email addresses posted by the district). Fusch and Ness also reported on a 2012 piece by Bernard with the phrase, "the researcher takes what [s]he can get." However, while saturation was reached, the geographic constraints of this study will have had impacts on the teacher responses as the teachers who were interviewed had different perspectives based on their local demographics and backgrounds, whereas a wider geographic demographic would have the potential for alternative cultural introspection on their perspectives.

Issues in the study were also found in the factor analysis and reliability analysis. This demonstrated poor psychometric properties of the scale in the pilot study. However, this limitation was not completely unexpected, as Gagné (2018) himself determined that there was psychometric weakness in the original instrument that he had created. The researcher created the new instrument (Appendix I) in the pilot study by adapting selected questions from the original an attempt to create a better survey. Again, the pilot study led to removal of the originally intended survey portion of the study based on the findings of the factor and reliability analysis concurring that this was an unacceptable instrument.

This study also revealed low agreement in Kappa coefficients of the environmental catalysts in the generic qualitative portion of the research based on the work of Hallgren (2012). Milieu had the highest agreement with a 0.463, or moderate agreement level. All other environmental catalysts were only in fair agreement with scores of 0.29 for persons, 0.28 for provisions and 0.28 for events. These findings showed a limited interrater reliability of the

interview based on the reviews of the collected data. Lower Kappa coefficients may have been caused by difference in background knowledge level of the coders. There may also have been differences in the quality of coding based on multiple variables, including analysis fatigue, knowledge difference and overall depth of analysis between the researcher and the additional coder.

Another limitation within this study was the generalizability of research findings. There was no doubt some issue with reporter bias in the self-report data collected, however the researcher insured the confidentiality of the findings to put the teachers interviewed at ease. The researcher also focused on collecting data from teachers with appropriate experience in the area of study, AP classrooms, in order to find the most reliable data available. The point of view, perception or memories of those interviewed could have been skewed by person bias or social desirability bias, and this concern was addressed by reaching saturation with 12 teachers to be interviewed. The data collected was also limited in general due to the attempt to keep a concise study. Other questions or forms of data collection could have been used, as seen in the recommendations for future study.

Finally, the researcher was limited by their own background in education. Perspectives that may have unintentionally influenced or caused bias in the study would have come from a limited view of education in Georgia. The researcher has taught in one of the two interviewed districts, and was associated with some of those interviewed. The interviewer came from a limited demographic and a limited personal perspective of Georgia, having no personal knowledge or perspective from outside of County A. The researcher was bound by the constraints of access to other educators, by time allotted for research and by boundaries of the research process and time allotted. In order to overcome their own bias, the researcher used

reflexivity to self-monitor via personal journaling and memo recording (Ortlipp, 2008). The points made by the researcher through these note taking methods helped to avoid these biases through metacognitive reflection in the researching and reporting phases.

Dissemination of the Findings

The final approved copy of the dissertation will be shared with participating counties' research and accountability departments. The dissertation will also be available through Columbus State University.

Conclusion

This generic qualitative study has evolved over years of investigation. Georgia high school AP teachers perceive the environmental catalyst of milieu, people, and provisions as having the greatest opportunity to impact low SES African American and Latinx gifted students in the AP classroom. However, these teachers do not perceive AP to be providing an adequate gifted option to these students. A perception of barriers between the school and home milieus was also highlighted as a cause for concern for many teachers of low SES African American and Latinx gifted students.

Based on the analysis of AP teacher perceptions from two counties in West Central Georgia, the researcher concludes that gifted studies for high school students in this state are not sufficient. Simply enrolling a student in AP does not fulfill their gifted and talented needs. In addition, this inefficient approach to gifted education for high school students, exacerbates inequities for low-socioeconomic African American and Latinx students.

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Appendix A
RECRUITMENT LETTER FOR TEACHER SURVEY

Dear High School Teacher,

My name is Rebekah Atkinson and I am a doctoral student in the Ed.D. program (Curriculum and Instruction track) in the College of Education and Health Professions (COEHP) at Columbus State University, Columbus, Georgia. The purpose of my research study is to determine the validity and reliability of a modified survey of high school teacher perceptions of gifted education. The findings from my research study would provide useful information in the development of a valid and reliable survey to gather data on high school teacher perceptions of gifted education and legislation in Georgia. The study findings could provide guiding information for further study in teacher perceptions of gifted curriculum and gifted legislation in Georgia. The study is pending approval by the school district's Institutional Review Board and the school principal.

You are being asked to voluntarily participate in this proposed research study because you are a full-time certified teacher at one of the high schools where the study will be conducted. I will be collecting data for this portion of my research in one phase. High school teachers (9^{th}, 10^{th}, 11^{th}, and 12^{th} grade levels) will be sent online Qualtrics surveys to assess teacher perceptions of gifted education and curriculum at the high school level in Georgia to determine validity and reliability of the survey. The surveys will take approximately 15 to 30 minutes each to complete. Your survey responses will be anonymous and confidential. Responses will be used to determine validity and reliability of the survey. Teachers will have the option to voluntarily participate in the study. Data will not be collected during instructional time or any other time in which the teacher is engaged in completing their work responsibilities. No individual level-data will be published. Data collected from this project could be used in future research projects.

Please click on the following hyperlink to access the informed consent form and survey if you wish to participate in the research study.

Appendix B
First Contact Email

Greetings,

I am writing to request your participation in my research study. The purpose of my research study is to determine the validity and reliability of a modified survey of high school teacher perceptions of gifted education. This pilot study is being conducted to determine validity and reliability of a modified survey. The survey will take approximately 15 to 30 minutes to complete. Demographic data will be collected on gender, racial classification, employment status, age, and certification status as a teacher. Additional survey items ask you about your beliefs about educating gifted students. Your responses will be anonymous, should not be collected during instructional time or any other time in which you are engaged in completing your work responsibilities, and may be used in future research on gifted education. If you wish to participate in this survey, please click the link below.

Qualtrics Survey Link

Sincerely,

Rebekah

Atkinson

Doctoral Candidate,
COEHP, Columbus State University

Appendix C

FOLLOW-UP RECRUITMENT LETTER FOR TEACHER SURVEY

Dear High School Teacher,

Approximately 2 weeks ago, an email was sent to you regarding participation in an online survey. Thank you to those participants who have already completed the survey. My name is Rebekah Atkinson and I am a doctoral student in the Ed.D. program (Curriculum and Instruction track) in the College of Education and Health Professions (COEHP) at Columbus State University, Columbus, Georgia. The purpose of my research study is to determine the validity and reliability of a modified survey of high school teacher perceptions of gifted education. The findings from my research study would provide useful information in the development of a valid and reliable survey to gather data on high school teacher perceptions of gifted education and legislation in Georgia. The study findings could provide guiding information for further study in teacher perceptions of gifted curriculum and gifted legislation in Georgia. The study is pending approval by the school district's Institutional Review Board and the school principal.

You are being asked to voluntarily participate in this proposed research study because you are a full-time certified teacher at one of the high schools where the study will be conducted. I will be collecting data for this portion of my research in one phase. High school teachers (9^{th}, 10^{th}, 11^{th}, and 12^{th} grade levels) will be sent online Qualtrics surveys to assess teacher perceptions of gifted education and curriculum at the high school level in Georgia to determine validity and reliability of the survey. The surveys will take approximately 15 to 30 minutes each to complete. Your survey responses will be anonymous and confidential. Teachers will have the option to voluntarily participate in the study. Data will not be collected during instructional time or any other time in which the teacher is engaged in completing their work responsibilities. All data collected from the surveys will be aggregated and analyzed. No individual level-data will be published. Data collected from this project could be used in future research projects.

Please click on the following hyperlink to access the informed consent form and survey if you wish to participate in the research study.
<Qualtrics Survey Link>

Sincerely,

Rebekah Atkinson

Doctoral

Candidate,

COEHP, Columbus State University

Appendix D

Second Contact Email

Greetings,

This is my final request for your participation in my survey. If you have already participated, thank you so much for your help, it is greatly appreciated and you may disregard this email. If you have not yet been able to participate, the purpose of my research study is to determine the validity and reliability of a modified survey of high school teacher perceptions of gifted education. This pilot study is being conducted to determine validity and reliability of a modified survey. The survey will take approximately 15 to 30 minutes to complete. Demographic data will be collected on gender, racial classification, employment status, age, and certification status as a teacher. Additional survey items ask you about your beliefs about educating gifted students.

Your responses will be anonymous, should not be collected during instructional time or any other time in which you are engaged in completing your work responsibilities, and may be used in future research on gifted education. If you wish to participate in this survey, please click the link below.

Qualtrics Survey Link

Sincerely,
Rebekah
Atkinson
Doctoral Candidate,
COEHP, Columbus State University

Appendix E

INFORMED CONSENT LETTER FOR TEACHER SURVEYS

Dear High School Teacher,

The purpose of my research study is to determine the validity and reliability of a modified survey of high school teacher perceptions of gifted education. A pilot study will be conducted to determine validity and reliability of the modified survey. The survey will take approximately 15 to 30 minutes to complete. Demographic data will be collected on gender, racial classification, employment status, age, and certification status as a teacher.

Participation is voluntary and refusal to participate will involve no penalty or loss of benefits to which participants are otherwise entitled. Participants may discontinue participation at any time for any reason and without any questions and without any consequences that could influence their employment with the school district. Participants will voluntarily participate in the survey during their time away from school or in the privacy of their homes. Teachers can decide to be a part of this study or not and may withdraw from the study at any time without any penalty or loss of benefits and no consequences. Responses to survey will be anonymous. There are no foreseeable risks to the participants. Although there may be no direct benefits to them, a possible benefit from their being part of this study is to understand from the results of a study on teacher perceptions of gifted education, curriculum and legislation in Georgia. There is no financial compensation for participating in this survey. Data collected from this project could be used in future research projects.

The survey data in Qualtrics is protected by a sophisticated firewall system and high-tech security scans are performed regularly to ensure that data in servers are secure and only authorized personnel can access the data. In addition, Transport Layer Security (TLS) encryption (also known as HTTPS) for all transmitted data is utilized. The IP addresses of the participants will not be accessible to PI and Co-PI. All the survey data would be stored in password-protected computers within the Principal Investigator and Co-Principal Investigator office located in the work place. Data will be kept secure for one year, and then destroyed by deleting electronic copies of survey and consent forms and then delete from the PI's and Co-PI's hard drive after the research project is complete. No personal information (i.e., addresses, phone numbers, email addresses, social security numbers) will be collected. All the data will be aggregated and analyzed. No individual responses will be reported. Your identity, and the school's identity will remain anonymous and teachers' names will not be made known to any outside party.

If you would like to know more information about this study, feel free to contact Columbus State Co-Principal Investigator, Dr. Parul Acharya at: acharya_parul@columbusstate.edu, or call (706) 507-8523. If you have any questions, please contact the Principal Investigator, Rebekah Atkinson at atkinson_rebekah@columbusstate.edu or call 706.580.2320. Please contact the Institutional Review Board (IRB) at CSU (irb@columbusstate.edu) or school district IRB personnel if you have any questions about your rights as a research participant.

Appendix F

Validation Survey: Demographic Data Collection

1. What is your gender?
    a. Male
    b. Female
    c. Non-binary
    d. Prefer not to answer
2. Please select your ethnicity (check all that apply):
    a. White
    b. African-American
    c. Latinx
    d. Asian
    e. Native American
    f. Other (Please specify)
    g. I prefer not to answer
3. What is your age?
    a. 20 - 30
    b. 31 - 40
    c. 41 – 50
    d. 51 – 60
    e. 61 – 70
    f. 71 +
4. Are you a high school teacher (grades 9 – 12) in Muscogee County?
    a. Yes

b. No

5. How many years have you been teaching high school?

    a. 1 to 5

    b. 6 to 10

    c. 11 to 15

    d. 16 to 20

    e. 20 or more

6. Are you certified to teach Advanced Placement Classes?

    a. Yes

    b. No

7. Have you taught Advanced Placement Classes in Georgia?

    a. Yes

    b. No

8. Do you have a Gifted Education certification/endorsement?

    a. Yes

    b. No

Appendix G
MCSD IRB

Muscogee County School District
Columbus, Georgia

Research, Accountability and Assessment
•
Patrick C. Knopf
Director

July 17, 2023

Rebekah Atkinson has requested permission to conduct a research project entitled ADVANCED PLACEMENT TEACHERS' PERSPECTIVES ON EFFECTIVENESS OF GEORGIA GIFTED LEGISLATION: A QUALITATIVE STUDY. Her request has been approved as currently written with the updated changes approved on March 2, 2023. Any additional changes to the project will require a resubmission for review and IRB approval. All study activities must be conducted outside of school hours, be completely voluntary and may only use publicly available directory information. A finalized copy of his research results should be filed with our office upon completion of the project.

Patrick Knopf
Director, Research Accountability and Assessment

2960 Macon Road • Columbus, Georgia 31906
Phone (706)748-2020 • FAX (706) 748-2029

Appendix H
Troup County IRB

APPLICANT AGREEMENT/CONDITIONS
FOR CONDUCTING RESEARCH IN TROUP COUNTY SCHOOLS

I understand that no participant(s) or school(s) will be identifiable through this research project. I recognize that the research is not completed until a copy of the results is sent to the address listed below:

Please attach a copy of all correspondence (cover letter, questionnaire(s), etc.) that you intend to send to Troup County staff. Please send this completed application with requested materials to:

Jo Beth Lanier
Director of Research, Assessment & Accountability
Troup County Schools
100 North Davis Road, Building C
LaGrange, GA. 30241

No students will be surveyed as part of this study. I realize that I will be notified in writing concerning the status of this research.

Signature of Applicant — 8/22/2021 Date

FOR SYSTEM'S USE ONLY:

Date application received: 8/23/2021

Date applicant notified: 8/29/2021

Approved ✓ Not Approved _____

Authorized Signature [signature] Date 8/30/2021

3

APPLICANT AGREEMENT/CONDITIONS
FOR CONDUCTING RESEARCH IN TROUP COUNTY SCHOOLS

I understand that no participant(s) or school(s) will be identifiable through this research project. I recognize that the research is not completed until a copy of the results is sent to the address listed below:

Please attach a copy of all correspondence (cover letter, questionnaire(s), etc.) that you intend to send to Troup County staff. Please send this completed application with requested materials to:

Jo Beth Lanier
Director of Research, Assessment & Accountability
Troup County Schools
100 North Davis Road, Building C
LaGrange, GA. 30241

No students will be surveyed as part of this study. I realize that I will be notified in writing concerning the status of this research.

Signature of Applicant

1/29/2023
Date

FOR SYSTEM'S USE ONLY:

Date application received: 1/30/23

Date applicant notified: 1/30/23

Approved ✓ Not Approved

Authorized Signature Date 1/30/23

Appendix I

Validation Survey Items

1. A complex technological society needs the talents of gifted persons in order to function well.
2. If students are gifted, they don't need help.
3. The leaders of tomorrow's society will come from the gifted today.
4. In traditional (non-AP) classes, teachers devote more attention to those who learn more slowly than the gifted.
5. In Georgia schools, it is possible to meet the educational needs of the gifted without investing additional resources.
6. It is the parents who have the major responsibility for helping gifted children develop their talents.
7. Gifted children are often unsociable.
8. It is less profitable to offer special education to children with difficulties than to gifted children.
9. The gifted need special attention in order to fully develop their talents.
10. When the gifted are put in special classes, other children feel devalued.
11. Special programs for gifted children make them more motivated to learn.
12. By separating students into gifted and other groups, we increase the labelling of children as strong-weak, good-less good, etc.
13. Most teachers do not have the time to give special attention to their gifted students.
14. The best way to meet the needs of the gifted is to put them in special classes.

15. All children are gifted.

16. The gifted come mostly from wealthy families.

17. Whatever the school program, the gifted will succeed in any case.

18. Gifted children do not need special educational services.

19. In Georgia, it is not always possible for gifted children to fully develop their talents.

20. Georgia schools are already adequate in meeting the needs of the gifted.

Appendix J

Interview Questions

1. As an AP teacher, describe your interaction with gifted students in your class(es).

2. In your position as an AP teacher, what trainings or studies have you participated in about gifted education and how well versed would you say you are in current gifted practices?

3. What are your perspectives on having gifted education at the high school level? Does it add any kind of value to gifted education students in high school?

4. What are your perspectives on having AP classes as an accommodation for gifted high school students?

5. Other than AP classes, what accommodations do you believe gifted students need?

6. Do you believe there is equity or inequity in gifted education and AP offerings for low socioeconomic status African American and Latinx students? Please explain and give any examples you have.

7. Please describe any personal experiences of disparity or inequity in gifted education that you have perceived for low socioeconomic status African American and/or Latinx students.

a. What are your perceptions of equity for these students?

8. Explain how well you believe AP teachers are prepared to provide for gifted students of diverse backgrounds in Georgia.

9. What are your perceptions of the adequacy of gifted training for AP teachers of low socioeconomic African American and Latinx students in Georgia?

10. Francois Gagné believes that gifted students need positive environmental catalysts in order to develop their talents. These include milieu (physical, cultural, social and familial

etc), persons (parents, teachers, peers, mentors etc), provisions (programs, activities, services) and events (encounters, awards, accidents etc).

a. How do you perceive milieu impacting AP student talent development?

b. How do you perceive persons impacting AP student talent development?

c. How do you perceive provisions impacting AP student talent development?

d. How do you perceive events impacting AP student talent development?

11. Do you perceive a difference in the level of impact of any of the environmental catalysts for low socioeconomic status African American and/or Latinx AP students?

12. Based on your experiences, do you perceive all environmental catalysts to be addressed by AP classes? Please explain.

13. What are your perceptions of family and other non-classroom environmental catalysts on gifted low socioeconomic African American and Latinx student talent development?

14. What are your perceptions of Georgia's reported and automatic referral processes in identification of gifted students? How do you perceive equity in this process?

15. What are your perspectives of RTI plan usage for gifted students in Georgia?

16. How much instruction time should be dedicated to gifted specified instruction for high school gifted students?

17. What criteria do you believe are important for grouping gifted students into clusters?

18. Describe the appropriate use of internship/mentorship programs for high school gifted students.

Appendix I
Interview Transcript Coding Samples

Interview 9 Transcript Teacher I: County B

Researcher: It's fine. In your position as an AP teacher, what trainings or studies have you participated in about gifted education? How well versed would you say you are in current gifted practices?

Teacher I: So, um, to get my AP cert I actually took a class in that specific course for the AP computer science principles. And then I'm currently taking the gifted course for West Georgia RESA, and so I think pretty versed because I'm doing them right now, so it's real recent. ***[Coded: Provisions, teacher training)]***

Researcher: Okay, other than AP classes, what accommodations do you believe gifted students need?

Teacher I: Oh, I don't know. Um, I think variety of courses. So maybe not necessarily just AP track, because some kids, that's not where their giftedness lies. So maybe having alternate language arts courses that they could take, or additional language arts courses that I could excel in. ***[Coding example: Provisions]***

Researcher: Explain how well you believe AP teachers are prepared to provide for gifted students of diverse backgrounds in Georgia.

Teacher I: So, when I went to my AP training, it was more focused on the course content than it was teaching gifted students. So, I'm getting that supplementally through my gifted certification and so I don't think as just AP is concerned that they are preparing us to teach gifted kids, they're more preparing to teaching the content and then you kind of learn along the way how to deal with the different types of kids. ***[Coding example: provisions, teacher training (training for diverse students)]***

Researcher: How do you perceive events, encounters, awards, accidents, impacting AP student talent development?

Teacher I: So, if it's a negative event, so like an accident or something I think that does. AP classes typically cover a lot more information in shorter periods of time, so missing a one class could mean a lot and a lot to catch up on. ***[Coding example: events, negative]***

Researcher: Do you perceive a difference in the level of impact of any of the environmental catalysts for low socioeconomic African American and/or Latinx AP students?

Teacher I: Um, I think parental involvement. It is one of the main things that I can see the kids who had strong parents pushing them forward, when they did see an absence or a deficit, they were much more likely to complete the work in a timely manner than the kids that maybe didn't have the parental help at home of them checking up on them. And not just support but involvement, immediate involvement of them constantly hey I've got you

going, like here's the grades what are your grades look like? ***[Coding example: milieu (home), Persons (parents)]***

Researcher: What are your perceptions of family and other non-classroom environmental catalysts on gifted low socioeconomic African American/Latinx students in their development?

Teacher I: So, like I said earlier I think when parents are involved, those kids still thrive even if they don't have all the necessary resources that are offered… ***[Coding example: Persons (family/parents)].***

Appendix J

COLUMBUS STATE UNIVERSITY

INSTITUTIONAL REVIEW BOARD

Informed Consent Form

You are being asked to participate in a research project conducted by Rebekah Atkinson, a student in the Curriculum and Leadership (EdD) - Curiculum Track at Columbus State University. This project is under the supervision of Dr. D. A. Frazier and Dr. P. Acharya.

I. Purpose:

The purpose of this project is to determine the perspectives of Georgia high school teachers on gifted education for high school students.

II. Procedures:

1. Georgia high school teachers will receive a recruitment email to participate in a recorded zoom interview in which they will be questioned about their perspectives on gifted education in the state for high school students.
2. Informed consent forms will be emailed with the initial recruitment email letters. and participants will have the option to digitally sign the informed consent form if they wish to participate and return it to the researcher.
2. Teachers will arrange an appropriate time, outside of the workday, with the researcher in which the interview will be conducted within two to three weeks after the recruitment email is sent.
3. During the interview, which will last approximately half an hour, the researcher will provide the interviewee with basic demographic questions (5 minutes) followed by 21 questions to respond to about gifted education (less than 30 minutes).
4. Upon completition of the interview, the researcher will transcribe the recording and remove any identifying data from the interview to include teacher name and name of school taught at. These identifiers will be replaced with psuedonyms.
5. Information gathered may be used for future research (identifying data will not be used).

III. Possible Risks or Discomforts:

The interviewee may have some discomfort in their answers, however no identifying data will be connected to any answers, results will be anonymous.

IV. Potential Benefits:

The interviewees and reviewers of this research have the potential benefit of learning more about gifted education in Georgia, the chance to reflect on their own pedagogical practices, and provide a data source for the state and state educators to reflect upon. This could result in improved educational opportunitites for gifted high school students.

V. Costs and Compensation:

There is no cost or compensation for participating in this study.

VI. Confidentiality:

Interviews will be recorded for use by the researcher only, who will then transcribe the collected data. Transcriptions will have all identifying data removed so that the interviewee remains anonymous. All collected data, including recordings and trascripts, will be stored on a password protected computer. Transcripts that are published will not contain any information to identify the interviewee. All printed transcripts and data will be shredded and or burned at the end of the dissertation. Digital information will be permanently deleted from all saved files.

VII. Withdrawal:

Your participation in this research study is voluntary. You may withdraw from the study at any time, and your withdrawal will not involve penalty or loss of benefits.

For additional information about this research project, you may contact the Principal Investigator, Rebekah Atkinson at 706.580.2320 or atkinson_rebekah@columbusstate.edu. If you have questions about your rights as a research participant, you may contact Columbus State University Institutional Review Board at irb@columbusstate.edu.

I have read this informed consent form. If I had any questions, they have been answered. By signing this form, I agree to participate in this research project. [If participation is dependent upon the participant being 18 years of age or older, you must include a statement here confirming the age.]

_____ _____

Signature of Participant Date