CHANGING CAN'T TO CAN:

A STUDY OF HOW TEACHER DEFICIT THINKING AFFECTS THE ACHIEVEMENT

OF GIFTED STUDENTS LIVING IN RURAL POVERTY

By

MELISSA JABLONSKI CONWAY

(Under the Direction of Sheneka Williams)

ABSTRACT

This dissertation describes a **qualitative** case study focusing on how **teacher deficit thinking** affects **gifted students of a low socioeconomic status (SES)** in a **rural high school**. The research seeks to answer the following questions: (1) How does deficit thinking by teachers affect the achievement of rural, gifted students of a low SES?; (2) How does the action research process of developing and evaluating interventions affect teacher attitudes in regards to deficit thinking when working with this subgroup of students?; and (3) How does the action research process of developing and evaluating interventions impact the school and/or system's thoughts on this subgroup's potential to achieve? The methods included in this study are qualitative in nature: surveys, interviews, and a private blog serve as the crux of data used to inform the questions. Participant journals were also used to cull further, more personal and reflective data. Findings this study might inform include teacher preparation programs and professional development programs for veteran

teachers who work collectively to narrow the achievement gap between low SES students and those of a higher SES.

Key Terms: Qualitative; Teacher deficit thinking; Gifted education; Low-income students; Rural education

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DEDICATION

This work is dedicated to my grandfather, the late Leonard Jablonski. Be good.

To my son, Evan: may your own love of learning brighten your life as it has mine. I love you to the moon and back.

ACKNOWLEDGEMENTS

I would first like to express my gratitude to my husband, John, who has spent countless hours outside of the house with our son as I wrote. I could not have achieved this without having you in my corner.

I would also like to thank my mom, Kris, for being my biggest supporter in life. Thank you for instilling in me the love of learning and seeing more in me than I could ever see in myself.

To all of my family and friends: thank you for the love and support you have given me throughout this endeavor. I am blessed beyond measure.

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A special note of thanks to my cohort. You all inspire me to be better. I am leaving this process with lifelong friends and colleagues—you are the best unexpected gift.

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CHAPTER ONE

INTRODUCTION AND OVERVIEW OF THE PROBLEM

Statement of the Problem

This research project analyzed how the achievement of rural, gifted students—especially those of a low socioeconomic status (SES)—is affected by teacher paradigms of deficit thought. At Thomas Comprehensive High School (TCHS)[1], a rural high school in Georgia, researchers discovered that gifted students of a low SES were not achieving at the same rates as their gifted, higher SES peers: The College Board (2014a) in its report of scores for TCHS students reported that 60% of Advanced Placement test takers who self-identified as possessing a low SES per the Federal Free and Reduced Lunch Program scored a one or two on the exam, which means they failed to earn college credit for the course (see Table 1).

In comparison to a national percentage of 41% of students overall who did not receive a three or higher on their AP exams, 19% more of TCHS students with a low SES did not earn a three or higher to receive college credit for the AP course (60% of TCHS students with a low SES did not earn college credit). Compared to other Georgia students, 16% more low SES students at TCHS did not receive college credit due to AP scores on exams. Not only were low SES students at TCHS underperforming compared to their higher SES peers at the school, they also severely lagged behind state and national scores (College Board, 2014a).

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[1] Pseudonym used

While 40% of low SES students did in fact receive college credit via the AP exam, not one of these students received a five, the highest score possible. Fifty-one percent of their TCHS peers outside of the low SES subgroup scored a one or two on the exam; while 49% received a three or higher and in turn received college credit for the class. Seven percent of students (not of a low SES) received a five on the exam versus the 0% of low SES students receiving this score (College Board, 2014a). At TCHS, gifted students of a low SES underperformed on AP exams in comparison to their higher SES peers. The data clearly stated a disparity in AP achievement between students with a low SES and their peers, which in turn demanded action to ameliorate this situation.

Framing the Problem

After the passage of the No Child Left Behind (NCLB) legislation, schools became more accountable for all demographic groups in regards to achievement in standardized testing and attendance. Until recently, NCLB put a focus on all students passing a standardized test and on all students graduating on time; the legislation neglected the specific analysis of each student subgroup achievement. Because of this political and legislative movement, rural gifted students suffered. Schools could choose to ignore their gifted student population knowing that students would perform well on state standardized tests, tests on which schools were graded. Schools did not necessarily feel pressure to promote the growth of gifted students because their growth was not isolated in the analysis of overall school progress.

Since Race to the Top (RTTT) and the use of the Teacher Keys Effectiveness System (TKES) teacher assessment program commenced, the movement to track the achievement—and more importantly, the growth of all students—find researchers needing

to take a closer glimpse at demographic groups which traditionally achieve at higher rates. For the first time, each individual student's growth is being measured and this data is used as a piece of the equation to rate the success of the school overall. This information is reflected in the College Career Ready Performance Index (CCRPI). The overall CCRPI score communicates the achievement of the school and is also used to gauge whether the school needs state intervention. Gifted student achievement and growth is an important facet of the CCRPI rubric.

If the goal in contemporary education is for all students to grow, then neither practitioners nor policymakers can ignore the growth of students who are already deemed high achieving. Rather, the analysis of the achievement of the school's most gifted students is more important than ever in supporting the growth of their learning along with the learning of the general population of students. Because of this legislation, a focus of research on gifted populations is timelier than ever. Schools can no longer turn their backs from raising the bar in gifted education; RTTT's and TKES' focus on individual student growth data forces rural schools to analyze and address how they can better support their gifted learners. More resources and attention need to be given to rural schools in order to help them reach their gifted population—especially those students of a low SES (Azano, Callahan, Missett, & Brunner, 2014).

Conceptual Framework

The theoretical framework used in this research revolved around teacher deficit thinking with a specific examination of how teacher thought paradigms affect the achievement of gifted students living in poverty (GSLIP). The generation of the framework used in this study was developed during the beginning stages of the action research

process. Based on Simons' (2009) description of how theory frames the study, this study accidently fell into a "theory-generated" case study because the theory arose only after a constructivist exploration of the data. Again this was non-intentional (and a bit painful) because the researcher worked diligently to provide a framework for the research much earlier in this process.

My involvement as a high school English teacher and now as an assistant principal of curriculum and instruction allowed me to determine that the core part of my job lies in the building of relationships with students. Students make the work worthwhile and sustainable. Through my relationships with students, I have often found myself seeing school through their eyes. As a result of a series of conversations with students regarding their lives at school, I came upon the problem of teacher deficit thinking at TCHS where I taught and served as the Response to Intervention program coordinator.

My experience was unique in that I spent half of my day with gifted students teaching Honors English and AP Literature and Composition and the other half of my day developing interventions for students struggling to find success in traditional course work. I began to see that our students who struggle in more traditional terms—students who might need 504 plans or Individualized Education Plans (IEPs) were receiving much more attention than our students participating in advanced curriculum. As I hold a core belief that every student deserves the opportunity for success, I began to question how we might give more support to our gifted students as they struggled in advanced classes. Through this analysis, I realized that a gap existed between the services we were providing for kids struggling in traditional curriculum and the services we provide, or in this case do not provide, for our students struggling in gifted and other advanced curriculum.

While I continued to feel as though our lowest performing students deserved the attention and instructional modifications they received, I also knew that our higher performing students were not being served with the same level of equity. We often left these students to fend for themselves, knowing that they had the aptitude to achieve success at higher rates than their peers (Watkins & Erickson, 2011; Russo, 1997).

The difficult question came to me, through a series of conversations with students: Were we truly supporting our higher achieving students in a way that pushes them to grow as learners? Through Georgia's adoption of the Teacher Keys Effectiveness System standards, student learning growth has taken on a new importance. Were we creating an environment in which even our highest performing students could grow as learners? My answer to that question kept resolving itself to an overwhelming no.

Once I began digging into the numbers to find more quantitative support of my theory, my argument became even further solidified: Our gifted students, especially those students living in poverty, were not achieving at the levels of their peers at TCHS, their peers in the state, and their peers nationally. We simply were not doing enough to support the learning of students and I aimed to know why. Wanting the best opportunities for my rural students, I began a journey to find answers for their underachievement. My journey is documented within this research.

While knowing the problem was important, but the study still lacked a theoretical framework. The framework process really began when the Action Research team (AR) distributed a survey about teacher views on our school culture. We gave this survey because I had recently read Gruenert and Whitaker's (2015). *School culture rewired: How to define assess, and transform it.* Many of the issues we saw as an AR team were discussed in

this book and it made us think that we needed to analyze some basic tenets of the school culture at TCHS.

Based on data, we ascertained that many of our teachers possessed a deficit-thinking construct when working with all students of a low SES, including students in the gifted population. We had hypothesized that this might be the case, but the data from the survey solidified our suspicions and gave us a solid framework to begin creating interventions: teacher deficit thinking (see Figure 1). As mentioned before, the framework arose from the process and the AR team found it difficult to stand in limbo as we worked through the issue to find the theoretical standing we needed. This being said, this process of generation more valuable for the AR team than beginning with a theoretical framework decided upon by the lead researcher and forced to confine the study within the theory previously determined. The AR team built the framework together, which helped to solidify the team as they continued the research process.

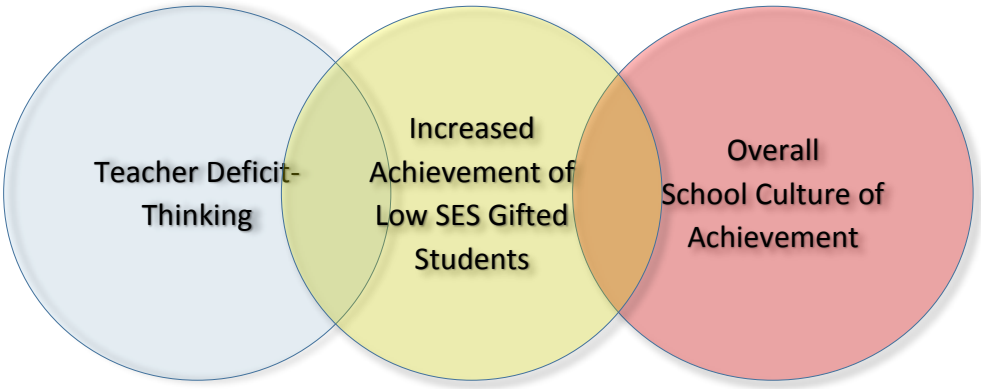


Figure 1. Conceptual Theoretical Framework for Tackling Teacher Deficit Thinking to Increase Student Achievement

Gifted Education in Research

Many studies (Azano, Callahan, Missett, & Brunner, 2014; Hadre & Reeve, 2003; Howley, Rhodes, & Beall, 2009; King, 2012; Seeley, 2004) have addressed the achievement

of gifted students at the high school level. However, studies rarely address gifted students who possess a low SES without framing the research around race often using a critical race theoretical framework (Delpit, 1995; Rubin, 2006). A high correlation between family income level and student achievement exists, so many researchers have also studied the underachievement of students living in poverty. However, because such a small amount of these students are also labeled gifted, not much research has been completed on this demographic group. While studies detailing the underachievement of gifted students in the context of race as well as in the context of poverty provide great insight into how student achievement is affected, many of them also fall short in informing this project because the studies often focus on intrinsic motivational issues in relation to individual student achievement. Most studies also tend to focus on urban and/or suburban populations. This research instead approaches the gap in literature involving how the achievement of gifted students in rural public school settings is affected by teacher deficit thinking. A closer analysis examines how teacher thought paradigms affect the achievement of gifted students living in poverty.

As stated above, the focus on gifted education in rural schools is less defined in literature than those in urban ones. Instead, rural schools find themselves combatting a higher rate of poverty and a lower rate of funding for educational programs with fewer resources available for gifted programming. Research has also determined that rural schools limit their pool of gifted students with a bias against those students who are economically disadvantaged (Howley et al., 2009). In the school under study, the issue of providing gifted services is prevalent. Because many students are of a low socioeconomic status, low achievement, even in regards to gifted students, tends to be the status quo

among educators. A culture of blaming students and their families has become predominant with the teachers in this study's building. This 'blame game' "allows educators to avoid responsibility for teaching a group whom they have labeled 'capable of doing much better'" (Seeley, 2004, p. 2).

To combat this phenomenon, this research set out to engage gifted educators in a discussion about teacher expectations and the relationship of this factor in our gifted student achievement. Many teachers of this particular subgroup of students believe that the students' impoverished home life prevents them from achieving at the same rates as students of a higher socio-economic status. Statements from teachers such as "these kids lack the resources to truly function at a high level" or "my gifted students have too much to worry about outside of school to achieve at high rates on Advanced Placement exams" places blame at the doorstep of poverty, rather than asking teachers to reflect on how their own assumptions and expectations of students might hinder gifted student achievement.

Through the researcher's work with students, a cycle of poverty became evident—one that was often saturated with parents and grandparents who did not complete high school due to various personal difficulties. Moreover, geographical isolation often prevented members of previous generations from furthering their education after high school. The previous generations also had opportunities to do farm work and other work that did not require formal education; however, the new digital age has put more importance on formal education and completing high school so that students can learn a specific trade or study subjects that will lead them to better employment opportunities. This generational divide places rural, gifted students at a disadvantage if they are not able to overcome generational barriers of poverty and geography to further their education

(Ulrich, 2011). Many students today do not have access to the same job opportunities of their parents who lived in a more agriculture rich economy.

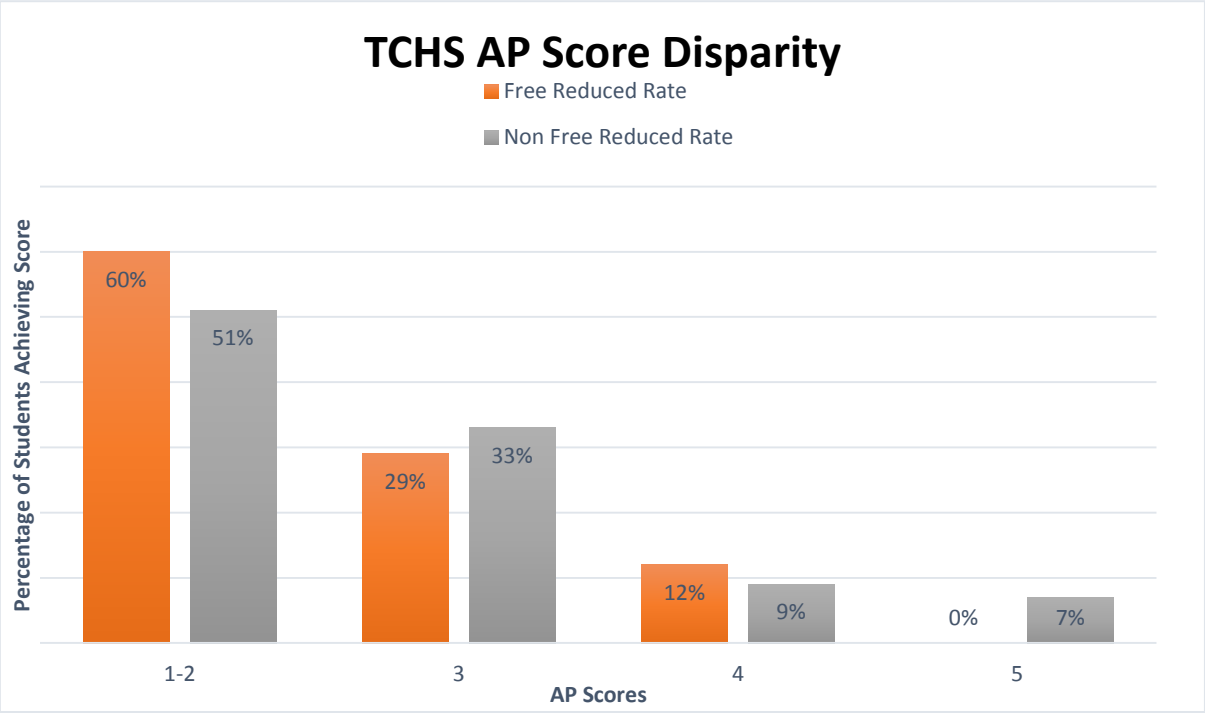
Ulrich (2011), in her study on educational attainment rates, compared rural to urban areas and discerned that "although rural Americans from all community types have been able to attain higher educational levels than their parents, their progress has not been uniform" (p. 3). Ulrich (2011) further argues "parents' education is important because the educational attainment of children is often closely related to that of their parents. When parents place a high value on education, their children are more likely to have the encouragement and financial support to pursue education themselves" (p. 2). Many students at this rural school have parents with limited educational backgrounds and resources. Because of challenges like this, rural gifted students may need more extrinsic help and motivation within the walls of the school building.

Initial Data Collection and Verification of Problem

To verify the problem, an analysis was conducted studying 2013's Advanced Placement scores for TCHS students receiving gifted funding. Only 68 of the 290 students enrolled in an AP course at TCHS actually took the test at the end of the course. Of the students considered economically disadvantaged, 60% scored a one or a two on the AP exam, while 51% of those students from a higher socioeconomic background scored the same (see Table 1). The College Board used data from the Federal Free and Reduced Lunch Program to ascertain socioeconomic background. To earn college hours for the AP course, students must score at least a three on the exam. Less than 30% of economically disadvantaged TCHS students scored a three (score granting college credit), while 12% of this subgroup scored a four (College Board, 2014a). It is important to note that no students

from economically disadvantaged backgrounds at TCHS scored a five. TCHS also possessed a higher percentage of economically disadvantaged students scoring ones or twos than the percentage of all economically disadvantaged test takers nationally. The analysis reported that students at TCHS from a low SES were underperforming in comparison to their peers on AP exams.

Table 1. TCHS AP Score Disparity



Source: College Board (2014a)

Purpose and Research Questions

This study describes the steps taken toward creating a qualitative case study around how teacher deficit thinking affects the achievement of gifted students of a low SES in a rural high school. While the problem, deficit thinking, has been shown to directly affect the achievement of this subgroup of students, this study also explores teacher experience with deficit thinking—within their own classroom and their experiences with evidence of

colleagues' deficit thinking. A more thorough summary of the literature framing this research is contained in Chapter 2.

The research seeks to answer the following questions:

1. How does deficit thinking by teachers affect the achievement of rural, gifted students of a low SES?

2. How does the action research process of developing and evaluating interventions affect teacher attitudes in regards to deficit thinking when working with this subgroup of students?, and

3. How does the action research process of developing and evaluating interventions designed to affect this population's achievement impact the school and/or system thoughts on this subgroup's potential to achieve?

The methods included in this study are qualitative in nature: surveys and interviews are the crux of data used to inform the questions (see Appendix for survey and interview protocol). Participant journals in the form of a private teacher blog (created by the researcher) and a student journal recording experiences as a student in the classroom are also used to cull further, more personal and reflective data.

The Setting. Thomas Comprehensive High School is one of two high schools in a county school system located in rural Georgia. The 2014 FTE count reported the county served 7,288 children, while the student population at TCHS hovered around one thousand. Students in the county and at TCHS are primarily White and many live in poverty; as of 2013, the county's student enrollment in the free and reduced lunch program was 53% with about 65% of students at TCHS participating in this program. As stated earlier, the majority of students attending school in district are White (79%) with 5,747 of students

self-identifying as White. Meanwhile, White students enrolled at TCHS account for 77% of the student body. The next largest racial demographic group is Hispanic. They account for an additional 12% of the overall student population (Georgia Department of Education [DOE], 2014).

Documentation of Poverty

Further documentation of the district's poverty levels is illustrated in Title I funding received. Eight of the fourteen schools in this district received Title I funding, a federal form for funding of schools serving a student population with a high poverty rate (Georgia DOE, 2014). As seen in countless studies (Anderson, Leventhal, Dupéré, 2014; Gordon & Cui, 2014; Silvernail, Sloan, Paul, Johnson, & Stump, 2014; Ulrich, 2011), poverty rates directly correlate with achievement rates; students of a low SES traditionally score lower on standardized tests.

Because of the high poverty population the district serves, its primary focus on achievement largely deals with those students who are underperforming on state standardized tests, such as End of Course tests (EOCs) at the high school level. Little attention is given to students in Advanced Placement (AP) classes in regards to monitoring achievement. TCHS's School Improvement Plan (SIP), written in the fall of 2013, has its first focus area stating: [TCHS strives] "[t]o increase the percentage of students meeting/exceeding standards on state and national assessments (EOCTs, SAT, ACT, Advanced Placement)" (Thomas County High School, p. 1, 2013).

However, when surveying the indicators to measure this area and its goals, there is no mention of SAT, ACT, or Advanced Placement testing goals; rather, there is only mention of EOCTs and Georgia High School Writing Test percentage increases. To truly serve all

students at our school, educators must more closely scrutinize how our gifted population achieves. Stakeholders must align goals that measure achievement in regards to all testing as a step to create an environment of educational equity.

Defining Giftedness

The district's gifted program identifies most gifted students through data and achievement rates produced by students in elementary school. By the time they reach high school, very few students go through the process to be labeled as gifted—this is mostly due to the fact that most students have been previously identified. Some students remain labeled as gifted, meaning they pull Full Time Equivalent (FTE) funds at the rates given for gifted students which are more than the rates given for general education students, even though the particular arenas in which they are gifted have expired with maturation. For example, in first grade a student may be determined as gifted in mathematics, but by tenth grade, the student achieves on level rather than showing a talent in this area. The school still receives gifted funding from FTE for this student even though the student may have outgrown his gifted capabilities.

TCHS reported 158 gifted students in their population as of the 2014-2015 school year. Of these, 56 students were also considered economically disadvantaged; in other words, they possess a low socioeconomic status (SES). The numbers reflect that 35% of TCHS's gifted students are also of a low socioeconomic status; the high percentage of this particular demographic group is too important to ignore. Educators cannot continue to disregard AP students simply because they often perform higher than their peers not enrolled in AP classes. Teachers and other stakeholders must work to enrich the curriculum for gifted students just as they remediate for students who struggle.

AP Program at TCHS

In this particular high school, students are pushed to take higher-level classes, whether they are gifted or not. Due to the de-tracking movement, TCHS eliminated classes such as Advanced English and Advanced Math classes, traditionally known as College Preparation classes or On Grade Level classes. Depending on the subject, there is a gifted track. For example, freshmen can choose to take English I or English I Honors, and sophomores can choose between English II and English II Honors. Once students become juniors, they have the choice of Advanced Placement Language or English III, and then as seniors they have the choice of Advanced Placement Literature or Advanced Composition (also known as English IV). The math curriculum at TCHS also reflects gifted tracking in that it offers accelerated curriculum for students in ninth and tenth grades. As eleventh and twelfth graders, they are able to take Advanced Placement Statistics and/or Advanced Placement Calculus. The science and social studies curriculum fails to offer an Honors track, but does offer various Advanced Placement coursework.

Students at TCHS are not required to meet any minimum criteria to enter into Honors coursework or Advanced Placement coursework. Teacher advisors do encourage students to take classes specific to their abilities and goals; however, parents have the right to override class suggestions during the advisement and registration process. This accounts for a diverse group of students populating Honors and AP classes. In spring of 2014, 290 students were enrolled in Advanced Placement courses, accounting for 31% of the population taking college level courses. Only 25% of the 290 students took an Advanced Placement exam at the end of the course (College Board, 2014a). While there is no data to support the low number of test takers, the high number of students of a low SES

enrolled in AP courses may have an impact on testing. The College Board charges a fee of $91 for each exam. At TCHS, any student with a low SES gets one test free but has to pay a subsequent fee of $62 on any other exam the student decides to take (College Board, 2014b). This is a huge strain on already strapped pocketbooks and may also attribute to the low number of test takers who sit for the AP exam.

Significance

While the collective body of research in education has a firm focus on gifted education at the high school level (Azano, et al., 2014; Hadre & Reeve, 2003; Howley, et al., 2009; King, 2012; Seeley, 2004); very few, if any researchers have specifically examined how gifted students of a low SES achieve in rural areas. This particular research study further addresses the gap in the literature in that it seeks to understand how teacher deficit thinking factors affect low SES, gifted student achievement in a rural high school.

As evidenced previously, TCHS's school data represents the idea that students from a low SES are underperforming on AP exams as compared to students from a higher SES. While TCHS has a high population of low SES students, it was troublesome to see the data that low SES students often score lower than students from higher SES homes. Previous research (MacNeil, Prater, & Busch, 2009) illustrates the importance of the overall culture of school achievement as a possibly negative effect on student achievement; this study seeks to deepen the exploration of this issue by using the theoretical lens of teacher deficit thinking in order to uncover interventions to help students achieve at higher rates.

The initial work of the Action Research (AR) team did not focus on teacher deficit thinking as being a culprit of the underachievement of our low SES, gifted students. The AR team came to this conclusion as they began investigating the larger frame of school culture

and its effects on student achievement. Once teachers were given a survey about school culture, the AR team identified teacher deficit thinking and its negative effect on achievement. The AR team also proposed that it might be causing deficit thinking among our student population—specifically low SES, gifted students.

Besides adding to the literature of gifted education of low SES students and teacher deficit thinking, this study also serves to inform school leaders on this topic and help guide them in addressing deficit thought in their own school to transform the overall school culture into one that promotes the achievement of all students. Chapter 2 presents the literature review, which focuses on student motivation, teacher expectations, and deficit thought paradigms and their effects on the achievement of our gifted, low SES students. Chapter 3 depicts the methods of data collection and data analysis used in this case study. Chapter 4 tells the story of the Action Research Team as they worked through creating and carrying out interventions. Chapter 5 provides findings related to each of the three research questions, while Chapter 6 renders the conclusion and implications of this study.

Educators of rural gifted students will be interested in the types of interventions the AR team ascertained successful in increasing achievement. Hopefully, they can employ some of these interventions to all students, no matter what ability. Scholars will be interested in learning more about how deconstructing teacher deficit thinking can affect learning in specific regards to students who achieve at high rates but come from underserved backgrounds. Educational leadership scholars can use this research to help raise awareness and achievement for increasing the success our gifted learners of a low SES experience in the AP curriculum and test.

Definition of Key Terms

The primary terms involved in the context of this study follow.

- **Teacher deficit thinking.** Teacher deficit thinking is a thought structure of the teacher that posits "that the student who fails in school does so because of internal deficits or deficiencies. Such deficits manifest…in limited intellectual abilities…lack of motivation to learn" (Valencia, 1997, p. 2). Teachers possessing deficit thoughts often fail to study external factors affecting achievement to instead blame the student for what the teacher might call his/her educational inadequacies.
- **Gifted education.** The Georgia Department of Education (2015a) describes gifted education as being comprised of students who "demonstrate a high degree of intellectual and/or creative ability(ies)…and/or excel in specific academic fields, and who need special instruction…to achieve at levels commensurate with his or her ability(ies)" (pp. 1). The students in this study were tagged as gifted during their elementary school years.
- **Low socioeconomic status.** In this study, low socioeconomic status is defined by the Free and Reduced Lunch Program that serves American children as the provision of financial assistance for lunch at school. Students who self-identify as receiving assistance from this program were included in the low socioeconomic status demographic group for the purposes of this research.
- **Rural education.** The Census Bureau defines rural territory as fringe, distant, or remote. The school featured in this study fits into the distant rural

definition because it is more than 5 miles but less than 25 miles from an urbanized area (Office of Management and Budget, 2000).

CHAPTER TWO

REVIEW OF THE LITERATURE

Introduction

Limited research has been conducted on rural, gifted student achievement in regards to students with a low socioeconomic status. The trend in education has been to research low achievement among the general population in rural schools or to research the underachievement of gifted students possessing a low SES without the boundary of a rural school location. This study focused on this neglected subgroup—rural, gifted students of a low SES with a specific focus on teacher deficit thinking—and its' impact on students' achievement in AP classes (see Table 2). While there has been some research conducted on rural gifted students and rural gifted programming; very few, if any, examine teacher deficit thinking. Some articles (King, 2012; Seeley, 2004) address the socioeconomic status of the school in that rural schools find it more difficult to provide some of the more expensive programming and curriculum that their wealthier urban and suburban counterparts provide. Other articles (Hadre & Reeve, 2003; Howley, et al., 2009; King, 2012; Seeley, 2004) address the motivation of gifted students; however, they do not fully address extrinsic motivational factors like deficit thinking by teachers affect student achievement.

In order to fully understand the nature of gifted programming in rural areas where students of a low SES are underperforming, a review of the larger body of research in regards to rural, gifted education, school culture and climate factors, and teacher deficit

thinking constructs was warranted. Using these three veins of knowledge to guide this action research project, a thorough analysis of gifted education in rural schools at the macro-level was conducted. As the research took shape, further study was directed to the micro-chasms of the manifestation of teacher deficit thinking and how this operates specifically in rural, gifted programming. The results of this analysis are contained within this literature review.

Table 2. Empirical Findings Table: Reviewing Literature about Gifted Achievement in Rural High Schools

Title of Article	**Brief Summary with Theoretical Framework and Method**	**Type of Research/ Time/ Sample**	**Results**	**Gap Left**
"Leadership for Increasing the Participation and Success of Students in High School Advanced Courses: Implications for Rural Educational Settings" Alford, 1997	**Theory:** *Transformational Leadership Theory* **Summary:** Alford determined six high school sites in Texas through the Texas Mentor Schools Network and conducted interviews with key administrators. The transcriptions of the interviews were analyzed to find themes and patterns in the data. Alford triangulated the data by using member-checks and peer-debriefing. From this process, categories were formulated to answer the study's research questions and discern what practices and processes in educational leadership are needed to achieve equity and excellence in advanced programs in high schools. Alford also includes benefits and challenges of inclusive programs (of which she is a proponent) and thoughts on professional development to help support inclusive programming.	**Type of Research:** Qualitative **Time:** was not mentioned **Sample:** Key administrators from six sites	Through her interviews, Alford found patterns to the following questions: 1) What practices and processes in educational leadership for equity and excellence for detracking are important? 2) What are the primary benefits and challenges relative to opening opportunities for greater high school participation and success in advanced level courses? 3) What practices in professional development are effective in promoting knowledge and skills for educational leadership in equity and excellence? • Training for educators is beneficial in detracking • Principals also need opportunities for professional development (Alford, 1997).	The gap left for my study is that this research only discusses recruitment of students for enrollment in Advanced classes. It does not discuss retention of these students in these classes. There is an interest in keeping these students (gifted and nongifted) enrolled.

"Gifted Students' Perceptions of Their Class Activities: Differences Among Rural, Urban, and Suburban Student Attitudes" Gentry, Rizza, & Gable 2001	**Theory:** Drawing on theories that student interest is key in engagement **Summary:** This study investigated the differences in attitudes of gifted students toward classroom activities in rural, urban, and suburban settings. The authors used an instrument called My Class Activities which is based in theories of motivation and learning in gifted education.	**Type of Research:** Qualitative **Time:** Late fall and winter months of school years 1996-97 and 1997-98 **Sample:** Elementary Students—386 Urban, 80 Suburban, 68 Rural Middle School Students—3 Urban, 622 Suburban, 47 Rural	Using the My Class Activities instrument, the authors found that elementary students had higher overall perceptions of activity enjoyment with rural gifted students reporting more activity enjoyment than urban and suburban students. They found that by middle school rural gifted students enjoyed classroom activities less than the suburban students. They highlight that this might cause rural gifted middle school students to have lower achievement levels, motivation, and interest.	This research conducted in the study "Can't to Can" studied why rural, gifted students living in poverty drop out of gifted programming or underachieve in gifted curriculum. This article does not directly address the reasons for the declination in numbers between elementary and high school, but it does give some insight into how middle school students feel about the enjoyment of classroom activities. This is definitely something to look more into.
"A Motivational Model of Rural Students' Intentions to Persist in, Versus Drop Out of, High School" Hadre & Reeve, 2003	**Theory:** *Self-determination Theory* **Summary:** This research focuses on the causes for the drop-out rate in rural schools. The researchers used a questionnaire to assess five constructs: teacher autonomy support, self-determined motivation, perceived competence, school performance, and intention to persist. The questionnaire used a 7-point response scale ranging	**Type of Research:** Quantitative **Time:** Not specifically mentioned **Sample:** 483 students from four rural, public	The researchers found that the odds for a student to drop out is not only rooted in achievement but is also rooted in motivation. They also found that rural students may have a higher need for motivation from their teachers than their urban counterparts.	This article does not really focus on gifted students in rural schools; however, it does give information into why rural students drop out of high school which may then give some insight into why

	from 1 (not at all true) to 7 (extremely true).	high schools in Iowa		gifted students drop out of gifted programming.
"Predicting the Academic Motivation of Rural High School Students" Hadre, Crowson, Debacker, & White, 2007	**Theory:** *Motivational Theory* **Summary:** The authors looked at predictive relationships among student characteristics that influence student learning. The students involved completed questionnaires on: supportive classroom climate, achievement goals, perceived instrumentality, and school engagement and effort.	**Type of Research:** Qualitative **Time:** mid-November through late February of the same school year **Sample:** 900 students in all four grade levels of 18 public high schools in the southwestern US	The authors found that there is not a lot of difference in motivation between rural and nonrural students. They found that students' learning goals were predictive of engagement. As they hypothesized there is a direct correlation between students' perceived ability and their actual achievement.	While this article looked at a general group of rural high school students, it is beneficial in my research in that it gives me some information to the motivational factors of rural students. The gap of knowing motivational factors of rural gifted students still exists.
"The Effects of School Culture and Climate on Student Achievement" MacNeil, Prater, & Busch, 2009	**Theory:** Organizational Theory **Summary:** The research looked at how overall school achievement correlated with school culture and climate	**Type of Research:** Mixed Methods **Sample:** 29 schools in southeast Texas; 24,684 students and 1,727 teachers; used OHI survey and TAAS	Researchers found that schools who achieve at higher rates have a perceived healthier school climate	While this article discusses how achievement correlates to school culture and climate, it does not offer any information or interventions to increase achievement while subsequently increasing the positive nature of school culture.

Rural, Gifted Education Factors

Using School Format to Promote Achievement: The Effects of De-tracking

School structure is an important component in creating a culture of high achievement for their rural, gifted students. The de-tracking movement has been a trend in education in the last few years, but some research shows that de-tracking can be detrimental to gifted students if it is not implemented and monitored correctly (Garrity & Burris, 2007). Garrity and Burris (2007) assert that de-tracking must be accompanied with a rigorous curriculum. The goal of de-tracking is to offer the best curriculum and instruction to all students; however, if not facilitated correctly, de-tracking can result in a "watered down" curriculum for all students.

De-tracking is important to this particular research study because the school site of this research has an open choice policy for students enrolling in gifted classes, meaning that students can self-select to enroll in any gifted or AP class without fulfilling any requirements. This affects gifted students of a low SES in two distinct ways: (1) a student from a low SES who is labeled as gifted may not have been pushed to pursue gifted programming in the high school setting later choosing to take Honors and AP level classes and, (2) non-gifted students who join Honors and AP level classes in high school may not be adequately supported, which causes issues in instruction and curriculum and may take attention away from gifted, low SES students who may need more classroom interventions to be successful.

One of the possible benefits of open access to enrollment in advanced courses is that students who come from underprivileged backgrounds may feel more welcome in classes that are open to any student —they may find a higher sense of self-determination and

competency if they are in classes that include more than just those students who have been deemed the best and the brightest. Alford (1997) wrote, "…[P]roblems on the high school level include problems such as track placement is influenced by race and socioeconomic factors with the advanced track primarily white" (p. 2). By opening up advanced classes in high schools, students may feel safer in an environment that is more representative of the population of their school. Alford (1997) also discovered that de-tracking had a positive effect on Black male enrollment, which is a subgroup much like the gifted, low socioeconomic status in that the enrollment numbers for these two subgroups have traditionally been low. By de-tracking their advanced classes, high schools determined that their enrollment numbers of subgroups, like Black males, were much higher than before (Alford, 1997; Burris & Welner, 2005; Yonezawa, Wells, & Serna, 2002). The students can do the work, and maybe just by being in an advanced class build the competency that Hadre and Reeve (2003) ascertained to be so important in increasing achievement and decreasing the drop-out rate.

An unfortunate side-effect of de-tracking often occurs when schools do not support students new to gifted programming as they navigate the more difficult and accelerated course work and as they are placed in classes where they find themselves as the minority because of their low SES status (Yonezawa et al., 2002; Rubin, 2006). Just as Fordham (1996) discussed students feeling as though they betrayed their own race by joining gifted programming, low SES students find themselves at odds culturally when sitting in a classroom of higher SES students who have access to many more resources than low SES students often have. As students grapple with advanced coursework and finding their place in the context of the gifted classroom, many studies (Hill-Collins, 1991; hooks, 1999;

Thompson & Gitlin, 1995; Yonezawa et al., 2002) suggest creating "safe spaces or homeplaces, sites where people can reconstruct their knowledge and come to understand new possibilities" of their academic work in gifted classrooms (Yonezawa et al., 2002, p. 61).

Gifted, low SES students may also struggle in building a strong self-concept in their work in gifted classes. Friedman (1994) states that students of low-SES students who participate in gifted programming often feel isolated from their families in regards to their education. As such, they often do not feel as though their families are a source of academic support. The isolated feelings that gifted, low SES students might experience at home often times transcend to school where they feel "out of place." Fordham (1996) posits that Black students in gifted classes may be bullied for "acting White" while students of a low-SES might also be bullied for betraying the doctrine of social class by moving into classes filled with students of a higher SES.

If gifted students feel as though they are being victimized or bullied due to their gifted status, their concept of self may be derailed. Peters and Bain (2011) compared bullying rates between gifted students and their non-gifted counterparts—both subgroups were in advanced level classes, often together. They uncovered no real relationship between gifted students' advanced cognitive development and predictors that students will be bullied. Peters and Bain (2011) go on to suggest that more research on the rising numbers of gifted students feeling bullied needs to be explored. When students choose to move themselves into higher-level classes, teachers and administrators need to help support their transition. Without support all students in gifted coursework may be negatively affected.

Curricular Challenges in De-tracking

Research indicates that educators need to reconsider curriculum and format for rural, gifted students. Gentry, Rizza, and Gable (2001) reported a disparity in how rural, gifted students viewed school versus how urban, gifted students viewed school. Gentry et al. (2001) reported significantly higher levels of enjoyment among gifted, rural elementary students in classrooms, which they attributed to the ability for rural schools to maintain small schools with nurturing environments and stable communities. However, as Gentry et al. (2001) studied gifted, rural middle school students, they found the level of student enjoyment waning. This may be attributed to the notion that as students mature, they rely less on nurturing environments (although they are still important) and desire more autonomy of self in their education. The study did not address this variable.

While rural, gifted students seemed to enjoy school more than urban, gifted students; they also felt less challenged in their course work than urban, gifted students. Gentry et al. (2001) hypothesized that a feeling of being less challenged occurs from the limitations of curriculum and programs for rural, gifted students:

> For a variety of reasons including limited funding and isolation, rural gifted students are less likely to have access to a well-developed variety of programs, to be identified, and to have peers with whom to work. Their [students] perceptions of less challenge indicated how important gifted programming is in rural schools. (p. 125)

Gentry et al. (2001) go on to hypothesize some of this as a possible result of the elimination of gifted programming and ability grouping nationwide, in other words, de-tracking. They argue that instead of de-tracking, flexible achievement groups may be a

better answer in serving up challenge. They contend that "gifted students need the opportunity to work with and be challenged by their intellectual peers, and this is of special concern in rural areas with small populations of gifted students" (p. 125). This finding leads back to the idea that school formatting must be surveyed in order to serve our gifted students in the best ways possible. The research indicates that de-tracking is positive for rural, gifted students in regards to bullying and building a strong self-concept; however, it may deter from the rigor of the coursework offered in gifted programming (Gentry & Owen, 1999; Kulik, 1992; Rogers, 1991).

School Culture and Climate

School climate is another indicator for achievement rates among rural, gifted students. Hadre, Crowson, DeBacker, and White (2007) determined that relationships in rural schools are fundamental; similar to the way they have been determined to be in nonrural schools. They realized that "climate predicted instrumentality and learning goals…[and] engagement." (p. 263). Just as Hadre and Reeve (2003) found, Hadre et al. (2007) confirmed that rural students have a higher need for support from teachers and administrators: "To support optimal academic motivation, particularly for rural students who may lack educated role models, teachers and administrators can create opportunities to help students see the instrumentality of foundational learning in high school" (p. 264).

Hadre et al. (2007) continued to argue that rural students need an environment grounded in a value for learning and innovation. Their research asserted the need for more student support to prevent avoidance goals and perfectionism, and a larger impetus on how using proximal goals can support achievement. In other words, rural students have a fear of failure if they are not perfect; schools must embrace this fear and communicate that

perfectionism is not realistic for any learner (Hadre et al., 2007). This research further supported the study's thesis that this group of students needs more support from their teachers and their schools than other groups might.

School culture is a large motivating factor per MacNeil et al. (2009). In their study of 29 Texas schools, they realized that the highest achieving schools have the most positive and healthiest perception of their individual school's culture. They clarified further, "strong school cultures have better motivated teachers. Highly motivated teachers have greater success in terms of student performance and student outcome" (MacNeil et al., 2009, p. 77). The authors advised school principals desiring to increase student performance to "focus on improving the school's culture by getting the relationships right between themselves, their teachers, students and parents" (MacNeil et al., 2009, p. 78). This study's findings that school culture directly correlates to student achievement informs schools considering strategies to increase student achievement and enhance the positivity of school climate and culture.

The gap in the literature identified here lies in how to facilitate the support from teachers that students need. Research shows its importance; however, it does little to investigate how teachers might best support rural, gifted students, many of them coming from a lower socioeconomic status. Research (Garcia & Guerra, 2004) illustrated that gifted teachers in rural areas often take on a "deficit thinking" attitude when it comes to these students. Teachers often view families of students living in poverty as

> at fault because from their perspective, 'these children' enter school without the necessary prerequisite knowledge and skills that so-called uncaring parents neither value nor support their child's education…. Because these educators do not view

> themselves as part of the problem, there is little willingness to look for solutions within the educational system itself. (Garcia & Guerra, 2004, p. 151)

Deficit thinking on the part of our school's educators may be a factor in why this particular demographic of students is not achieving at rates similar to their peers. Motivating teachers to examine this problem and work to find solutions will affect school culture—the motivation of teachers to educate students is key to helping students academically achieve. Deficit thinking is discussed more fully later in this review of literature.

Affecting Motivation of Rural, Gifted Students

Much of the research on rural, gifted student achievement has been examined through the lens of self-determination or motivational theories. Hadre and Reeve (2003), using self-determination theory rooted in the idea that "students become engaged in school-related activity when instructional activities are interesting, relevant to their lives, and affirm their competencies" (p. 353) found that rural students will stay in school, rather than drop out, if they perceive they are members of a supportive climate.

In their research, self-determination and perceived competence by the students was determined to be extremely important in keeping rural students in school in order to graduate. An important take-away from their research lies in that rural students need more support from their teachers and other adults to feel as though they are successful. This support leads to student self-determination and competency: "the effect of teachers' autonomy support on students' motivation (self-determined motivation, perceived competence) appears to be noticeably stronger for rural students than for urban students" (Hadre & Reeve, 2003, p. 354). Rural students need more outside influences than their

other geographic counterparts to fulfill key needs that help students continue successful schooling.

Hadre and Reeve's (2003) research informed this study in that gifted, rural students from low-socioeconomic settings need more teacher support to build and maintain the students' self-determination and feelings of competency. Research reports many students with a low SES as coming from families who offer little educational support, not out of lack of caring, rather out of lack of resources to help facilitate their children's education (Azano, et al., 2014). Azano et al. (2014) noted in their research of rural gifted education that students had limited resources outside of school,

> Many teachers described their students as coming from lower socioeconomic backgrounds. Teachers said that parents were un- or 'under-' employed and that many parents lacked resources for basic supplies needed for school, leaving little money for enrichment opportunities outside of school…. Several [teachers] characterized homework as 'problematic,' perhaps indicating that academic support was also lacking for students outside of school. (p. 96)

Azano, et al. (2014) might have used the teachers at TCHS to inform their data as these same factors are often listed as the culprit for student underachievement at this school site. Researchers uncovered from that teachers felt that students lacked resources for school; however, when they began to question students in interviews, they realized that students actually had more access to resources than teachers initially thought. Almost 75% of gifted students living in poverty (GSLIP) felt that they could get access to any resource they needed at school by asking their parents for help (per student pre-intervention survey; see Appendix A).

Teacher Deficit Thinking

Teacher Expectations' Impact on Achievement

"Deficit thinking" of students of a low socioeconomic status in gifted education manifests itself in many ways. Teachers' attitudes toward work load and teachers' attitudes toward gifted students' home support are two of the ways "deficit thinking" appears. Swanson (2006) found that teachers' negative assumptions about how low-income students can achieve perpetuates low achievement among gifted students and negatively affects students' own motivation. Much of the research suggests that teachers who make negative assumptions about student achievement in turn negatively affect the achievement of their students by providing less effective instruction, lower quality of instructional feedback, and a low-quality classroom environment (Brault, Janosz, & Archambault, 2014; Rubie-Davies, 2007).

Brault et al. (2014) also discovered that schools with the highest proportion of students from low socioeconomic backgrounds had more evidence of negative teacher expectations of student achievement. The perpetuation of low student achievement caused by low teacher expectations of achievement is troubling and important for researchers, school leaders, and teachers to investigate as they seek to find the cause for this thought paradigm practiced by teachers.

Jussim, Eccles, and Madon (1996) determined that "[t]eachers rely on stereotypes in developing expectations from stigmatized groups, and because such expectations will often be inaccurate, they are also more likely to be self-fulfilling" (p. 282). They argued that certain stigmatized groups, like students of a low SES, are even more affected by teacher

expectations than their non-stigmatized counterparts (Jussim et al., 1996). Teacher expectations are important facets of student achievement.

Many scholars, such as Swanson (2006), supported the idea that "when teachers [see] that students [can] do when provided with the opportunity to learn at high levels, [these] teachers [will] become believers and a 'breakthrough' in their attitudes [will] occur" (p. 12). If opportunities are provided for teachers to develop agency to replace deficit expectations, student achievement will be positively affected.

The Theory of Deficit Thinking in Schools

While many constructs directly affect the achievement of gifted students (i.e. school and classroom format, school culture and climate, and lack of resources), teacher deficit thinking has the power to unravel all the other constructs. Valencia (1997) defined deficit thinking as "positing that the student who fails in school does so because of the internal deficits or deficiencies. Such deficits manifest, it is alleged, in limited intellectual abilities, linguistic shortcomings, lack of motivation to learn and immoral behavior" (p. 2). Valencia (1997) goes on to argue that deficit thinking embodies the characteristics of blaming the victim, oppression, and educability.

While deficit thinking may feel abstract, making it seemingly impossible for teachers and teacher leaders to tackle, Valencia (2010) provided some practical solutions. He suggested the provision of better pre-teacher educational opportunities on the construct of deficit thinking and how to dismantle it. He also argued that although "some scholars pathologize low-SES parents…claiming as evidence these parents' alleged lack of participation in their children's education," it is of the utmost importance that schools involve parents in the education of their children (Valencia, 2006, p. 131).

Perhaps the most salient factor in dismantling deficit thinking lies in the hands of educational leaders. Valencia (2010) urged the need for school leaders "to be aware of their own biases and learn how to lead schools that are diverse along SES and racial lines" (p. 135). Much of Valencia's (2007; 2010) scholarship as well as McKenzie and Scheurich's (2004) was pulled into the action research team's work to establish interventions. McKenzie and Scheurich (2004) advised school leaders to participate in various activities to dismantle deficit thinking. Activities include educator participation in neighborhood walks and home visits to help build teacher-parent rapport and the creation of "oral histories" from members of the community by teachers and students to help build a better understanding of one another. Additionally, three-way conferencing includes a parent, the student, and the teacher as a way to build a sense of community in working together to make instructional decisions for the student. The discussion of how this literature informed interventions is included in Chapter 4 of this paper.

Summary

Many authors have studied deficit thinking in correlation with cultural differences (Delpit, 1995; Pohan, 1999; Valencia, 1997), but very few, if any, have studied the role of deficit thinking in the education of students from a low socioeconomic background, and if they have investigated SES, they used a race lens as well. Many other studies (Azano, et al., 2014; Hadre & Reeve, 2003; Howley, et al., 2009; Seeley, 2004) have addressed the achievement of gifted students at the high school level; however, studies rarely address gifted students who are from a low SES. By investigating extrinsic factors like school format and overall school culture, this particular research study seeks to fill the gap in the

literature regarding teacher deficit thinking and its correlation to gifted, low SES student achievement.

CHAPTER THREE

METHODOLOGY

The purpose of this study was to examine how teacher deficit thinking affects the achievement of gifted students living in poverty (GSLIP). Researchers (e.g. –include names of researchers here) found that teacher deficit thinking negatively affects the achievement of GSLIP in their Advanced Placement course work. The three questions which guided the study were 1) How does deficit thinking by teachers affect the achievement of rural, gifted students of a low SES?, 2) How does the action research process of developing and evaluating interventions affect teacher attitudes in regards to deficit thinking when working with this subgroup of students?, and 3) How does the action research process of developing and evaluating interventions designed to affect this population's achievement impact the school and/or system thoughts on this subgroup's potential to achieve?

This chapter describes the methodology employed in this research study. It includes the following sections: design of the study, sample selection, data collection, data analysis, and reliability of the data.

Design of the Study

This study employed action research (AR) based qualitative methodology. As Creswell (2014) asserts,

> Qualitative research is an approach for exploring and understanding the meaning individuals or groups ascribe to a social or human problem. The process of research involves emerging questions and procedures, data typically collected in the

participant's setting, data analysis inductively building from particulars to general themes, and the researcher making interpretation of the meaning of the data. (p. 4)

Because of the nature of qualitative research in which action research methodology lies, this type of study aligned itself well with work in a school. Leaders in the field of education consistently cycle through a process of questioning their work, collecting data relevant to the work, and then analyzing that data to make meaning of the work. This process is the very definition of action research (Creswell, 2014). In this study, the AR team analyzed the achievement of gifted students in the team's rural high school where they all taught and served as teacher-leaders. The AR team particularly focused on how addressing teacher deficit thought influenced student achievement through an analysis of the problem and the subsequent development of interventions seeking to remove teacher deficit thought in order to increase student achievement. The qualitative methods included data collection from surveys, interviews, observations, a teacher blog, and student journals.

Action Research Methodology in the School Setting

A best practice in teaching involves educators often times using an inquiry approach in lesson design and in the implementation of instruction (Ravitch, 2014; Hwang, Chiu, & Chen, 2015). Today's standards, the Georgia Standards of Excellence (GSE), require students to respond to real world problems by giving them an overarching question, which often leads to further questioning. In an inquiry approach, students eventually use their problem solving and critical thinking skills to explore an issue and/or answer a question by using research methods. The end result of the inquiry process in the classroom may be a written argument, a blueprint of a water system, or an artistic performance. The inquiry

approach allows students to navigate their own learning and creativity with the teacher as facilitator.

If inquiry-based instruction in the classroom is considered a best practice and embedded in educational standards, does it not make sense to use this type of research in more formal types of study and especially in the field of education? Many educational leadership programs feel that it is and are beginning to use the inquiry approach, better known as action research in their programs (Black, 2011; Storms & Gordon, 2005; Toll, 2010; Towers, 2012). One of the components of the doctorate of education in educational leadership at the University of Georgia is an action research based dissertation. As a definition,

> action research is a systematic approach to investigation that enables people to find effective solutions to problems they confront in their everyday lives. Unlike experimental or quantitative research that looks for generalizable explanations related to a small number of variable, action research seeks to engage the complex dynamics involved in any social context. (Stringer, 2014, p. 1)

In other words, action research provides an engaging framework to problem-solve situations in day-to-day life. Action research is actually something that most educators do every day. For example, a student fails a quiz. As a teacher, one considers the "whys" behind it: was it the instruction, was s/he having a bad day, or is this a symptom of a larger trend of underachievement? Once one thinks s/he has an answer, the teacher employ strategies to help ensure that the student learns the material s/he failed, and the teacher also uses this data to inform future instruction. This is a simplified version of action research, but it illustrates the systematic investigation and inquiry of action research itself.

Action research requires collaborative work within a team of researchers. Most action research team work with the lead researcher in developing possible interventions for the problem or question at hand. While the lead researcher manages the culmination of data and the overall work of the AR team, the team plays a large and important role in solving the problem stated in the action research proposal. As a team in this study, members **looked** (gathered relevant information and described the situation); **thought** (explored and analyzed the situation to interpret/explain the problem; and **acted** (planned, implemented, and evaluated strategies that helped solve the problem that the action research addressed) (Stringer, 2014).

This described cycle of research was ongoing. This action research study explored the problem of underachievement in rural gifted students of a lower socioeconomic status; more importantly, it sought to investigate the effects of teacher deficit thinking on rural gifted achievement for this demographic group. How did teacher deficit thinking affect the achievement of rural gifted students of a lower SES? Why were rural gifted students of a higher SES outperforming their lower SES peers on AP tests? What were some interventions the team might employ to narrow the gap? The lead researcher then used the gathered data to lead the research team and to include the process as a whole in the write up of this paper.

This action research process shaped itself to comply with a case study definition of research. Hays (in press) defines case study as "the close examination of people, topics, issues, or programs" (p. 218). While this may seem a simplistic way to study a problem—just in examination—the, depth that the case study format offers is its ability to allow the reader to develop his/her own meaning in regards to the problem. Information is

presented to readers so they can "use their own experiences to give meaning to the case reports, using judgment to enhance their understanding of the case and comparing that to similar cases they have encountered" (Hays, 2000, p. 219). To the researcher, this meant that this work would continue on in the minds of readers as they synthesized the material presented, and they would then create their own meaning from the case study as a whole.

Being a part of any action research process in education is a powerful way to shape learning and achievement outcomes for students—which is a large component for why many chose careers in the field of education. Action research provides an organized format in which research participants can use their work to positively and directly affect a school, and in this particular research, specific students. The great Mahatma Gandhi said, "Be the change that you wish to see in the world." Action research gives each participant this opportunity.

Strengths and Weaknesses of Action Research

Perhaps the biggest strength of action research lies in its collaborative nature. Because action research draws upon a team when examining a problem, it allows for multiple insights into the research,

> The experience of groups and teams in engaging in the action research steps is paramount. As they engage in the activities of constructing, planning, and taking action they might experience some success in some of their activities, and not in others…. Exploring these issues means being able to go beyond personal blame and draw on useful constructs…to take remedial action where necessary, and develop effective team processes. (Coghlan & Brannick, 2014, p. 103)

While some of what Coghlan and Brannick (2014) articulate seems challenging, it is in the challenge that strength is unearthed during the conduction of action research projects. Action research is a journey, not a destination. And while one does eventually complete cycling through interventions, much of what is learned is through reflecting while cycling through the four steps (see Figure 2): constructing, planning action, taking action, and evaluating action (Coghlan & Brannick, 2014). When the team works together to take the four steps and develops processes to understand how the research is unfolding, true meaning is established. The team in action research is integral to its success as the age-old adage goes: two heads (or in this case five) are better than one. In this particular study, much thought was put into selection of action research team members who would work closely in the process of tackling the problem of underachievement of GSLIP students on AP exams. The researcher determined that the carefully created team both challenged and enhanced the work.

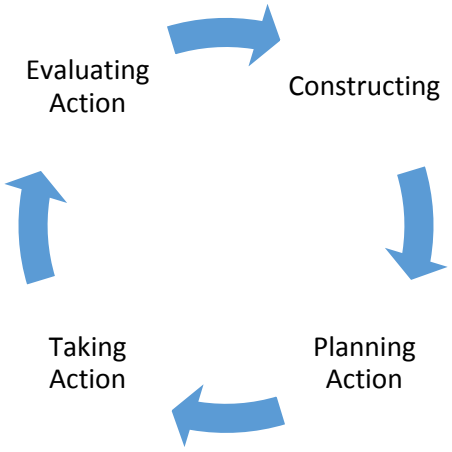


Figure 2. Cycles of Action Research

One of the weaknesses of action research as defined by Anderson, Herr, and Nihlen (2007) is due to its inquiry form, which is value-laden: "Although most practitioners hope that action research will improve their practice, what constitutes 'improvement' is not self-evident. It is particularly problematic in a field such as education, where there is no consensus on basic educational aims" (p. 3). In this research study, showing "improvement" from the created interventions was a concern.

Although inquiry can be problematic in data collection, it does provide optimal learning experiences for all participants. Because researchers possess more fluidity in how they answer questions, they are able to create environments in which learning is paramount. If one intervention fails, they try another, and so on. Inquiry in action research allows a hypothesis to be tested out several times over a cycle. The act of researching then becomes a valuable learning tool for all participants and stakeholders involved in the research.

Several interviews, both pre- and post- research, were conducted in this study (see Appendices C and D). Advanced Placement test scores for the 2014-2015 school year also served as a data point in constructing the problem; however, these data could not be utilized in assessing the success of interventions issues for a few reasons. First, the students tested during the 2014-2015 school year were not necessarily the same students as the previous year. Second, the students who were included in the 2013-2014 data sets did not take the same courses in their 2014-2015 school year, so growth might have been impacted by the differences in courses and exams taken. This also rang true for students in the 2014-2015 data set. Third, scores from the 2015-2016 school year were not available to include in this paper as they were published after writing was complete. Finally, the AR

team only employed interventions in the fall of 2015, and the team was unsure that this was a long enough time period to see true change in the academic culture in regards to our gifted students—with a specific focus on teacher deficit thinking.

Surveys, via SurveyMonkey, of study participants helped to shape the problem and focus the study. The study began with a Pre-Intervention Student Survey (see Appendix A) to ascertain student beliefs in regards to the support they receive from teachers and their families. The AR team needed to better understand student perceptions of teacher support and they wished to know more about the encouragement and academic support students felt they were receiving at home.

The best set of data culled came from interviews, but even the interviews had limitations in that the interviewer had to be especially careful in conducting interviews that were not value-laden in nature while also being cognizant to not lay blame at a certain group's (teachers) feet for all issues in AP achievement at TCHS.

Research Design and Rationale

Because this research studied the AR team members' own organization, an action research approach was best suited. Both the researcher and the school were engaged in the research problem and subsequent questions in an effort to create a transformational change in the school's culture by addressing teacher deficit thinking. In this focus on action research, the goal of the researcher "involve[d] being a part of this collective reflection" in an effort to "learn and articulate what is happening [within the course of the study]" (Coghlan & Brannick, 2014, p. 129). While the AR team often felt that the school could engage more in the study in an effort to create change, the school was open to being reviewed by the team. However, the school never reached the point where, collectively,

they felt that the data and interventions warranted wide-scale change. The hesitancy of the school did not make the action research process any less valuable to it as an organization and to its stakeholders.

As a teacher-leader in the school, the lead researcher actively participated in first-person research and was committed to learning through action in the study. Because the lead researcher had spent seven years as a member of the school, she was able to utilize her prior experiences and prior knowledge to help direct the study. Coghlan and Brannick (2014) describe insider action research as the researcher being "engaged in first-person research, using your preunderstanding of organizational knowledge and organizational studies for your own personal and professional development" (p. 132).

Action research was the best model to employ in this study because it offers primary access to the organization and researchers already possess an understanding of the organization. Researchers also actively engage in the interventions generated which helps team members better reflect on the success of the interventions on the organization. All of these assets help to promote real change and this is facilitated through the action research process.

Sampling and Recruitment Process

Site Selection

Thomas Comprehensive High School served as the research site for this study. TCHS is a rural high school with an enrollment hovering around 1000 students. At the time of this study, 65% of the student population received services through the Federal Free and

Reduced lunch program (Georgia Department of Education [DOE], 2014). The school was relatively new at the time of this research—opening in 2007; thus, its Advanced Placement program was in earlier stages of implementation. Although the program was new, some AP teachers had previously taught AP curriculum at other schools and brought their expertise to TCHS. 17 students and nine teachers served as the research sample in this study.

This site was selected because AP data from the College Board illustrated the disparity in the achievement of GSLIPs and their counterparts, students possessing a higher SES. The College Board (2014a) in its report of scores for TCHS students reported that 60% of Advanced Placement test takers who self-identified as possessing a low SES per the Federal Free and Reduced Lunch Program scored a one or two on the exam, which means they failed to earn college credit for the course. While 40% of low SES students did receive college credit, not one of these students received the highest score possible: five. Fifty-one percent students outside of the low SES subgroup scored a one or two on the exam; while 49% received a three or higher and in turn received college credit for the class. Seven percent of the higher SES subgroup received a five on the exam versus the 0% of low SES students receiving this score (College Board, 2014a). At TCHS, gifted students of a low SES underperformed on AP exams in comparison to their higher SES peers. The data clearly stated a disparity in AP achievement between students with a low SES and their peers which in turn demanded action to ameliorate this situation.

Sample

Participants included students who had been previously identified as gifted and who also self-identified as low SES. This population at TCHS was first estimated to include

approximately 60 students; however, due in part to the Family Educational Rights and Privacy Act (FERPA), the student population was limited. A possible reason for this is that high school students are sometimes hesitant to report themselves as receiving Free and Reduced Lunch. Also, due to FERPA, other students who did not fit the criteria of the population consented to participate in the research. In order to keep students' personal information confidential, gifted students who did not self-identify as living in poverty also participated in surveys, observations, and interventions. The result of the inclusion of the higher SES population was a good cross-section of data and made the comparison between higher and lower SES student perceptions in regards to AP support available for future research. The data from this cross-section is not presented here. In all, 32 students participated in the study in some capacity and more than this sample are reaping the rewards of interventions. Of these, a diverse sample of 17 students were both gifted and self-identified as living in poverty. While the students and their achievement began as the focus of this research, the AR Team determined achievement as directly correlated to teacher deficit thinking in regards to our gifted, lower SES student population.

Students were first identified through data, reported by the school system with parent contribution, and culled from the school database. To begin, students were selected based on a history of being flagged as gifted (this often occurred in elementary school). Then, this group of students was further disaggregated by those that self-identified as receiving financial aid to pay for school lunch. The Free and Reduced School Lunch Program was the key indicator for these students. Once students were identified, Advanced Placement teachers were included on the basis of whether the teacher taught an AP course in which two or more of the students were determined as gifted. This included

all nine AP teachers at the school. Due to FERPA rights, students were not identified to teachers as receiving Free and Reduced School Lunch.

To initially engage students in the study, the researcher gained access into Honors and AP English classrooms in an effort to describe the study and to give them a letter with further description. After this letter was given, the researcher left a parental permission form with the English teacher for students who were interested. The AR team received about fifty letters back with parent signatures. Not all of these students fit the criteria of living in poverty and enrolled in gifted classes. To keep the identity of the students whose data was used, all students who wished to participate were initially involved in interventions. Although data was collected from students who did not qualify to be a part of the sample, data only pertaining to gifted students living in poverty was specifically investigated. The AR team analyzed the 17 students in the study to find themes and trends to inform the research questions. When the study was described to the students, the researcher explained that all of them would be surveyed but not necessarily interviewed; thus, only three students out of the 17 who fit the function of the study were interviewed. Another survey was given to the 17 students who fit the research criteria to ensure that information about their experiences as gifted student living in poverty would be acquired.

In addition to the student sample, nine Honors/AP teachers (including some AR team members) agreed and signed consent to participate in this study. Because this study dealt with teacher deficit thinking, which can be sensitive for teachers, the researcher was careful in explaining the purpose of the research. One-on-one conversations were held in which an explanation of the researcher's choice to study this phenomenon was given. A further explanation that this research examined overall trends among teachers and in an

effort to not vilify any one teacher the researcher felt that one-on-conversations would help build trust. All teachers included in this study are anonymous in any data used for informal and formal reports.

All 17 students and nine teachers, including four from the AR team, involved in this study gave consent through a consent form created through the IRB process. Parents gave permission for their students to be studied, interviewed, and surveyed. The researcher also was careful to make certain that all participants consented to the research and saw the value in participation. All members of the sample were informed of the purpose, results, and possible consequences of the study as this helped to ensure that no participants came to harm through participation in the project (Stringer, 2014).

Data Collection

This research included an ongoing collection of qualitative sources of data from interviews, surveys, a teacher blog, and observations (see Table 3) (Creswell, 2014; Simons, 2009). Both teachers of GSLIP and some gifted students living in poverty participated in methods, although the format and questions of the methods varied from teacher data to student data. While 17 students and nine teachers participated in most methods, more interviews were conducted with teachers than with students due to availability. To alleviate the issue of availability for data collection, some students were asked to record their reflections in journals. This section details the methods used in the collection of data and an explanation for how data informed the generation of interventions.

As stated previously, the team had initially planned to include Advancement Placement exam scores to serve as a point of data to prove an improvement in GSLIP achievement generated from the employment of interventions; however, the latest scores after interventions were completed were not reported in time to be included in this research. All of the data collected through qualitative means was organized based on the three research questions and was studied through various lenses to identify themes across the data and the project.

In the theory generating stage of this study, teachers were given a school culture survey created by Greunert and Whitaker (2015) (see Appendix B). This survey was given to teachers in their mailbox in the front office. After taking the survey, teachers placed the completed form in the lead researcher's mailbox. All surveys were anonymous. Next, three teacher participants were observed in their classrooms by a member of the AR team. The data collected was organized using the Teacher Keys Effectiveness System (TKES) rubric with a specific focus on the Positive Learning Environment domain. This observation led into interviews that discussed teacher deficit thinking in the school at large and in their own classrooms.

Like Simons (2009), the researcher placed much value in interviews and that they really allow the researcher to get to the heart of the matter. Some positive attributes of interviewing allow the researcher: "to get to core issues in the case more quickly and in greater depth, to probe motivations, to ask follow-up questions and to facilitate individuals telling their stories" (p. 43). As a former English teacher and sociologist, the lead research of this study was incredibly interested in "the story" behind the problem. Storytelling, a

part of every culture since the beginning of time, helped to make this this method of research one that is universal in both format and the development of understanding. Actively listening to various perspectives (students and teachers) on the problem assisted the researcher in creating a narrative that hopefully lead to change in teacher thinking. The interviews conducted were audiotaped using an IPhone application or an audio recorder. All interviews were transcribed and analyzed in order to identify themes of teacher deficit thinking. All AR team meetings and AP PLC meetings were also audio recorded and transcribed.

Further data was collected through the teacher blog. The AR team and other participating teachers joined in reflection; however, as time went on the other participating teachers stopped blogging. The blog entries were used to identify strengths and weaknesses of the project, and they were used to analyze thematic issues that may result during the project. In addition, the blog entries gave each team member a place to personally reflect on their roles as leaders of change and how they might participate in the developing and implementing of interventions. All of this data remained housed on the secure blog site created by the lead researcher.

Initially, students took a pre-intervention survey in an effort to identify student perception of their experiences in AP classes. The survey also ascertained parent level of education which informed the AR team that this variable was not majorly affecting low achievement of GSLIP students. The survey was given electronically through SurveyMonkey and was anonymous. It did ask if the student received financial aid for school lunch so that the fidelity of the data generated by gifted students living in poverty

could be better ensured. After the survey was given, three students began recording their experiences in a narrative form in a journal. Only one student participated in journal writing throughout the data collection period (student submitted six entries); the other two did generate some entries, but the entries were not as numerous or complete (students wrote four entries combined). All three students were also interviewed. The interviews were audio recorded and transcribed.

To track and organize data, the researcher listed data collected along with the data in a Word document. All of the data were organized based on the three research questions. Physical copies of the teacher survey were stored in a file folder in the researcher's filing cabinet. Student surveys remained secure on the researcher's SurveyMonkey account. Teacher observation information was physically recorded using the TKES rubric. Once transcriptions were generated from interviews, they were also stored in the filing cabinet. As data was collected, the lead researcher tried to informally assess how the data would help to answer one or more research question. Not all collected data worked to inform one of the questions. This data was set aside for possible future research.

Table 3. The Research Plans

Research Question	Anticipated Data to be Collected	Sample	Analysis Approach	Proposed Timeline
How does deficit thinking by teachers affect the achievement of rural, gifted students of a low SES?	AP scores; student and teacher surveys; interviews of students; interviews of teachers; individual interviews of AR team members; observations; meeting minutes from AP PLC; blog; student journal	Students identified as both gifted and of a low SES (school data informed gifted status, students self-selected low SES status based on Free and Reduced Lunch Program)	The test scores were to provide quantitative data analysis to see if there is an increase in achievement. Interviews, AP PLC meeting minutes, AP Teacher Blog, student journal, and observations provided qualitative data to inform how deficit thinking is affecting the achievement of this subgroup.	Summer-Winter 2015
How does the action research process of developing and evaluating interventions affect teacher attitudes in regards to deficit thinking when working with this subgroup of students?	AP scores; student and teacher surveys; interviews of students; interviews of teachers; individual interviews of AR team members; observations; meeting minutes from AP PLC; blog; student journal	Teachers who teach students identified as both gifted and of a low SES; AR team members	The surveys and interviews provided qualitative data of attitude shifts.	Fall –Winter 2015
How does the action research process of	AP scores; student and teacher	Students and teachers; AR team members	Qualitative data was analyzed to see if the micro	Fall-Winter 2015

developing and evaluating interventions designed to affect this population's achievement impact the school and/or system thoughts on this subgroup's potential to achieve?	surveys; interviews of students; interviews of teachers; individual interviews of AR team members; observations; meeting minutes from AP PLC; blog; student journal;		approach of action research at TCHS might benefit on a macro level for the entire school and school system.	

Data Analysis

Qualitative data from a variety of sources informed this action research case study. The data were analyzed as they were collected by the research team, both to inform the cycle of research and to reflect on the research methods (Creswell, 2014). Exit interviews were conducted in January 2016 in order to better understand stakeholders' experience of participation in the research. Sharing their experiences gave researchers a better understanding of what worked and what might yet need to be done to change the culture of achievement directly affecting gifted students from a low socioeconomic status.

Interviews became the strongest source of data informing the research. Five Honors/AP teachers and three gifted students living in poverty were interviewed face-to-face at various times throughout the research process. Each interview was audio recorded and transcribed. All of these interviews were structured around questions but also gave the interviewee an opportunity to share their experiences teaching or learning in the AP program at TCHS. Statements from the interviewer beginning with words like "tell me" and

"describe" gave participants an opportunity to share a narrative about their experiences in AP programming at TCHS.

The surveys and interviews were shaped to answer the three research questions. These three types of data were in different format when presented to students versus when presented to teachers. Also, specific guidelines served as a format for the observation rubric by utilizing the TKES rubric on which Positive Learning Environment is assessed. The three research questions were the crux to any generation of data— to be included in this paper, the data informed the key.

Data Preparation

All interviews, AR team meetings, and AP PLC meetings were audio recorded. The researcher used a professional transcription service to transcribe the interviews and the AR team meetings. While all of the AP PLC meetings were audio recorded, not all of them were transcribed. Rather the researcher took notes throughout the meetings and found some meetings lacked any real data to inform this particular research study; therefore, three of these meetings were professionally transcribed. Survey results, journals, and blogs were already recorded through SurveyMonkey, Word, and Edublog. Thus, the researcher could code this information fairly quickly.

Familiarization

As the researcher received transcriptions and other data, she reviewed it in an effort to identify the set of codes to be used in analysis. In this review key data was highlighted and the researcher wrote notes. Once initially reviewed, she was able to generate the

coding process used and so she reread all of the data as a whole after all was collected. In this analysis, the researcher coded the data. Through previewing and then reviewing the data at the end of the research cycle, all data was looked at least twice in an effort to familiarize the researcher with the information collected.

Coding

The researcher studied the data as it was generated and then ultimately read through and looked at the data as a whole at the end of the study. While data was still being generated, the researcher would highlight transcriptions and make notes in the galleys of important research themes being revealed. To assist in organizing the data, the researcher used a Word document to code the data in a table. A variety of codes was implemented. See Table 4. Topics included but were not limited to: teacher deficit thinking, student deficit thinking, positive aspects of AP programming related by teachers and students, school culture, student achievement, action research process (divided by AR team reflections and other member reflections), and researcher reflections on process. If the researcher felt that a piece of data might be important to the analysis but did not necessarily fit a code, she highlighted the data with an orange marker to indicate its importance even if it did not fit a code (all other highlights were yellow). Once data was coded, the researcher identified themes of similarity existing across the data, for example, the theme of organizational learning. These themes were then used in discussing the findings of the analysis.

Table 4: Codes by Type

Type of Code	Topics
Context Codes	• Descriptions of school • Descriptions of AP program
Situation Codes	• Participant perceptions of AP program experiences (coded specifically by participant type, e.g. student) • School culture • Student achievement
Ways of Thinking About People and Objects	• Teacher views on teacher deficit thinking • Student views on teacher deficit thinking • Teacher views on student deficit thinking • Student exemplifying active deficit thinking in the data
Process Codes	• Evolution of AP program • Evolution of school culture • Action research reflections • Researchers reflections on process of methodology

Generating Meaning

After data was coded, it was organized in a table in an effort to make the review of data easier. A Word document was used. Once the information was coded and organized, it was further analyzed in relation to the three research questions. The research team then generated meaning in relation to the problem the project addressed: the effects of teacher

deficit thinking on gifted students living in poverty. The researcher also assessed the action research process through a thorough analysis of the data.

Interviews

Much of the data collected in this study came from interviews with study participants and with action research team members. Stringer (2014) describes interviews as a "reflective process that enables the interviewee to explore his or her experience in detail and to reveal the many features of that experience that have had an effect on the issue investigated" (p. 105). The reflective nature of interviews allows researchers to uncover information from participants that might not have been revealed through other data collection techniques. Interviews included in this research were semi structured in that the interviewer asked prepared questions, but did not dictate the direction the interview would take (Anderson et al., 2007).

Surveys

Teachers and students also participated in surveys and questionnaires that added to the data: "surveys and questionnaires are a common instrument because they are interviews by proxy and therefore easy to administer, they provide direct responses to factual and attitudinal questions, and they make tabulation and analysis of responses almost effortless" (Anderson et al., 2007, p. 180). The nature of surveys and questionnaires provided a wide range of data because of the ease of administration, while ensuring anonymity for participants. Process validity of the surveys and questionnaires was ensured by the AR team; they constantly questioned whether the data sought would lead to answers of the research questions salient to this study. Process validity was further

utilized in the ongoing learning experienced by all stakeholders through surveys and the other methods of data.

Trustworthiness and Triangulation of Data

To ensure trustworthiness of data, the method of triangulation was used. Not only did the researcher use multiple forms of data, such as interviews (qualitative) and surveys, (qualitative); the research also included a variety of participants. Both students and teachers were interviewed and surveyed in an effort to provide various angles on the research questions and to assess the success rate of interventions. Anderson et al. (2007) also offer the method of reflexive journaling as a way to ensure more trustworthy data. To employ this method of data, the action research team to blog on a private forum in which they were able to freely demonstrate their own reflections on the study. Because of the blog, team members more thoroughly thought through the intervention process. This deep thinking not only resulted in the better generation of interventions but also provided data to reflect upon as the team cycled through the different parts of this action research study. In addition to these attributes, the blog also provided members a way to communicate their concerns in regards to the work of the group in a nonthreatening forum. The blog also provided a way to communicate when the team could meet face-to-face, which became invaluable when some team members left TCHS at the beginning of the 2015-2016 school year.

Member Checking

Anderson et al. (2007) define member checking as the act of "Data, analyses, interpretations, and conclusions brought back to stakeholders for verification and input"

(p. 153). Once all data was collected, it was presented to the AR team in an effort to verify the data was correct and that the analysis aligned to the three research questions. Team members reviewed transcripts, analyzed survey results, and read blog entries and journals to ensure that the conclusions found from the data were valid. One team member specifically, Beverly, worked with the lead researcher extensively to assess the validity of the data to the research. Many times Beverly would almost operate as a critical friend to push the researcher in the data analysis process.

Once the data was written up in this paper, the AR team read the case study and findings chapters to check for validity once again. Another AP teacher at TCHS who participated in the study also read the case study to assist in verifying the data. Due to the vulnerability of the data in that students might be able to identify teachers discussed even with the use of pseudonyms, student stakeholders did not participate in member checking.

Validity

Validity is an important construct in any research project; however, it is of utmost concern in action research due to the vast nature of interventions. One must ensure that an intervention and the data resulting truly measures what it intends to measure (Spaulding & Falco, 2013). It would have been easy for the AR team to get carried away in the development of interventions and the identification of data proving the success of interventions; however, it became paramount to the AR team that they reflected on each intervention and data set to ensure that the data measured correlated to the research questions. For example, examining the effects of teacher deficit thinking on the achievement of gifted students living in poverty was central in this research. It would have

been very easy for the action research team to develop interventions seeking to alter school culture in the creation of an overall atmosphere of higher achievement without looking discretely at whether the intervention specifically addressed deficit thinking and its effect on the achievement of the demographic group involved in this study; in fact the team almost went down that rabbit hole. An intervention also might have enhanced the achievement of lower achieving non-gifted students without affecting our lower SES gifted demographic group. The AR team worked diligently to keep the focus on the group it desired to most affect. If the team felt the intervention did not work to shift teacher mindset away from deficit thinking paradigms, the data was discarded from this study and preserved for other future research.

The validity point led to deeper thinking in regards to the problem. Because the AR team first decided to wrap their minds around school culture in an effort to understand the underachievement of low SES, gifted students at TCHS, a teacher survey created by Greunert and Whitaker (2015) concerning school culture was administered. The results of this survey and the results of other student-generated data led the team in the identification of teacher deficit thinking as a central cause to the underachievement of this group students. The process of action research in this study led to "refram[ing] the problem in a more complex way," which is an example of outcome validity (Anderson et al., 2007, p. 40).

Democratic validity was also ensured through the collaboration of stakeholders in the analysis of the problem. The interviews of participants, both teachers and students, provided great insight into the research questions. The lead researcher carefully selected a diverse group of participants, three teachers and three students, to interview in order to

ensure reliability of the data. The data collected then informed the interventions. "While process validity depends on the inclusion of multiple voices for triangulation, democratic validity views it as an ethical and social justice issue" (Anderson et al., 2007, p. 40). While all students self-identified as living in poverty and were enrolled in AP classes, the students themselves varied in gender, race, and cultural backgrounds. The teachers interviewed ranged in teaching experience from three years to thirty years. All of the teachers were White. Validity was further assessed by the AR team through an analysis of interview themes.

Validity was also ensured by carrying out interventions along with interviews, surveys, blogs, and journals for a sustained period of time. This prolonged engagement "provide[d] participants with extended opportunities to explore and express their experience of the acts, activities, events, and issues related to the problem investigated" (Stringer, 2014, p. 92). Teachers and students were able to reflect on problem over time, which enabled them to develop a deeper understanding of teacher deficit thinking and the action research process.

Action Research Team Process

Transcripts from interviews, AR team meetings, and AP PLC meetings, survey results, along with journal and blog entries were member checked to evaluate the AR team's work in addressing the study's three research questions. In addition to this process, the researcher met with her advisor, Dr. Sheneka M. Williams, face-to-face and through emails to help inform the research process. Meetings with Dr. Williams and the other committee members: Dr. Karen Bryant and Dr. Karen E. Watkins were also audiotaped so that the researcher could further reflect on the process. This study also utilized two

external auditors in the review of the study. One auditor, a teacher not related to the study, only audited the case study. The other auditor, a public librarian, reviewed the entire project to assess validity. As Creswell (2014) emphasizes, "the procedure of having an independent investigator look over many aspects of the project enhances the overall validity of a qualitative study" (p. 203). All of this information and action helped to ensure trustworthiness and reliability of the data.

Position of Researcher

During the course of this research study, I served as the English Department Chair and the Response to Intervention Coordinator for TCHS. I was very blessed to be in a leadership environment that supported me in my learning and was willing to grow with me as I reached my future goals. I taught Advanced Placement Literature and English II Honors classes in which I had an instructional relationship with some of the students who participated in my case study—rural students who are gifted and have a low SES. Previous teaching experience led me to more closely analyze this student subgroup's achievement. Professionally, I perceived a general lack of achievement in regards to this demographic group; TCHS's Advanced Placement scores annually supported this assertion. I had countless theories of why this might be happening, but as I uncovered more of the problem, my theories shifted. Ultimately, the AR team and I surmised that our low SES student achievement directly correlated with teacher deficit thinking.

My mentor in the Educational Leadership program was my principal. He was a big support in helping achieve research that was both possible and pertinent to the school and education in general. Through his support, I fully implemented this action research plan in the school setting where I taught. I also had the support of other administrators at the

school. In fact, the assistant principal of instruction initially agreed to be a member of the action research team. Although she eventually dropped out of the team when other school responsibilities became too much, she did continue to support the AR team in its work.

Subjectivity and Limitations

Subjectivity remained an important area of focus throughout this study. The AR team, in their analysis of GSLIP underperformance on AP exams, also needed to recognize their own "initial assumptions and subjective reactions to events, in effect, presenting audiences with both preconceptions and post conceptions" (Anderson et al., 2007, p. 164) as they worked to generate interventions addressing the problem. Before research began, the team worked to recognize subjectivity and bias in the research process. They then used this work to establish protocols ensuring open discussions of subjectivity. Because the research took place in a school, the members of the research team already brought much of their own experiences to the study—this meant that the members had to recognize their preconceived notions in an effort to create a successful research environment. A positive attribute of qualitative research occurs when subjectivity is identified and subsequently utilized to benefit rather than detract from the research. The AR team worked diligently to ensure subjectivity operated as a positive facet of the project.

Boundaries

This action research study was instrumental because it "explore[d] an issue or research question…to gain insight or understanding into something else" (Simons, 2009, p. 21). While this study focused on teacher deficit thinking, it was studied to learn about the relationship between deficit thinking and gifted, low SES student achievement in hopes that student achievement might be positively influenced with the data culled from the research.

This case study was a single case study bounded by upperclassmen AP classes at Thomas Comprehensive High School.

Limitations

The largest limitation of this study laid within the time frame. The AR team established evidence of deficit thinking and began interventions to focus attention on this issue; however, the erosion of a thought paradigm takes time, and this research study needed to come to a conclusion. While the study has closed, the movement by the AR team to shift deficit thought continues as most of them persist in their work together in the AP PLC.

The small sample of students and teachers in the study is another limitation. Ideally, it would be better to have a larger cross-section of participants; however, because this research occurred in a smaller, rural high school, participants were limited to the population.

CHAPTER FOUR

CASE STUDY

The Action Research (AR) Team served as the teacher-focused case study throughout all interventions posed during the research period. The process began as a group of teachers aiming to positively affect the Advanced Placement program at their school, especially a specific group of students who were underachieving—Gifted students living in poverty (GSLIP). As the leader of the research, I thought carefully before I invited anyone to participate in the AR team process. I had initially planned to create a diverse group of teacher-leaders; however, as the AR team began to take shape, I also took pains to select teachers who would not balk at change or the difficulties that might arise in the attempt of creating change. From careful consideration in the selection of participants and from the organic shifting of teacher-leaders who later decided to withdraw their participation, we developed an AR Team that served as a nucleus of thought, ideas, and excitement for how we might change our school for the better.

With all the elements combined, a unique phenomenon occurred within this particular AR team. Although we each had known and worked together for a while, we did not necessarily work closely with one another—before our work together, we all felt extremely departmentalized due to the setup of curricular teams at our school. However, through our meetings together and our exploration of the achievement of our gifted students living in poverty, we became a close knit, cohesive group. We all agreed that the

action research process of study was an "opportunity to make the voices of those who work closest to the classroom heard" (Anderson et al., 2007, p. 7).

Together, we saw the value of our work to not only help improve our school and the achievement of our GSLIP, but we saw the power of utilizing an inside-out or down-top approach rather than the status quo, outside-in or top-down approach we had been subject to for so long. Finally, we discovered ourselves inspired because we felt as though we could actually create the change we had been longing for, and this change would not have to stop with the conclusion of this study. Like Anderson et al. (2007) described action research, we began to view our work as the construction of our own knowledge rather than being consumers of someone else's knowledge. We were empowered.

The liberation we all experienced assisted in the fostering of relationships we created with one another. We were all in it together; we were vested; we intended to see the change we had imagined. The development of the relationships within the AR team also more easily enabled the challenge of one another's views of students—we were able to "call out" examples of deficit thinking in our own practice because we knew we were "safe" to do so. We all aspired to eradicate these kind of thoughts in our own classroom as well as other classrooms across the school. While the goal of removing deficit thought from our school was lofty, we shared the weight in that we supported one another in our own personal growth as educators and in the overall growth of our school. Our ultimate purpose was to increase the achievement of low SES students in gifted coursework so that they would succeed at the rates of their higher SES peers and we were willing to take risks to make this happen—even when these risks came in questioning our own practices in the classroom.

We began as a group of seven: two English teachers, one social studies teacher, one science teacher, one foreign language teacher, one math teacher who also was serving as the AP Coordinator, and the assistant principal of instruction. Our first few meetings consisted of identifying the theoretical framework behind our problem: why are our gifted students of a low SES not performing as well as their higher SES peers? The math teacher and AP Coordinator attended the first AR team meeting and then dropped out of the process. The assistant principal of instruction attended the first few meetings and then attended meetings sporadically due to schedule challenges. Eventually she dropped out of the process as well; although, she did attend two meetings where deficit thinking was discussed. Even though she dropped out of the AR team process, she remained supportive in the AR team work and was our contact in the administration as we asked to survey teachers and to bring the topic of deficit thinking to all of our AP teachers.

The Action Research Team[2]

Janice

Janice was a young social studies teacher with seven years of classroom experience. She served as a leader in the school in her role as the chair of the Social Studies department and her role as an intervention specialist in the Response to Intervention (RTI) program at the school. Janice was also a graduate student working on her Specialist of Education degree in the Educational Leadership program at a local university. When many people meet Janice, they underestimate her as a teacher and as a leader. She encountered deficit thought within her own career reporting such statements by colleagues like, "*you are much too young to lead a department*" and "*you need to work on acquiring more experience if you*

[2] All names used in this section are pseudonyms.

plan on becoming an educational leader." Other, older and more experienced teachers made comments to colleagues and students that Janice "doesn't know what she's doing" in relation to preparing students for AP tests. During this study, Janice taught AP Macro-Economics and AP Psychology classes at TCHS.

Because Janice had personal experience with deficit thinking in her own career, she provided a unique perspective on how she thought our students might feel when they experienced deficit thinking by teachers in the classroom. Because the issue of deficit thinking was a personal one for her, she often reminded the AR team of the emotional complexity that deficit thinking creates for our students,

> *Students are taught from a young age to trust their teachers. The biggest blow to a kid's self-esteem has to be when [s/he] realizes that the teacher cannot be trusted….that the teacher treats various students differently based on issues of class, race, or prior academic achievement. The unfortunate fact is that I think this occurs every day in schools across the country—especially in schools serving students living in poverty.*

Beverly

Beverly, also a young teacher, had six years of classroom experience. She was a graduate student working on her Ph.D. in Educational Psychology at the local university. Beverly taught English at the school, including AP Language and Composition which she had been teaching for the three years at the time of this study. Beverly, a conscientious teacher, was incredibly sensitive to the needs of her students. She operated her classroom using a social justice framework to help support her students and to help them understand diversity and the challenges that we all face in the human experience.

Most students reported feeling well supported and respected in her classroom, which is evident in any informal conversation with any former students of Beverly's. Her work extended outside the four walls of her classroom as she also led interested students through books by bell hooks and other social justice advocates. She also led a teacher book study using *Teaching to Transgress* by bell hooks in the English department where she served as the department chair. She was an agent of change at TCHS. When I spoke with her in May of 2015 about the implementation of the book study for the 2015-2016 school year, she cited her experience in the work of our AR team as the inspiration behind the sharing this particular book with her colleagues,

> *Our [English] department is made up of a diverse group of people in terms of years of experience and teaching personalities. We have teachers nearing retirement [20+ years] along with teachers in their second or third years of practice. We have teachers who are more traditional in their pedagogical thought and in their classroom expectations—teachers who operate from a 'I'm the teacher, I know all and I am in control.' In addition to these teachers, we have teachers who operate from a more constructivist stance—they want to construct meaning and learning along with their kids. They share the responsibility of learning with their kids and they work hard to build trust in their classroom so that this can occur. While our teachers run the gamut in regards to experience and teaching styles, we all have one thing in common: we are all White and currently occupy a space in the middle class. Because of our diversity and our sameness, we need to study the work of someone like bell hooks to improve our practice. When we began discussing deficit thinking [as an AR team] and its role in our individual classrooms, I realized that as a teacher I needed to educate myself in*

teaching diverse students and I realized the need, as the leader of the English department, to share this journey with my colleagues. All of us need to and must continue to better ourselves, not only in regards to teaching strategies located within the TKES rubric, but also in regards to how we ***treat*** *the students we have been* ***trusted*** *to teach. I hope that studying bell hooks will allow us to all reflect on how we interact with our students in the ultimate hope that we become much more aware of our individual practices in deficit thinking so that we can work to remove it entirely from our practice.*

Beverly came to our work in the AR team with prior knowledge in the psychology of education. Her work as a doctoral student helped us immensely as we worked together to construct our theory, which ultimately became deficit thinking and as we worked to develop interventions. Her expertise in both social justice issues of education and in the psychology behind it helped us to build meaning together as we explored issues of deficit thinking in our own practice.

Charlie

Charlie represented a unique piece of our AR team in that he taught foreign language and TCHS did not offer any AP coursework in any foreign language at the time of this study (some students elect to take an AP foreign language course through Georgia Virtual School and Charlie does help these students through their work). He had been teaching for thirteen years in the U.S. (eight of them at TCHS) and three years in Germany. He was considered a valued member of the faculty at TCHS where he served as the department chair over the foreign languages. Charlie grew up in England with German

parents. He speaks English, German, French, and Spanish. He has taught Spanish and French. At the time of this study, he taught French I and French II.

As I worked to form the AR team for this research, I immediately thought of including Charlie because I considered him incredibly intelligent. He also possessed progressive thoughts about education, and students at TCHS adored him. He also coached soccer so I felt as though his experience on the soccer field with those students would bring valuable insight into the students of this study and their experiences at the school (the soccer team was composed of a very diverse group of kids involving minorities and students of a ow SES).

His view of students was summed up in his statement that "we must do everything we can to help our kids be successful in the classroom and in life." He spent hours at the school working to improve his teaching and working to support the students at TCHS. As aforementioned, he led the Foreign Language department as the chair where one could often find him yelling *"Si, se puede (yes, we can)"* throughout the halls during class change. This mantra pervaded his work and was another reason I knew he would be an invaluable addition to the AR team. He also brought an international experience of education that helped us reflect on American practices that might create issues of deficit thought.

After the completion of the formal work as an AR Team, Charlie transitioned into the role of AP Coordinator at TCHS. When I asked the principal about how he chose Charlie to lead the AP program, he remarked that he was impressed with our AR Team work, and that he intended to continue this type of energetic inquiry into subsequent school years. Through his work as the AP Coordinator, Charlie continued to challenge deficit thought in the AP program as he led AP teachers and students. He met monthly with AP teachers

working to improve the achievement of AP students as a whole while he also remained conscientious of GLSIP AP student achievement and how to better serve this population,

> *I really enjoy meeting as an AR team. While our focus is eradicating deficit thinking amongst our teachers, I have also gained so much from our informal conversations about our gifted students in general. These conversations and my work with my team members has helped inspire me in my role as the AP Coordinator. I am incredibly passionate about helping our students achieve at high rates, and I know I'm not in this work alone. I have four other colleagues (from the AR team) to consult. Because of my participation in the team, I have been able to generate ideas like the AP t-shirts (students scoring a 3 or higher on AP exams are given shirts to wear at school), which I think helps grow our AP program while honoring the work of students. This all ties into removing deficit thinking because our teachers will also see that these students were successful on AP exams—that they CAN do it. While we no longer meet biweekly, I still know that I can go to any of my team members for help and support.*

Bryan

I originally asked Bryan, a teacher of sixteen years, to serve on our AR team for a variety of reasons. He taught science and I aimed to include various content teachers on the team; he was an energetic, hands-on teacher who earned a Ph.D. in Secondary Science Education so I knew he not only could bring content knowledge and the experience of being a science educator, he was also well versed in educational theory and practice in the science classroom. He taught AP Physics and AP Chemistry and grew his class size each year he offered these classes. Another reason I asked Bryan to serve on our team is that our kids responded very well to him. He was voted "Most Influential Teacher" twice and

was nominated for teacher of the year (Janice and Beverly have also been nominated for teacher of the year).

Bryan possessed a reputation at TCHS for high academic rigor while working with any student willing to take his class as they attempted to master the standards and pass the AP exam. As we began our work on the AR team, I quickly learned that he was the teacher with the least amount of deficit thought existing in his practice. His teaching philosophy helped the rest of us grapple with the permeation of deficit thinking across our school while also helping us each individually get rid of deficit thoughts in our own classrooms,

> *The work is hard. I mean, any good work is hard. The work in my science classroom challenges my students, and I enjoy the struggle. I enjoy helping them through the struggle which in turn helps them to learn how to persevere through difficulties both academically and in life. My experience with my kids made me look differently at deficit thought practice by teachers in our school than maybe some of my other team members. Once we found evidence of deficit thought, I knew our work would be hard; but I also knew it would be worthwhile and that we (as an AR team) would struggle with persevering through changing our own thoughts and definitely the thoughts of our colleagues. I think the nature of my work helped to encourage my colleagues in their own journeys—at least I like to think so.*

Team Overview

While I attempted to incorporate diverse thought by selecting members of the team with varied educational philosophies, the team eventually narrowed to five of us who shared many commonalities. We were all fairly young teachers (under forty). We possessed advanced degrees in education. We were White, middle-class members of

society living in the rural area where we taught. Four of us were married with elementary-aged children. While these characteristics helped to unite us, our largest commonality was our "do whatever it takes" attitude toward improving the educational experience at TCHS. Most of us considered ourselves progressive educators who "thought outside the box" in the inventions of solutions for problems in the school. All of us were also teacher-leaders with a strong voice in the day-to-day operations of TCHS; the principal often referred to the AR team as "The Dream Team" because he saw this group as a strong core of teachers who he could rely upon in carrying out his goals and in generating new targets for our school.

Because of our common experiences teaching in the rural South and because of the similarities in our views on what we thought education should be like for our students, we were able to come together and focus on "doing the work" rather than spend extraneous time muddling through a lot of strife and differing opinions. Our AR team was a team in every definition and continued to work as a group supporting one another as educators—even when careers took us to different schools. While the team worked well together, we also were not afraid to challenge one another and the assumptions we held. The AR team believed in the work we were trying to carry out, and we developed the norm early on that we would ask difficult questions and challenge each other's positions—not necessarily because we disagreed with the position, but because we felt the need to fully think through any salient issue or thought that was going to affect our work and the lives of our students.

Differing Perceptions of the Team

As mentioned above, the AR team became an incredibly tight-knit group. In fact, such a high level of trust was built that team members continued with the facilitation of interventions at TCHS even though the leader of this research project moved to another

school. The closeness of the team presented itself with even more opportunities to disagree with one another because the environment was both non-threatening and conducive to critical discussions about the problem presented: GSLIP students were performing at lower levels than that of their higher SES counterparts. All of the team members bought into the research and held the same aspiration to construct a visible difference in student achievement that was both positive and informative so that they might use the interventions they developed or at least the protocol they had created in the future development of interventions designed to study other problems at the school.

Creating such a healthy AR team did not occur without problems. I had initially invited the new, first-year AP Coordinator (also math teacher) for the school to our meetings. She attended one and then would come up with an excuse for attending any subsequent meetings. After two months of asking her to attend, the AR team decided to send an email to her explaining that we felt she was too busy and overwhelmed in the new position to function as a team member. This particular person seemed fine with leaving the team, and she left the school shortly after this project began. Another member of the team, Charlie, became the AP Coordinator in her place, so the issue was resolved. He was named to this position in part due to his work on our AR team.

In addition to solidifying the members of the team, we also struggled to really pinpoint the nature of the problem in our first few meetings. We conceded that we had a difficult time admitting that deficit thinking occurs, so I think we were all hesitant to place the problem at deficit thinking's doorstep. All members of the team were careful to not "blame teachers" for low scores, which I thought was a powerful step in our process because deficit thinking often includes teachers "blaming" students and parents for

underachievement (Valencia, 2010). We knew this was happening, just by our own experiences; however, we were careful to not use the same equation for solving our problem. However, once we received individual results of the School Culture Survey (see Appendix B), it became evident that teacher deficit thinking was an issue at our school. As we worked around this theory, we collected further evidence of teacher deficit thinking occurring in teacher observations, teacher conversations, and student narratives. The theory then became the center of all interventions we planned in addressing the low achievement of our GSLIP population.

While the AR Team eventually developed into a highly functioning unit that went on to rely on one another even after this project was concluded, we did encounter certain issues amongst us. In the beginning, not everyone knew each other well so we brought varying perceptions of one another into our group. In early interviews, Beverly mentioned that she sometimes felt that Janice did not truly listen to what she was saying and that she did not feel valued by Janice at times. As Janice had a strong personality while Beverly was somewhat shy around people she does not know until feeling comfortable, I knew I needed to address this group dynamic. I asked Beverly to give me an example when she felt devalued by Janice. She mentioned that most of her feelings arose when Janice would cut her off to talk without mentioning Beverly's input or building upon it. At the beginning of our next meeting, we added a norm to the group to listen actively, not interrupt, and build upon the previous member's comment by beginning with a statement of value before adding one's own. The group became well versed in actively listening and not interrupting but they soon tired of positively giving credit to the previous member's statement, so we

eventually removed this from the norms. By this time, we felt comfortable that we were all being more cognizant of how our actions might make other group members feel.

Janice and Beverly continued to work on their professional relationship both in and out of our AR Team work. At times, Beverly still felt overrun by Janice. In our exit interview, Beverly explained,

> *I like Janice, and I respect her personally. We just have very different personalities. She is very driven in building her career in education, where I am still figuring out my place in it. I feel like we both have different perspectives on education and that our differences are good for the common students that we teach. It still doesn't make working beside her easy because she is intense and it sometimes makes me anxious…. When I think back, I think that I am less sure of myself, not as a teacher, but in my place at this school, so I think that my anxiety around her might have to do with that.*

Janice and Beverly continued to work next to one another, and their respect for one another increased. They both mentioned in their post-intervention interview that they were glad they had the opportunity to get to know each other more and work more closely together.

Timing: Key Milestones and Timeline

Planning was a key component making the research successful, but as with many processes, the plans shifted once the work began. The timeline change (see Table 5) was due in part to the fact that the AR team went through a theory-generated process to arrive at teacher deficit thinking in its analysis of the problem. The original timeline predicted completion of data collection in October 2015; however, the data collection was extended

to the end of December 2015. This pushed exit interviews with the AR team to January-February 2016.

Table 5. Timeline of Action Research Project

Action Research	
Phase I (June 2014-January 2015)	
Action	*Timeline*
Submit IRB	Complete by January 2015
Form action research team	Complete by January 2015
Engagement into the system	Complete by December 2014
Inquire into the System	November 2013-May 2014
Initial meeting with AR Team	February 2015
Phase II (January 2015-May 2015)	
Action	*Timeline*
Submit Revised IRB	January 2015
Action Research Team Meetings (bi-monthly ongoing)	January-December 2015
Develop and implement interventions	January-October 2015
Phase III (June 2015-June 2016)	
Action	*Timeline*
Evaluate effectiveness of methodology and interventions	January 2015-December 2015
Determine future of project	December 2015
Write Up Results	January 2016-May 2016
Data Generation	
Phase I (June 2014-December 2014)	
Action	*Timeline*
Conduct background research in the literature	June 2014-December 2014
Identify the problem; find statistics, etc.	August 2014-September 2014
Create professional development on deficit thinking based on research to be used in PLC setting	October 2014
Phase II (January 2015-December 2015)	
Action	*Timeline*
Observation of Action Team	Duration of Project
Intervene with teachers and students	January 2015-December 2015
Analysis of interventions	January 2015-December 2015
Phase III (June 2015-May 2016)	
Action	*Timeline*
Analysis of interventions	September 2015-January 2016
Exit interviews with AR Team	January 2015-February 2016

While the change in timeline was frustrating, it also gave the AR team more time to reflect on the project. The extension of time also led to a better focus on the AP program at TCHS overall because the study of underachievement was still a potent topic during the fall of 2015. The AR team spent a year analyzing the problem, and the length of time gave more weight to the study.

Author Reflection

The entire AR team process was messy, often undefined, and chaotic—which left me feeling frustrated with my own leadership. Before we started the work, I had neatly laid out plans for this process. As the Scottish poet Robert Burns once wrote in his poem, To A Mouse, "the best-laid plans of mice and men often go awry." Unlike Burns' poor mouse, thankfully the grief we endured eventually brought us joy.

While I enjoyed our meetings—especially the development of relationships, I also felt as though I was letting them down. Most of my frustration came from not having a firm theory as a basis of the work. The first few meetings were painful for me as a leader in that I knew we had a problem, but I did not know how to case the problem within a theory. Thankfully as time went on, we banded together as a true team to articulate our theory through a theory-generating process. Once we settled on teacher deficit thinking, our work became much more organized and our focus shifted from the abstract to the concrete.

The frustration I felt in the leading of the AR team has helped me to grow as a school leader. I know that the work might be messy at the beginning; however, if we persevere, we might just find the work more rewarding due to the arduous process. Sometimes the best results come from the messiest process.

The Journey

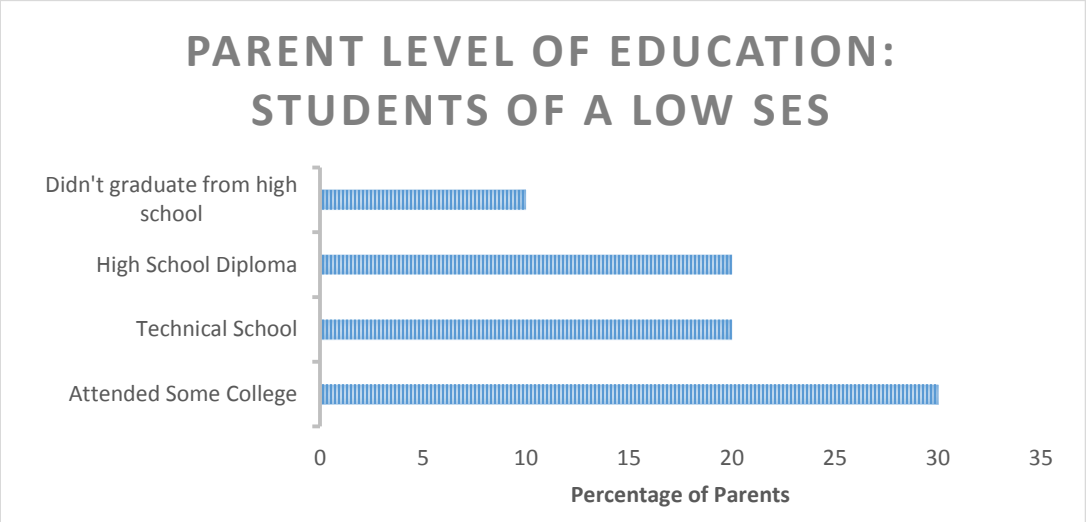
The yearlong journey in action research began with our first AR team meeting on February 25, 2015. During this time I worked to explain the definition of action research and to share the process of identifying the problem in the disparity of AP scores between GSLIPs and gifted students of a higher SES. No one was shocked; they had seen this data in previous discussions of AP scores. We knew the problem existed, but we were not certain of the cause.

In the beginning, the research team was unsure that teacher deficit thinking played a large role in the lower AP scores for gifted students of a low SES; instead the team hypothesized that student motivation was negatively impacted by other elements such as lack of access to outside resources. This led to a focus primarily on motivational theory as the culprit for this subgroup's low achievement on AP scores. Because many of these students do not have parents who went to college (and sometimes did not graduate high school) and their financial resources were limited, the AR team conjectured that the lack of these two resources was causing GSLIPs to score lower than their gifted, higher SES students—and that their motivation suffered from the lack of resources (later on, we would see that our assumptions were incorrect).

Once the team began collecting data on the educational levels of parents of all gifted students through the Pre-Intervention Student Survey (see Appendix A), the team realized many students of a higher SES had parents with lower levels of formal education, and that the low SES population of students actually possessed a fairly high percentage of parents who attended college (see Table 6 below). Half of the parents of students of a higher SES attended some college, versus 30% of students of a lower SES. While there was still a large

discrepancy between the two sets of data, the AR team did not see a large number of low SES students with parents who did not at least have a high school diploma (we had one student in our sample).

Table 6. Parent Level of Education for Students of a Low SES



Source: Student Survey on Parent Level of Education

These data moved the team's thinking a bit. If this subgroup of students, GSLIP, have parents at home with higher education levels than previously thought, the team needed to examine the level of support students get at home. The student survey also detected 59% of students felt like their parents supported them in their AP classes (e.g. would help them find resources outside of school).

With this data in hand, the AR team began to feel as though motivation should not be the primary focus; thus, began the study of how school culture affects the achievement of GSLIP learners. Because the AR team was interested in the overall school culture, I began reading *School Culture Unwired* (2015). In this book, I found a School Culture Survey (see Appendix B) that the AR team then decided to give to all AP teachers. As a result of this survey, the team uncovered some common threads which led to a narrowing of the

theoretical perspective to something more manageable in scope—teacher deficit thinking. Because the data was startling, each member of the AR team was then propelled to begin the process of self-reflection s/he considered his/her own practices as teachers and how these practices might have been perpetuating deficit thinking.

In addition, the results of this survey and subsequent interviews illustrated the disconnection that many teachers feel in their relationships with students (see Table 7). The interviews conducted were ripe with statements of deficit thought like, "I went to school with this kid's parent. Trust me, when I say that the apple doesn't fall from the tree" and "I can't fix everything. Some of my kids don't have a shot at success, but that's because of who they come from [their family's background]." The AR team even discussed how their initial hypothesis that motivation was the culprit was a manifestation of deficit thinking on their own parts—they had assumed that students did not have the motivation to highly achieve due to factors stemming from home. The AR team finally felt that they had the theory and the justification for the problem, which was even more solidly proven by their own experiences in regards to teacher deficit thought.

The teacher survey, from *School Culture Rewired* (2015), then became the impetus for the exploration of teacher deficit thinking, causing the move from school culture overall to the more specific issue of teacher deficit thinking (see Appendix B for full survey statements). The results of this survey and subsequent interviews demonstrated a disconnection between teachers and students (all demographic groups were considered in the survey; the interviews then focused on GSLIP). The AR team specifically inspected statement numbers 6, 13, 21, 35 to find evidence of deficit thinking.

Table 7. School Culture Survey Results from Teacher Population (see Appendix B for full survey and results)

Statement	Results (percentage who agreed or strongly agreed with the statement in context of the school) N = 9
6. Teachers and parents have common expectations for student performance.	44%
13. Parents trust teachers' professional judgement.	44%
21. Teachers and parents communicate frequently about student performance.	56%
35. Students generally accept responsibility for their schooling, for example be being mentally engaged in class and completing homework assignments.	33%

Source: Adapted from Gruenert, S., & Whitaker, T. (2015). *School culture rewired: How to define assess, and transform it*. Alexandria, VA: ASCD.

Subsequently, the AR team interviewed five AP teachers—one math, two science, and one social studies—using semi-formalized interview questions, which allowed participants to describe a story or situation related to the research. The transcriptions from these audiotaped interviews were then analyzed for certain themes. Subjects emerged included teacher recognition of teacher deficit thinking and the need for equitable expectations across various student populations. School and family disconnect was a major theme that we found in interviews. Many teachers felt as though students could be doing more to support their own achievement. They also often "blamed" either parents or students for underachievement. As a whole, teachers did not take accountability for the roles they were playing in the underachievement of GSLIP in AP classes. These themes supported the theoretical framework of this study—teacher deficit thinking.

The team then presented teachers with the data and asked them about their relationships with GSLIP in their AP classes. They also asked them about their perceptions of students and parents who have a low SES by asking them to *"tell me about a time when you interacted with students and their parents who lived with a low SES status."* Participating teachers agreed that the survey results reflected their own experiences with students. Three of the four teachers felt that survey statement number 35 would have a lower percentage of agree or strongly agree statements when focusing on GSLIP students. They attributed this to out of school demands on students, such as work. One teacher remarked,

> *I have a student who works two jobs. One at Subway and the other at one of the stores in the outlet mall. I get that she's working, and I don't think that working is a bad thing. But I also don't think that you can work the amount of hours a week she's working and still do quality work in advanced classes. She doesn't do anything in my class but sleep. She says she's too tired from working late shifts every night. She's a lazy student anyway. I wouldn't be surprised if she's saying that she's working a lot as an excuse not to do her work. If she wants to work so much, then maybe she needs to take different classes. I get tired of making exceptions for students based on things that are out of my control.*

This particular statement about a student really shocked the team. Many team members knew her and knew that she was saving for college and paying for her own braces. The team used this data and other data like this to propel the research forward in developing interventions that focused on teacher deficit thinking paradigms as the focus problem causing low AP scores among GSLIP.

The AR team also gathered information from students in their Pre-Intervention Student Survey (see Appendix A for survey and results) which supported their thought that students were not feeling adequately supported in their AP classes. Only 24% of students (four out of the 17) felt strongly supported in their AP work by their AP teachers (full results of this survey can be found in Table 11). In the comments section of the survey, one student wrote,

> *I don't think teachers take into account how much time AP homework takes. Sometimes I have five hours of AP World History to do in one night. Then the next day, the teacher doesn't ever talk about the homework. She does pick it up and my grade will suffer if I don't do it.*

The AR team felt that this percentage further indicated the possibility of teacher deficit thinking as a root cause of GSLIP underachievement.

Once the AR team began talking with student participants in the study during pre-intervention interviews, they realized that some of the disparity between teacher perception of support and student perception of teacher support seemed to occur because teachers thought they were helping students be more successful in advanced content classes but students could not see evidence of their teachers' supports. An example of this came from a student when he noted that one of his teachers would not stay past the time he was contracted to help him,

> *I want to be an engineer, and I'll be the first person in my family to go to college and just the third in my Granny's family that has graduated high school. My adviser told me to take AP Calculus because she thought I'd need it for college. So I did, and it was a big mistake. I am struggling so bad. It's hard and doesn't make sense. I*

used to stay after school so that [my math teacher] could help me, but he wouldn't stay past 3:30 when he got to go home. That left me with twenty minutes to get help. That was not enough and then my Granny would have to pick me up after she got off work at 5. It just wasn't worth the hassle, so now I try to keep up as best as I can and I have a good buddy who gets it and helps me during lunch. But, man, I wish I hadn't taken this class. Maybe it means that I'm not cut out to be an engineer.

The AR Team felt they had uncovered a sound amount of data to support the presence of teacher deficit thought and the lack of support for GSLIP students in advanced content courses. While not every teacher indicated evidence of large amounts of deficit thought, the AR team did begin to see a pattern emerge among all of the faculty, including themselves, that was alarming—so many of the team members had participated, before this study, in conversations containing deficit thought. Even the most student supportive person of the group admitted that he had listened to and perpetuated deficit thinking in regards to his students in his AP class. This realization made the team's work so much more personal. The AR team recognized they were part of the problem, not just the solution.

Author's Reflection

In regards to our group work, trying to build a relationship between these two members was the most difficult for me as a leader. They are two very strong women who are younger in the profession, and I could see how they felt competitive against one another. I worked to value each member individually in my praise of his or her work and in my leadership of the group. I did this by contributing positive comments about each

member when I led the group in figuring out which group member would be responsible for a certain aspect of our intervention. I also made sure to directly comment positively on specific statements these women wrote on the blog. This act was not hard as they are both very astute and intelligent.

As the leader of this group, I also began to question why I did not feel the same strain in my relationships with these two women. I am not much older than them, and I am not any more advanced in my career necessarily. I still do not have an answer for my own lack of conflict, but I feel as though one of my attributes and flaws is that I want to please people, so I think I worry much more about how these people perceive my work and how I can make them feel comfortable. I have since realized that I can worry too much about supporting others that, at times, I do so at a risk to my own feelings. My experience working with these two strong and intelligent women has helped me notice my own flaw in regards to pleasing others. I now try to make sure that I do not do something in my work solely to please adults (although that is a nice byproduct). Instead, I constantly ask myself, is this work what is best for the students in my building? If it is not, I go back to the drawing board even if it leaves me at odds with some adults.

Constructing: January 2015-April 2015

As we began the process of creating interventions, we relied heavily on research about gifted education. While the focus on gifted education in rural schools was less defined in research than those in urban ones, we did uncover some studies to help inform our own practice. The research reported that rural schools find themselves combatting a higher rate of poverty and a lower rate of funding for educational programs than their

urban counterparts. Researchers also discovered evidence that rural schools sometimes limit their pool of gifted students with a bias against those students who are economically disadvantaged (Howley et al., 2009).

At TCHS, the issue of providing gifted services was prevalent. Because many students are of a low socioeconomic status, low achievement, even in regards to the gifted population, tended to be the status quo among educators. A culture of blaming students and their families had become unfortunately predominate with the teachers in the building. This 'blame game' "allowed educators to avoid responsibility for teaching a group whom they had previously labeled 'capable of doing much better'" (Seeley, 2004, p. 2).

This research project set out to engage gifted educators in a discussion about teacher expectations and the relationship of this factor in gifted student achievement. Many teachers of GSLIP believed that the students' impoverished home life prevented them from achieving at the same rates as students of a higher socio-economic status. Statements from teachers such as *"these kids lack the resources to truly function at a high level"* or *"my gifted students have too much to worry about outside of school to achieve at high rates on Advanced Placement exams"* placed blame at the doorstep of poverty, rather than teachers asking themselves how their own assumptions and expectations of students hindered gifted student achievement.

These statements initially caused the AR team to take a closer glimpse into deficit thinking and informed the creation of the AP PLC intervention along with the AP blog. The AR team sensed that teachers needed a safe place to discuss student achievement as well as a place where the unraveling of deficit thinking could occur. Both of these interventions

put emphasis on the language used in the classroom in an effort to positively affect the thoughts behind the language.

Additionally, the AR team felt as though we needed some more information about students in poverty; thus, I read Ruby Payne's (2005) *A Framework for Understanding Poverty*, and attended a lecture given by her at another school in Georgia. Her thoughts, though sometimes controversial in regards to changing the students' behavior, did help the AR team better understand some of the issues at play with our students, such as the need for support systems impacting the ability to do homework. Payne's (2005) work made the AR team question homework practices in AP classes: how might we help students manage the workload? The school, outside of the AR team, later created a study hall period which all students (gifted or not) participate in daily at TCHS.

From my own work with students at TCHS, I witnessed a cycle of poverty that is often saturated with parents and grandparents who did not value education when they were young and did not see the value of school in future employment opportunities. The previous generations had opportunities to do farm work and other work that did not require formal education; however, the new digital age has placed more importance on formal education and finishing high school so that students can go on to learn a specific trade or study subjects that will lead them to better employment opportunities. This generational divide has placed rural, gifted students at a disadvantage if they lack an understanding of how valuable an education is in today's world. Ulrich (2011), in her study on educational attainment rates comparing rural to urban areas, acknowledged that "although rural Americans from all community types have been able to attain higher educational levels than their parents, their progress has not been uniform" (p. 3). Ulrich

(2011) further argued that "parents' education is important because the educational attainment of children is often closely related to that of their parents. When parents place a high value on education, their children are more likely to have the encouragement and financial support to pursue education themselves" (p. 2). Many of students at TCHS possess parents with limited educational backgrounds and resources; although, as referenced previously, this data does not discriminate between low SES and high SES households. Because of these challenges, rural gifted students need more extrinsic help and motivation within the walls of the school building; these challenges make the removal of teacher deficit thinking from TCHS even more imperative.

Knowing the research behind rural students living in poverty was powerful in informing the AR team's interventions; however, defining and understanding deficit thinking in this context became the largest salient issue in this study's research. The problem at TCHS was a bit different from most scholarly work in the theory of deficit thinking (Valencia, 1997; Delpit, 1995). While many researchers discussed deficit thinking in addition to critical race theory and its relation to poverty, this particular body of research did not address the cultural gap which exists at TCHS—both the students and the faculty are White; the gap occurred solely in regards to socioeconomic status.

Teachers at TCHS reflected middle class ideals, while many students' culture derived from living in poverty. Also, many students who had been identified as gifted were also living in poverty. Even though there was not much research on this particular research phenomenon, we were able to use the research to inform our own practice; many interventions dealing with deficit thinking transcended the two subgroups studied in opposition of one another. For example, the AR team used much of Garcia and Guerra's

(2004) work which focused on using professional development as the vehicle for understanding and deconstructing deficit thinking by focusing on developing teacher awareness of the culture of poverty in which some students live. We not only wanted to cultivate an awareness, we then wanted to grow the cultural competence of the teachers at TCHS. While this was our goal, we achieved more success in teacher development of awareness than we did in developing cultural competence due to the time frame.

In our AP teacher PLC, we began the practice of deconstructing the language of deficit thinking. When a teacher made a statement that reflected deficit thinking in the PLC or on the blog, we took time to reflect on the words behind the statement. This practice was driven by the understanding that " through discussions about cultural variations in home-community-school patterns of socialization, participants become increasingly aware of their students' as well as their own culturally based behaviors and values and gain access to alternate explanations for academic outcomes" (p. 159). As an AR team, we felt that we needed to directly address and analyze teacher thought and statements to better understand how misconceptions of student culture might be driving student underachievement.

One particular analysis stood out for the AR team in particular. We came across the study in Valencia's (2010) book, *Dismantling Deficit Thinking,* and have used it as a guide for our own research process: McKenzie and Scheurich (2004). Based on interviews, McKenzie and Scheurich (2004) identified four equity traps in dismantling deficit thinking as educational leaders: "Racial Erasure," "Avoidance and Employment of the Gaze," "A Deficit View," and "Paralogical Beliefs and Behaviors." We chose to focus on the trap, "A Deficit View" because we felt that it coincided with what we were observing at TCHS.

McKenzie and Scheurich (2004) devised several strategies to help principals deconstruct deficit thinking by focusing on building community between teachers and students. In the creation of the AP Teacher PLC, one of our fundamental goals was to expose deficit thinking first and then provide a safe place for teachers to build a community where deficit thinking is addressed and where a deeper understanding of student culture is fostered.

We also pulled from Theoharis's (2007) interviews of seven principals across all levels of K-12 education. He listed four strategies to deconstruct deficit thinking at the school level: (1) increasing student academic achievement by increasing expectations and by using feedback results from state tests to drive instructional expectations; (2) improving school structure to allow greater access to advanced courses; (3) re-centering and strengthening staff capacity to ensure that all teachers have professional development in deficit thinking and issues of social justice; and (4) strengthening school culture by including the community, especially our disenfranchised families.

As the AR team continued its work, we examined Theoharis's (2007) study to center many of our ideas. We often asked ourselves if a certain intervention fell within one of his strategies or if it fit other research such as McKenzie and Scheurich (2004). While we did not limit ourselves to prior research to inform interventions, we realized the incredible importance of understanding previous studies and how the studies worked to inform our research at TCHS. The biggest takeaway was contained in the fact that the exposure of deficit thinking as a practice among faculty, in a safe setting, was first and foremost in importance. Only after this exposure, did we have true opportunities to work together in the removal of these thought paradigms. Overwhelmed, to say the least, we were unsure

how we would convince the faculty that deficit thinking was real and that we were all at fault in its use at our school. How would we convince teachers to take a more social justice theoretical stance? As a result the anxiety felt by the team, we decided to begin deconstructing deficit thinking in our own practice before we began to tackle the practices of teachers around us.

Planning Action: April 2015-August 2015

In working to construct the problem, the Action Research team brainstormed a variety of interventions (see Table 8). These interventions were also a result of the AR team's work to generate a theoretical perspective for the underperformance of GSLIP. While we remained cognizant of the importance of operating from a theoretical framework, we also did not want to waste our time together when we felt we might be able to address other issues that were affecting the achievement of our GSLIPs in AP classes. This led us to buy a subscription to Learnerator, an online AP prep program. As I discuss later in this paper, we did not find this intervention to be overall successful in increasing AP test scores, and this intervention did not address deficit thought amongst teachers. In reflection, the AR team was grasping at straws in our work because when we purchased the subscription, we had not yet generated our theory.

The AR Team began meeting in January 2015 with the intent to create an intervention increasing student achievement. The team did not have a theoretical framework of deficit thinking established, but did want to take action. By the end of March, the AR team decided to buy a subscription to Learnerator, an online platform assisting students in their preparations for AP exams. All students taking an AP exam in May 2015,

including GSLIP, were given an account. Not all chose to use the program. This data was considered more fully when cross-referenced with student performance on AP tests.

Limited success with Learnerator was achieved; thus, the AR team decided to not employ this intervention again. Two issues informed this decision: 1) some students had limited access to Learnerator due to the nature of the subscription timeline (students received accounts a month before the test), but even students who actively engaged in the Learnerator program did not see a large increase on AP exams, and 2) Shmoop, another online program the AR team discovered was deemed a better resource for AP learning across the year. Students had access to this program throughout the 2015-2016 school year, and the AR team ensured that all AP students sign up for an account and were educated about its usage. One limitation in the employment of any online program as an intervention related to the fact that many of our rural, gifted students did not have internet access at home. The AR team polled their students and 78% of them did have internet at home and were able to access Shmoop. The team felt that this percentage warranted the inclusion of this program as a quantitative measure of intervention. Unfortunately, a report of AP scores from the 2015-2016 school year was not available at the time of this research's publication; thus, a full evaluation of the success of Shmoop was not obtained.

Other interventions that we developed but did not implement included AP summer workshop, kick-off party for AP testing, and incentivizing the actual taking of the test by offering awards for high test scores. We did not implement the AP summer workshop frankly because I moved schools and TCHS saw a large shift in teachers; thus, we did not know who would be teaching AP classes when we needed teachers to meet with students

during the summer. We decided not to hold a kick-off party for AP testing because we felt we needed more time to fully plan and broadcast information to students. As for incentivizing the test taking, we decided that this was an intervention that was not going to help address the issue of underachievement so we decided against this plan.

The summer of 2015 came and went leaving the AR team feeling as though we had not accomplished much in tackling the problem. In the beginning of August 2015, the AR team met to talk about possible interventions we had brainstormed over the summer; we turned to research to support our intervention plan. As we discussed our previous intervention brainstorms, we realized that we were putting the onus of learning on the students. None of these interventions was going to be helpful in our real work, deconstructing deficit thinking among teachers. We decided to get back to basics and put emphasis on teachers, not students. We aimed to increase student achievement, but our goal was to do so through removing deficit thought paradigms from our school.

Because one of the AR Team members became AP Coordinator for TCHS, he was especially interested in coming up with interventions and carrying them out; thus, with his inspiration, we began to really act. The first intervention was the implementation of an AP Professional Learning Community (PLC), which met monthly. In previous years, we had met a few times as an AP teacher group, but these meetings tended to occur at the beginning of the year only to taper off. Many teachers felt that the time spent in this group was not productive and was just a place to vent about kids not doing what they need to do in order to be successful. In the previous year, the AP Teacher group did not meet at all—not even to review data from the summer session of testing.

Drawing on multiple research studies (DuFour & Eaker, 1998; Hord, 1997; Liberman, 1995; Vescio, Ross, & Adams, 2008;), we decided that the organic happenings in a PLC might be the best Petri dish to explore issues of deficit thinking and work to address these issues. We aspired to create a safe arena like Theoharis (2007) described so that all AP teachers would begin to feel comfortable in discussing issues of social justice and deficit thought. The PLC developed specific norms addressing deficit thinking. Their mission was to "increase the achievement of all AP students no matter a student's background or previous learning experiences."

We felt as if we could tackle deficit thinking head on and squash any negativity. We would also be able to utilize the PLC to create changes in the AP program that would positively affect both teachers and students. The AP Coordinator led the first meeting with a discussion of the power of language and the banning of deficit thinking-like statements. He defined deficit thought and gave examples through role play. They brainstormed a list of statements that reflected deficit thinking and banned them from meetings. This poster board remained in place at all meetings as a reminder for teachers.

The AR team also created an AP teacher blog, which was password protected yet still accessible for all teachers teaching AP classes. The blog began with a few posts asking teachers to reflect on salient issues in the AP program at TCHS with hopes that the blog would expand to include teacher resources and solutions to eliminating deficit thinking amongst teachers and students in AP classes.

Author Reflection

Again, in our work developing interventions, I felt frustrated with my own leadership. I often had tremendous self-doubt and worried that the research would not be meaningful to myself, my AR Team, and my school. During this time, I realized I was relying on much of the support from another colleague in my Ed.D. Cohort. She was experiencing some of the same difficulties, and we would share our frustrations and then work to advise one another how we might better facilitate our research.

As a leader, I learned that I will not have all the answers and I will doubt my ideas. For myself, I find that sharing my difficulties and doubts with a close colleague is incredibly helpful as I sort through my work process. In any discussion, I try to put the onus on myself in regards to whatever might be going on. It can be easy to use the discussion to simply complain about the problem, but I know that if this is all I do I will struggle even more in solving the issue. It is more important to put emphasis on how I operate in the process and how this affects those around me than for me to complain. Thus, I use this time hashing out important issues with my peer to focus on how I might better serve the teachers at our school and more importantly the students. As simple as this is, sharing an issue of leadership with my peer has been invaluable to my growth as she sees the situation from an entirely different vantage point.

I have learned that having a strong network of peers involved in the same work provides a community in which to grow and learn through the experience of listening to their experiences as leaders. My circle of community now includes the members of the AR Team. We learn from our support of one another.

Table 8. The Intervention Plan

Proposed Intervention	**Action Research Team Activities**	**Anticipated Outcomes/Connection to the problem, theoretical framework**	**Proposed Timeline**	**What data will be collected to evaluate the intervention?**
Implementation of an AP Teacher Professional Learning Community	The AR team facilitated the AP PLC with the AP Coordinator, also a member of the AR team at the helm of facilitation	Teachers realized the issue of deficit thinking was evident and began to look for ways to change this thought paradigm to more productive and positive thinking patterns in regards to the student demographic group studied (low SES, gifted)	August 2015-December 2015	Interviews, surveys, journal entries from the blog, meeting minutes
AP Blog	The AR team created a safe space for teachers to "talk" outside of the PLC on a password protected blog	Teachers realized the issue of deficit thinking was evident and began to look for ways to change this thought paradigm to more productive and positive thinking patterns in regards to the student demographic group studied (low SES, gifted)	August 2015-December 2015	Interviews, surveys, journal entries from the blog, meeting minutes
AR Team	Met to discuss the achievement of GSLIP in AP classes and to spread this information to our peers through the blog and the PLC	Teachers realized the issue of deficit thinking was evident and began to look for ways to change this thought paradigm to more productive and positive thinking patterns in regards to the student demographic group studied (low SES, gifted)	August 2015-December 2015	Interviews, surveys, journal entries from the blog, meeting minutes

Taking Action: August 2015-December 2015

As mentioned earlier, a funny thing transpired as we journeyed through what we thought were our cycles of action research or our interventions. The AR team began to realize that the most important work was materializing amongst each other—we were the intervention. Through our work on the blog, we began to document our own movements of thought from one that relied more on deficit constructions to one that investigated evidence of deficit thought in order to find ways to eradicate these types of thoughts from our school—a theory of asset based thought. During work in AR Team meetings, we discovered strategies for moving away from deficit thought while concurrently developing a more social justice theoretical stance in the reflection on our school and on our student impact.

The AP PLC. One of our first true interventions central to this research was the creation of the AP PLC. The AR team decided we needed a more formal environment where AP teachers could meet to discuss relevant issues within the AP program. In addition, we hypothesized that the creation of the PLC would give the AR team a platform from which to discuss teacher deficit thinking in regards to our GSLIP. From our own self-analysis, we had experienced the importance of process sharing when working to deconstruct deficit mindsets. The AP Coordinator, Charlie, led the PLC meetings. In the first meeting they defined teacher deficit thinking and then developed norms to help deconstruct deficit thinking and in an effort to ensure the safety for all members in the PLC.

The PLC developed into a positive intervention that shone a light on teacher deficit thinking among AP teachers. It gave teachers an environment to work on shifting their own mindsets toward more asset-based thinking. However, we soon realized that

meetings would often shift to other issues regarding the AP program. At times deficit thinking was pushed aside in the monthly meetings. I asked Charlie about why this occurred,

> *Because we'd never really had a truly defined AP PLC before, I think we were running behind on all that we needed to accomplish. It wasn't that teacher deficit thinking wasn't important. It was just that paying for AP exams and getting resources for our kids and our classrooms trumped it. I do think that each teacher in the PLC walked away knowing more about deficit thinking and could use this information in their classroom. I just wish we'd had more time to talk about strategies to help us get rid of it ourselves and then throughout the [AP] program.*

The PLC was a beginning, but we needed to create more successful interventions within our AR team.

Building the Blog. The AR team set out to conquer the world and implement countless interventions on our journey to do so. Even though we possessed a myriad of ideas that ran the gamut from parent partnership meetings to a complete overhaul of our school culture, the intervention that became the most meaningful was not initially created to be an intervention at all. Rather, we decided to form a way of communication on a private blog so that we could constantly be in touch even when we were no longer working in the same building. I set up the blog in August 2015 with broad and overreaching questions: *"What do you think are some of the strengths of our AP program currently? What are some of our weaknesses?"*

I began with a broad question in an effort to make teachers feel comfortable in their navigation of the blog with a question; thus, I posted a question that we had already

discussed but asked teachers to expand on that discussion. I originally asked every AP teacher to participate in posting on the blog. I felt that some of the participating teachers may not have every experienced posting on a blog, so I was cognizant of making access as easy as possible. While this was intended to be a mode of communication to serve as a record of the team's work now that the team was geographically separated, the blog developed into an intervention to expose and deconstruct deficit thinking among its participants.

While a few other AP teachers posted at its inception, it soon seemed that only the active members of the AR team felt compelled to post, and I had intended to create a forum for everyone. I was disappointed in the intervention and unsure that the intervention would make a difference. Once I got over my disappointment, I realized that the limited participation of the AR team members meant that I had the ability to post some very thought provoking questions because we had already developed relationships of trust between one another. I decided to see the limited participation as an opportunity rather than a stumbling block.

As I realized that I could probe more deeply into deficit thought with my team members because we already possessed established relationships, I also became conscious of the power we had in exploring our own issues of deficit thought and how this exploration might work to pervade the AP program as a whole in shifting teacher thought. Teachers on the AR team were teaching six of the twelve AP courses offered at TCHS that fall, so we already comprised a large percentage of AP teachers. I also learned that two of the other five AP teachers were already operating at higher levels of asset-based thought.

They had the best AP scores overall and were already fairly successful in growing achievement among their students.

Our first real discussion about overcoming deficit thought came from the prompt:

> *Educators cannot change the home environments of their students. They can, however, understand them, accept them, and consider the experiences they bring with them to the instructional program. Expecting less of poverty is not the answer. Offering the kind of support they need to meet the expectations is the answer. To survive in poverty requires great strength (Payne, 2013, p. 264).*
>
> *How do you think we might support our gifted students living in poverty? How can we help them meet expectations?*

Charlie responded,

> *In my opinion, this goes back to the hierarchy of needs [Maslow, 1954]. First, we have to support them by creating a school environment that feels safe and in which students are able to take risks—dare to fail. That has to begin with their first school days. Second, we can help them by modeling [our own success]; scaffolding learning for students to achieve that success and providing the opportunities they need to get there.*

Bryan then chimed in,

> *Successful learning depends on children's self-efficacy beliefs and parents' academic expectations for their children, especially among low-income families (Stenberg et al., 2001).*

This makes me think that, at an early age, the parents of gifted students living in poverty (GSLIPs) should be coached and mentored about their expectations for their gifted children. It also makes make think that our GSLIPs would benefit from counseling and mentoring as well. I also believe that a bigger partnership with UGA might provide unique opportunities to support and motivate our GSLIPs.

A program I worked for at Presbyterian College was called CHAMPS (Communities Helping Assisting Motivating Promising Students) was a very intensive but effective program targeting disadvantaged but bright children starting in 7th grade. Parts of the program included a two week camp at the college (many of the local teachers taught courses at this summer camp), monthly meetings/seminars, college mentors (that lived with the students during the summer camp, but also saw them monthly afterwards), a fathers council (to counsel fathers and get them more involved), community service projects, character education (local churches were very involved in this program), internships for the older students, and very dynamic founder who worked like a mad man. I am pretty sure near 100% of the students in the program went off to college. The program was expensive for the college, but also funded by grants from major corporations. The program was an example of the college's motto: Dum Vivimus Servimus (While we live, we serve). It was also an example of the "It takes a village" concept.

We were on to something within our work on the blog. I had left the four walls of the school, but I was still able to have incredible conversations about GSLIPs and how we might affect their achievement at TCHS. My reply to both Charlie and Bryan,

> *So, I think we agree that it takes the community to really affect change in GSLIPs achievement, but in the parameters of our research, how might we positively affect our gifted students by tackling the problem of teacher deficit thought? How do we get everyone on board with the "it takes a village" concept without allowing teachers to blame parents or students for underachievement? In essence, how do we get teachers to understand that our GSLIPs face problems sometimes larger than other subgroups we serve and that they need more support?*

Janice immediately responded,

> *First, I think we use our PLC to discuss some of these issues. We were all kinda shocked when we started to see the evidence of deficit thought at [TCHS], so maybe it's time to shock all of the AP teachers instead of just us. I think that seeing the data that deficit thinking exists might help some teachers deal with it more directly. Second, maybe we should do a book study using Ruby Payne or Richard Valencia? We could use that as a platform to really make change for our kids.*

We continued to discuss this particular topic finally deciding to adjust the next AP PLC meeting to focus on some of Payne's work about working with kids in poverty and Valencia's work in dismantling deficit thinking.

We knew that we were on our own in our work against deficit thinking at TCHS, but we felt that the blog helped us through our own struggles and helped us in becoming mentors (even if unwanted) for other teachers on our faculty. The blog was a great arena for hashing out our work, but the best work came with the actualization of the movement

away from deficit-based teaching, which stemmed from the blog. We hypothesized that the blog had the power to not only affect the AR team but also to then affect other teachers in our school (see Figure 3).

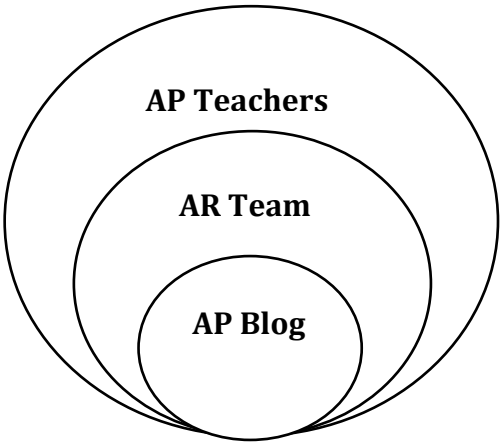


Figure 3. The Blog as the Ripple Effect

Action Research Team. In our initial plan of interventions, we did not set out for our work as an AR team to also function as an intervention for the problem at hand; however, as we continued our work reflecting on teacher deficit thinking and how it manifested itself in our own experiences, we realized that we were actually an intervention. Drawing upon McKenzie and Scheurich's (2004) strategies to deconstruct deficit thinking along with Theoharis's (2007) findings in his study, we began our own work by analyzing how deficit thinking became observable in our own classrooms. We all admitted that we had, at one time or another, established a preconceived construct in regards to a specific student's achievement based on the student's socioeconomic status. While we were ashamed, we also wondered how much of the overall school culture which embodied teacher deficit thinking as a norm was an influence on our own thoughts.

From discussions, we quickly realized the need for the analysis of our own actions and decided to interview one another in order to better understand the operation of teacher deficit thinking within our school. We trusted that this understanding would not only help us dismantle deficit thinking in our own practice, but also eradicate it on a larger scale.

Coghlan and Brannick (2014) discussed how being too close to the issue and people in the work might create problems in alleviating participant bias from the work. Given their research, I was convinced that we needed to conscientiously develop a protocol in which all members of the AR team felt safe and supported in the analysis of our own practices, much like the protocol we developed at the beginning of our AR team meetings. We suspected that the work of self-analysis would be worth any conflict we might encounter because it would provide us with potentially rich data. We also conjectured that this particular work would help to build ethos in persuading other teachers to join in future work regarding teacher deficit thinking. We predicted that other teachers would feel less threatened if we included ourselves in the analysis of deficit thinking and how it was affecting our GSLIP population.

And It Grew into a Life of its Own. Much of what occurred through the work of our AR team came about organically and I, as the leader of the research, became a consultant to the work rather than the leader of it. I believe that this partly occurred because I no longer worked in the school so, naturally, I could not play such a large role; however, I also sensed that the work became so important to the other members of the AR

team that they could not leave it—they felt a responsibility to themselves and our students to continue to work on this problem.

We had already established the formation of an AP PLC for all AP teachers. Our goal was to deconstruct teacher deficit thinking while also tackling other, smaller problems with our current AP program. Within the PLC, the AR team took a larger leadership role as they worked to help the AP Coordinator, Charlie, to improve the AP program. They continued to lean on one another as they encountered issues in the development of the AP program. With the examples of deficit thought posted on the wall of the meeting room, a shift occurred. The PLC, which had in previous years been a complaining session, transformed into a place where actual work would occur.

We had preliminarily thought, during our early work on the blog, that our work would be the impetus for our continued work as an AR Team which would then affect AP teachers. While the blog did have a positive effect on our work, it did not become the focal point. The center of the work still lied within our AR Team. We became emboldened by the importance of the AR Team in shifting away from teacher deficit thought and how we might utilize our own experiences to make a larger impact on teachers. The blog became a tool for the real work needing to occur.

Conclusion

Experiencing action research together as a team provided each member with an environment for growth. Charlie became the AP Coordinator. Janice moved into a leadership role within the Response to Intervention framework, and Beverly became a part-time instructional coach for teachers at TCHS. Bryan remained ready and willing

while continuing his contributions to any positive work within the school. The AR team formed deep bonds with one another. Even after the study concluded, team members continued to rely on one another for professional advice, often emailing each other throughout the week.

Each member of the AR team journeyed to explore difficult questions in an effort to solve problems with education. My own experiences throughout the action research process taught me a framework from which to operate as I work through current problems in my new school. I now try to gather as much information as possible before I develop an intervention. In the past, I liken some of my interventions to throwing spaghetti up on a wall to see if the noodle sticks; I would just act. I am much more cognizant now of the importance of seeing the whole picture before developing the intervention.

In education, where the stakes are so high because they involve students, it is so easy to act before knowing—we become driven to just "fix it." Unfortunately, this acting without knowing often results in interventions that are not effective, which only takes time away from the development of effective interventions. Acting with knowledge serves all stakeholders much more than throwing spaghetti on the wall.

CHAPTER FIVE

FINDINGS

This chapter focuses on the three research questions which guided the AR team's data collection and analysis of how teachers' deficit thinking was affecting our GSLIP students' achievement: (1) How does deficit thinking by teachers affect the achievement of rural, gifted students of a low SES?; (2) How does the action research process of developing and evaluating interventions affect teacher attitudes in regards to deficit thinking when working with this subgroup of students?; and (3) How does the action research process of developing and evaluating interventions impact the school and/or system's thoughts on this subgroup's potential to achieve?

Findings were gathered from face-to-face interviews, surveys, observations, and minutes from group meetings: both the AR Team meetings and the AP PLC meetings. In the discussion of these questions, themes related to this particular study were also identified. Table 9 gives an overview of the findings for each research question in relation to categories and subcategories along with themes uncovered.

Table 9. Overview of Findings

Research Question	Category	Subcategory
1. How does deficit thinking by teachers affect the achievement of rural, gifted students of a low SES?	Educators found evidence of teacher deficit thought in the analysis of effects on gifted, low SES student achievement in AP classes; teacher deficit thinking was affecting GSLIPs achievement in AP classes and AP tests. Educators developed an awareness of teacher deficit thinking and began to strategize ways to combat the thinking.	• Understanding of deficit thinking • Understanding of how deficit thinking was impacting student achievement • Analysis of student and teacher data conveying deficit thought • Educators as agents of social justice
2. How does the action research process of developing and evaluating interventions affect teacher attitudes in regards to deficit thinking when working with this subgroup of students?	Action research and inquiry gave teachers ownership over the exploration of teacher deficit thought Teacher attitudes shifted with an understanding of deficit thought and its effect on student achievement	• Individual learning • Mindset shifts • Trust in group work
3. How does the action research process of developing and evaluating interventions impact the school and/or system thoughts on this subgroup's potential to achieve?	Action research and inquiry impacted learning on various levels individually and within the school	• Individual learning • Group learning • Organizational learning

Teacher Deficit Thinking: The Effect on Student Achievement

The first research question focused on how teacher deficit thought might affect GSLIP achievement in the AP classroom. We detected the existence of deficit thinking by teachers when we collected data from the School Culture Survey (see Appendix B for full

results of survey). We realized that teachers felt disconnected from students and parents in terms of achievement goals. To test our hypothesis that teacher deficit thinking was an issue affecting student achievement at TCHS, we interviewed five AP teachers: Mrs. Johnson, Mrs. Waldroup, Mr. James, Bryan (AR Team), and Janice (AR Team).

In addition to these five interviews, we also surveyed AP students to better understand their perspectives on teacher expectations and to ascertain how teacher deficit thinking might affect their overall achievement in AP classes. Once we conducted the survey, I interviewed three AP students (two juniors and one senior) and subsequently asked the three to record their experiences in AP classes in weekly journal entries.

Teacher Deficit Thinking

Research Question One:

How does deficit thinking by teachers affect the achievement of rural, gifted students of a low SES?

Understanding Deficit Thinking and Its Impact on Achievement

In the exploration of deficit thought, its manifestation and its effects on students, data uncovered a direct correlation between teacher thought paradigms and AP student achievement (see Table 10). AP classes led by teachers who often operated from a fundamental space of deficit reported lower overall scores on AP tests than those teachers who did not elicit as much deficit thought—they functioned from a more asset-based thought paradigm. AP teachers possessing higher levels of deficit thought paradigms were initially identified through the school culture survey. Once the survey was given, the research team conducted interviews to further ascertain information about deficit thinking at the school.

Table 10. Teacher Deficit Thinking: The Effect on Student Achievement

Research Question	Category	Subcategory
How does deficit thinking by teachers affect the achievement of rural, gifted students of a low SES?	Educators found evidence of teacher deficit thought in the analysis of effects on gifted, low SES student achievement in AP classes; teacher deficit thinking was affecting GSLIPs achievement in AP classes and AP tests. Educators developed an awareness of teacher deficit thinking and began to strategize ways to combat the thinking.	• Understanding of deficit thinking • Understanding of how deficit thinking was impacting student achievement • Analysis of student and teacher data conveying deficit thought • Educators as agents of social justice

While all teachers surveyed and interviewed demonstrated evidence of deficit thought paradigms through the survey and/or interviews, the research team discovered that teacher mindset was not stable. Rather, it shifted on a scale from deficit thought to asset-based thought depending on the situation and, more importantly, how self-aware the teacher was in regards to noting when deficit thought appeared (see Figure 4). Beyond teacher self-assessment, student perception was utilized as a key indicator of teacher deficit thought. Student perception was validated by teacher interviews and observations. A survey was also conducted for validation (See Table 11). Data from journal entries and the student survey indicated the direct correlation between teacher attitude of student performance and actual student performance.

Table 11. Student Survey Results (Students Living in Poverty)

Student Survey N=17				
Statement	Strongly Disagree	Disagree	Agree	Strongly Agree
1. I feel supported in my AP coursework by my AP teachers.	7	5	2	2
2. I feel supported in my AP coursework by my other teachers who do not teach AP.	2	3	7	5
3. If I have a question in my AP class, I can go to my parents for help.	2	5	6	4
4. If I need extra help in an AP class, my parents will help me find a recourse outside of school (e.g. buy an AP test study guide).	3	6	4	4

Teachers operating from more of deficit thinking mindset in comparison to an asset-based mindset also scored lower on the TKES rubric in regards to Positive Learning Environment. When comparing AP teacher scores from observations, the researchers noted that AP teachers possessing lower student scores on the AP exam were more likely to score a 2 (rated from 1 to 4) in the Positive Learning Environment strand on at least one formative observation throughout the school year[3]. The state of Georgia defined a score of 2 on Positive Learning Environment as "the teacher inconsistently provides a well-managed, safe, and orderly environment that is conducive to learning and encourages respect for all" (Georgia DOE, 2015b, p. 39). Due to privacy, the school administration did not release any commentary from individual teachers' rubrics, so the AR team hypothesized that some of the 2s were in result of teacher attitudes toward students. An

[3] It is important to note that no 2s were given on any summative assessment for individual AP teachers; they all scored 3s or higher.

interview of TCHS's principal, who has observed each teacher in the building at some point, was conducted to ascertain more information. When asked if he observed teacher deficit thinking during instruction, he stated:

> *Most of our teachers are great here and they work hard to support students. But in every school I've been in there is always a few teachers who are less supportive of kids. There are teachers who make me wonder why they went into education. That is true here. There are some teachers who operate from your definition of deficit thought (Valencia's definition). I didn't really know that this is what it's called, but it does exist. I see it more when teachers have higher numbers of low SES students in their classrooms, and I have witnessed this in action in the classroom. Moreover, I have heard second hand accounts of this happening from students and parents.*

From the principal's statement and the data from the TKES platform, a correlation was established between teacher deficit thought and student underachievement.

Figure 4. Continuum of Teacher Mindsets

In AP teacher interviews, the team uncovered that one of the lowest performing subject areas, AP Statistics was being taught by a teacher, Mr. James[4], who showed higher evidence of deficit thought on the survey and in interviews (see Table 12). When asked question four of the interview questions: How do you see deficit thinking affect our gifted

[4] All names used in this section are pseudonyms.

students living in poverty who participate in our AP program, the teacher said he did not see any evidence of deficit thought in his own work and the work of those immediately around them. He then went on to explain, *"There are kids that I teach who do not choose to learn. They don't care about their education—don't see the value in it. Why should I care more about their education than they do? I won't [care more than they do]."*

This particular teacher had a reputation among other teachers as only wanting to teach the most academically advanced groups. When he taught lower level math classes, he became frustrated and sent an inordinate amount of students to the front office, 14 students were reported to the front office in Spring of 2015 (Infinite Campus, 2015). His feelings manifested in the AP classes he taught as well. He mentioned that,

> *I don't think AP is for everybody. We just let anyone sign up if they want and then what I get is a mixed bag of abilities that make it impossible for me to teach. You can differentiate all you want, but if I have kids who shouldn't be placed in AP, they are not going to be successful.*

When further questioned about his perception of who his lower achieving AP students might be, he said,

> *Most of the kids I have don't have any family support at home. Their parents didn't graduate from high school, and they don't see the value in supporting their kids to do differently. A lot of the parents of these kids work menial jobs, if they work at all, and their parenting skills seem to be lacking. Sure, I might teach a few students who come from stable homes and can do well, but I have a large amount that don't and I can't fix all their problems in 12th grade so that they can learn statistics and pass the AP test. The problem began way before they ever entered my door.*

The AP Statistics teacher's[5] scores reported three students as passing with a 3 or higher on the AP Statistic test taken in the Spring of 2014("AP Scores," College Board, 2014a). The teacher had 27 students on his roster that year, and only eight students chose to take the test (Infinite Campus, 2015). By the time this research was conducted, students had moved on to college so no interviews were given to find out possible reasons for them not taking the AP test or for not doing well on the test; however, current AP students were questioned in regards to their reasons for not taking the exam. They listed the cost of the test and not feeling prepared as the two biggest reasons for abstaining from testing. One student, Julia, elaborated,

> *I usually take between three and four AP classes a year. My family can't afford to pay $300-400 for me to test. My mom tells me to take the AP test that I think I'll do the best on. That's usually English…that's my strength. My tenth grade year, I thought about taking the AP World test but Mrs. Campbell kept telling us how hard it was and kept giving us statistics showing that a lot of kids don't get college credit. When she'd get upset with my class, she'd really tell us that we had no chance of passing the test—especially because we didn't all always do all the homework. But she gave us, like, 2 hours of homework a night. After the first couple of weeks in that class, I just did what I could to get by. I just felt discouraged. I didn't want to waste the $90 to just fail.*

[5]This particular teacher has moved on to teach at the junior college level shortly after the last cycle of research. In his exit interview for this research study he mentioned that he was looking for a job where he could teach students from different backgrounds than the students he was currently teaching.

Table 12. Themes from AP Teacher Interviews

Interview Question	**Themes That Emerged**
1. Who are you and what is your background? How long have you taught AP course? What AP courses have you taught?	Five AP teachers who ranged from two years to eleven years of experience in teaching AP courses. AP Language teacher; AP Statistics teacher; AP Environmental Science teacher; AP Chemistry teacher; and AP US History teacher
2. What is your interpretation of "deficit thinking"?	Only one teacher, the AP Language teacher, had any prior knowledge of deficit thinking. She positioned it in racial bias. The other three were not sure of the term.
3. Richard R. Valencia (2010) discusses deficit thinking as "blaming the victim" for failure in education, the blame being rooted in race and class bias. What are your thoughts? Do you think that we have some school structures in place that prevent our students living in poverty from achieving at higher rates?	Once given the explanation of the term, all five teachers agreed that deficit thinking is a real problem in education. Three of the four agreed that it exists at TCHS in relation to students of poverty. One of the teachers, AP Statistics, did not perceive to see any evidence of deficit thinking in his classroom, but he did see show evidence of deficit thought in his comments about achievement in his classroom.
4. How do you see deficit thinking affect our gifted students living in poverty who participate in our AP program?	All but one teacher (the AP Statistics teacher) agreed that deficit thinking might be negatively affecting our gifted students living in poverty. The hypothesized effects included lower expectations of these students yield lower results, curriculum changes due to lower expectations leave students not as prepared for AP tests, and two of the teachers mentioned that they felt that lower teacher expectations were creating a culture of lower achievement among GLIP students.
5. If you see an issue, do you have any idea for how to address it?	• Creating equity among expectations for all learners. • Challenging students in coursework while scaffolding support for those who need it • Clear discussions of deficit thinking and its role in learning when individual professional learning communities meet • Analysis of language use • Partnering with parents who live in poverty to provide them with tools to help their students academically

All the teachers we interviewed, except one, admitted that they had participated in deficit thinking in regards to various student groups. Two of the teachers mentioned that they felt that the entire AP program at TCHS was lowering expectations for students. Mrs. Johnson noted,

> *I feel like we keep lowering our standards trying to increase student achievement, but I think we're going around it the wrong way. I believe that kids will rise to the expectations we set for them. If we want to keep an open enrollment policy for our AP classes and we want to maintain rigor and increase achievement, we can't water down the curriculum so that kids pass. Our kids now register for AP classes because they get ten extra points on their grade—not because they want to take the test or learn. We have to change the culture of the AP program here. Not to make it exclusionary, but to show that AP classes are hard work but it is worth it, especially if they can get a college credit. Right now I feel like, in a lot of our AP classes, we aren't doing this. Our enrollment numbers go up, but our achievement levels go down. And we can't just blame kids for that, we have to look at ourselves and the program we're trying to build.*

The AR Team discussed the fact that the AP program as a whole might be operating from a deficit of expectations. Many teachers mentioned that they felt as though it was their responsibility to make kids pass the class to get high school credit, which made them feel as though they had to make concessions to expectations and curriculum, which left them less worried about the students being prepared for the actual AP test. The AR team was disappointed to discover this teacher perception and recognized that teacher deficit thought might be operating on larger scales than previously hypothesized. Too late in the

research timeline to take action, the AP PLC planned on tackling this problem in future work. Their goal is to change the culture of achievement within the AP program by setting high expectations while providing better support mechanisms for students who struggle with the advanced content. They also plan on creating a homework policy that takes into account the amount of homework that can be given in an AP class.

While teachers' levels of deficit thought shifted within the course of this research study, we did notice that the more evidence of deficit thought, the lower the achievement of all students, not just the GSLIP population. When teachers on the AR team began to really investigate deficit thought and analyze it in their own practice, a change in the culture of the classrooms was observed. Members of the AR team who were teaching AP classes during this project began to notice deficit thought when it crept into instruction and these teachers began work to eliminate it. Even those who felt as though they did not possess much deficit thought realized that it did exist on larger levels than previously thought. They also wondered if it was because there existed a larger issue of deficit thought permeating the entire school. In her exit interview, Janice reflected:

> *Once I took a long hard look at my own instruction and how I was adding to the issue of deficit thinking through my own practice, I began to work to undo this type of thinking. I have a lot of kids who sign up to take AP Macro because they get the ten extra points on their GPA, and I realized that I was categorizing these kids based on my own assumptions. Through my own reflection, I also felt as though at times I had lower expectations from my gifted students with a low SES. Beginning last March, I really started to think about how I could do a better job of shifting my own mindset and scaffolding support for kids to do well. This is why I started the school*

year off with AP enrichment activities on Tuesdays and Thursdays during our remediation period. I wanted kids to see how economics works in our world, and I wanted them to have fun with it. I'm hoping that these enrichment sessions ultimately convince more of my kids to take the AP test and that it helps them do better on the test than years previously.

Another piece of data illustrating the negative effect teacher deficit thinking had on achievement came from a very valuable source: students. On the pre-intervention survey, gifted, low SES students divulged that only 32% reported feeling adequately supported by teachers in their AP classes. This data led to various informal conversations with students about how safe and supported they felt in classrooms across the school. From these conversations and from work with many of these students, three students were chosen to be interviewed and one student, Julia, was asked to journal about her experience in her AP course work as a senior. To help ensure the validity of her journals, she was asked to record her experiences as an average AP student at TCHS. She provided a wealth of evidence displaying teacher deficit thought through entries such as,

Yesterday my AP Literature teacher told us about college. He pointed to each student and asked them where they wanted to go. When he pointed to me I told him I wished to attend NYU or Georgia Tech, he suggested I consider small in state colleges. He suggested top tier schools such as Duke or UNC Chapel Hill for the other students. I wondered if it was because he read my summer essay that I quickly wrote after my summer's honors program, or because I am the only black girl in my class, or maybe it's just because he doesn't think I belong in his class. I feel like that a lot. I always feel like I don't belong in AP classes, especially in Literature where the conversation is often

on current events such as Police Brutality or Poverty. My peer's eyes always turn to me when we talk about Ferguson, as if I am the poster girl for Civil Rights. As if I have time to be the poster girl for anything. I had to request less hours at work, so that I could balance 5 AP classes. It's weeks like these that make me wish I wasn't an AP student.

Other pieces of deficit thought including deficit thought in regards to race manifested in her journal entries, which was interesting and made a strong argument that teacher deficit thought did exist and it existed in various formats. Julia reported encountering teacher deficit thinking in regards to both her socioeconomic status and her race. Her experiences supported the research of Valencia (2010) and Delpit (1995). One of very few Black students involved in AP curriculum at TCHS, Julia wrote,

This year my goal has been to organize a group for Black girls in my school. I want to help them grasp the opportunities out there for them and to just be supportive. It's been a struggle because I see how the teachers glare at me when I interact with them. I've been an outside of the Black community throughout high school and I truly believe some teachers worship me for that. Not because the group itself is bad but because they view those Black girls just as the world views Black girls: Loud, obnoxious, and useless. I'm trying to change that culture. I've tried to tone down my blackness to comfort my white teachers. I feel like it's too much for me to be Black and to be poor and to be a woman.

In another entry, Julia also discussed how expectations of AP classes did not take into account what she was experiencing as a student living in poverty.

Earlier this month we had to move back in with my aunt due to an increase in rent. I've been sleeping on the couch. Teachers just don't understand that we have other things

going on. With all my AP classes, I have an average of 10 hours of homework a night. You get used to picking and choosing what's important to you as an AP student. I'm currently working on my college applications, working with my clubs, and finishing my research from my summer honors program. These last few months have been hectic. I understand that as an AP student, I'm expected to fulfilling my duties as such, but I have real world problems to deal with as well.

Throughout interviews with Julia and two other students, further evidence of the direct correlation between deficit thought and student achievement was collected. One student mentioned that while she enrolled in AP classes, she did not ever register to take the exam because she felt as though the fee was unattainable for her family and she did not feel adequately prepared by her teachers (she gauged this preparation on her scores on practice AP tests). Another student, Jack, discussed,

Some teachers treat me different. I think they see me in the same clothes day after day or they might know my parents. I feel like there are very few teachers who see me for me and not from who I come from. My dad is in prison and lots of teachers…[overcompensate] by being too easy on me. One teacher looks at me in disgust, but I think that might be because he knows I'm gay. I don't know. I definitely feel like I get treated different from other kids by a lot of my teachers. I want to prove them wrong by going to college and getting a degree….I don't do well on AP tests because of a lot of reasons. I'm not a good test taker. I can't afford tutoring like some other students. I think that some teachers don't put much effort in getting me ready because they've already decided I won't pass the exam. I don't know. I definitely feel as though some teachers could have helped me more than they did last year.

From student interviews, it became evident that deficit thinking was having a negative effect on student achievement. While low SES was the focus of this research, data revealed the existence of student perception of negative teacher mindsets in regards to race and sexual orientation as well. Even more startling was the finding that students at the school would often absorb this mindset as their own to eventually exhibit varying levels of deficit thinking in regards to thoughts about their own achievement. Through interviews, researchers realized that students who felt as though their teachers did not fully believe in their abilities began to internalize this belief as their own. One student, Edward, explained that he started having these feelings in sixth grade when he was pulled out for gifted services in math,

> *It was the first time I really started to question my own abilities. I'd always been good in math, but this stuff was hard. I liked Mr. Moore enough, but I felt like he thought I was stupid. Now I still worry about math and if I'm good enough to major in it in college.*

As Jussim, Eccles, and Madon (1996) asserted in their research, students at TCHS were perpetuating the deficit thoughts of teachers and other adults in their lives to achieve at lower levels than they were capable. Some students had seemed to give up hope because they did not feel supported in their academic achievement by certain teachers they encountered throughout the day. As Edward explained,

> *I have this one really great teacher for AP English. She makes us think outside the box. I really love her. After I go to her class, I go to [another AP class] and in there that teacher plays favorites. I am clearly not a favorite. She also talks about how poor people create problems historically for our country…welfare. I feel bad*

because we were getting food stamps up until last year when my mom got a job at Dollar General as a manager.

Through our interviews, we also realized that a large number of kids made the decision to not sit for the AP test in May because their teachers make them feel as though they would be unsuccessful in earning college credit. Our GSLIP did not want to risk the loss of money for the AP exam once teachers communicated their predictions of failure.

Teachers as Agents of Social Justice

In the analysis of data from all sources, the AR team became frustrated with what was happening at TCHS. The student interviews generated some salient conversations about deficit thinking and how teachers might work to alleviate this mindset and in turn increase GSLIP achievement in AP curriculum. The team's realization that teachers needed to be educated about deficit thinking and how it was affecting our students, prompted the intervention construction of the AP PLC and the blog. While participation by all AP teachers waned on the blog, the PLC was able to introduce the problem that deficit thought was creating at TCHS. An AP science teacher, Mrs. Waldroup remarked,

I had never heard of deficit thinking before our discussion of it in the PLC. This is my first year teaching at TCHS and I have definitely seen this (deficit thinking) in action, and I saw it at my old school with minority kids and poor kids. I was shocked to think how I might have played into negatively affecting students and their achievement by my actions and words. I don't want my kids to feel like I don't care about them or don't want the best for them. I do want them to realize that they can do anything they want.

Another teacher participating in the AP PLC remarked,

> *I have always been disgusted by teachers in the workroom complaining about kids, but I never realized the true power that these words possess…. I have participated in many conversations that lay the blame of underachievement at students and parents. Sometimes I listened and nodded my head in agreement and other times I have to admit that I was the one saying these negative things. I thought that if I said it out of the earshot of students, it wouldn't hurt them. Now I know that my active participation in these types of conversations made its way into my classroom where I lowered expectations for certain students based on their home life…whether they were poor or had single parent homes. I feel like I let these conversations eat into my actions even if it was subconsciously.*

Almost all of the teachers we interviewed expressed shock in the presentation of deficit thinking at TCHS and were even further disturbed by discussions about how it was negatively affecting students,

> *I feel like we do so much to increase test scores and raise achievement. We all say we want our kids to do as well as they can here with us and in college, but we are doing them a big disservice by some of our language and actions. I am in awe of how we really were doing harm to kids by lowering expectations, speaking of them using deficit language, and putting the majority of the responsibility of achievement on the kids—at least when they didn't perform. After our first meeting, I went back to my classroom and explained our meeting to my co-teacher. We agreed that we saw this kind of stuff happen with the kids needing special education services, but she particularly was taken back that this was happening with even our AP kids.*

Encouraged by the interviews, researchers also wondered how this revelation of information might change the actions of teachers. When teachers were asked if they had any ideas about how the issue might be addressed, they often discussed how talking about this together would help. Researchers prompted teachers further with the question*, "How do you think your knowledge about deficit thinking will affect your teaching?"* One teacher's response summed up the majority,

> *I hadn't ever heard of deficit thinking before. I knew that this kind of thing existed, but I didn't have a name for it. Now knowing what it is and how it might hurt kids…even when they're (students) not there to witness it or don't realize that it's happening…man, that has just made me very aware of how I participate in deficit thinking. I was in the workroom making copies yesterday and a teacher came in mad that only 12 of 22 kids turned in their big research paper. One of his complaints was that our kids don't care about education because their parents don't care. I listened to him and let him vent. I didn't say anything against his comments because he was angry and I didn't feel like I could do it, but I also didn't join in in agreement. I just looked at him and asked him if there might be real reasons kids weren't able to turn the paper in. The conversation ended shortly after that but I went, woah that was real deficit thinking in action.*

While teachers did not necessarily know how to deconstruct deficit thinking in others, they did begin to realize that it existed and sought change in their own pedagogical practices to remove deficit thinking from their classrooms. One teacher also offered a scholarship to help GSLIP students pay for AP tests. The AR team communicated frustration that the interventions and other work did not solve the problem but they also

realized that mindset shifts are complex and take time. The team was hopeful that they had begun a movement to remove deficit thinking from TCHS and ultimately increase students' achievement for our GSLIPs. The realization that there was power in the identification of deficit thinking in our school gave hope that teachers would begin to shift their thinking with the knowledge that it existed and that it negatively affected student achievement.

The team was further encouraged by some of the solutions teachers offered to help eradicate deficit thinking. They felt as though these suggestions might help the continuation of this work even after the formal research ended. This became the case. For example, Charlie, the AP Coordinator, utilized the idea of creating equity in the AP classroom as a platform for PLC meetings. A different teacher each month, with Charlie's prompting, presented how s/he developed equity in his or her classroom. As stated previously, he also continued to lead meetings during the summer with a focus on AP curriculum and expectations.

Action Research Effects on Teacher Attitudes

Research Question Two:

How does the action research process of developing and evaluating interventions affect teacher attitudes in regards to deficit thinking when working with this subgroup of students?

The second research question asked how the action research process of developing and evaluating interventions affect teacher attitudes in regards to deficit thinking when working with this subgroup of students (see Table 13). When the action research study began, very few teachers knew the definition of deficit thinking or were aware of its function in the achievement of our gifted, low SES learners. Throughout the study, as the

AR team struggled with deficit thinking in their own practice and those of their colleagues, they learned much about how the social construct of thought directly affected the achievement of all students. While the team set out to improve the achievement of one population, they began to realize that a larger shift away from deficit thinking was needed to begin creating a transformational school culture.

Table 13. Action Research Effects on Teacher Attitudes

Research Question	**Category**	**Subcategory**
How does the action research process of developing and evaluating interventions affect teacher attitudes in regards to deficit thinking when working with this subgroup of students?	Action research and inquiry gave teachers ownership over the exploration of teacher deficit thought Teacher attitudes shifted with an understanding of deficit thought and its effect on student achievement	• Individual learning • Mindset shifts • Trust in group work

The work of the AR team was rooted in action, observation, and reflection. They utilized Coughlan and Brannick (2014) as they continued work as a team,

> The experience of groups and teams in engaging in the action research steps is paramount. As they engage in the activities of constructing, planning and taking action they might experience internal conflict and destructive political behavior by some members. They might struggle to reach agreement on strategies, actions, and so on. What is important is that groups and teams learn to reflect on their experience in terms of how they function as groups and teams. (p. 103)

The team did not fail to disagree or to challenge one another, but they did so using norms previously established together. They all felt very strongly about the topic and

intended to utilize these convictions to develop appropriate interventions in helping increase the achievement of the GLSIP population.

Attitude Shifts of the Individual and the Group

As individual teachers, participants remarked on deficit thought at the beginning of the research and at the end. Each participant agreed that s/he had grown in the knowledge of this theory and how to dismantle it. While no one participant felt as though the work was done in his/her own classroom or the school at large, each agreed that the conversation of deficit thinking had changed their teaching philosophies to become more inclusive, more culturally competent, and more aware of ways deficit thinking manifests in their own classrooms. Table 14 discusses the findings.

Table 14. Participant Reactions to Deficit Thought

Participant	Participant Reflection on Deficit Thinking in His/Her Classroom
Janice	*When I first started coming to AR team meetings, I had no idea of what deficit thought was or that I might be contributing to it in my own classroom. I was shocked as I began to look at my own practices. I was embarrassed to remember saying statements like "There's no way that kid is going to get a 3 or higher on my AP exam." Through our work together, I feel as though I am much more aware of deficit thinking—and I think that the awareness part is a huge piece as I work to create a more equitable classroom.*
Beverly	*As a Ph.D. student myself, I knew about deficit thinking from reading works from bell hooks and other theorists. I had heard other teachers make remarks that were negative and was able to see evidence of deficit thought in our school. I've always worked very hard to be culturally competent in my classroom to create a safe environment for my students. However, my participation in this study has given me a new understanding of how deficit thinking is directly affecting the students I teach.*
Charlie	*I didn't have any inkling of what deficit thinking was or if it existed in our school. Our department's mantra is "Si se puede; yes we can" so I feel as though we, more than other departments, have supported a culture of high achievement in our classes. We don't offer any AP foreign language classes, and I've started to ask myself if deficit*

	thinking [by teachers and administrators] might be one of the reasons we don't.
Bryan	*Before this experience, I don't think I ever really thought about deficit thinking. Since we've worked together, I understand it much more and I have a better understanding of its operation in our school. I truly believe that our AP program will not every be as successful as we want it to be unless we keep looking into deficit thinking and our thoughts on our students living in poverty.*

As exit interviews were conducted with the AR Team, the researcher noted that many of them discussed how the process of action research allowed them ownership over the project. Working together to solve a problem motivated them to more actively participate in the research. Beverly said,

> *It's a little funny because this whole project became all of ours—it was our baby. We knew you (author) would be writing it up, but we felt passionate about creating a shift away from deficit thinking. We all care about our kids, and we felt a responsibility to them to tackle this problem.*

Charlie also noted,

> *My experience with all of you made me so much more aware of AP programming, etc. Our work together also illustrated that we, just a group of regular teachers, can create change in our school if we want it. I've used this experience and the knowledge I've gained to help me lead the AP teachers as the Coordinator. I love that all of our work can continue.*

As the lead researcher, I believe that the process of generating the theory for our research together helped to create this sense of ownership. We really were all in the process together, examining data and creating hypotheses for the why behind the data. Sometimes we would go off track in excitement and begin to take on more than this

research study could hold, but we soon learned to realize when this was happening and curtailed it with a focus back on the research questions. I listed these questions on every AR meeting agenda and frequently one team member or another would redirect the group with a questions like *"But does that really give us data for any of our questions? Is it valid to our research?"* Through our experience of struggling together to articulate a theory, we became much more dedicated to our work as a group. We knew we had a problem, and we were eager to attack it.

Mindset Shifts

While the AR team did not achieve our ultimate lofty goal of removing teacher deficit thought from our school, we did sense shifts of mindset among ourselves in the AR team and among other AP teachers. In exit interviews participants discussed how the action research process helped them to develop a growth mindset. Dweck (2006) defines growth mindset as being "based on the belief that your basic qualities are things you can cultivate through your efforts" (p. 7). When I recruited the members of the AR team, I sought out teachers who I felt possessed a growth mindset. I did not realize this at the time. It was only after I began reflecting on our work together that I realized we all possessed varying levels of the growth mindset. When I asked participants to tell me about their individual perspectives on growth mindset and then asked them to discuss whether they felt as though they had shifted even more in their mindset toward growth and away from fixed, four of the five of us felt as though the AR process had helped to further develop a growth mindset. Janice remarked,

> *To me growth mindset is about not giving up. I discuss this with my students. They need to develop grit or perseverance to be successful. My experience with our group*

didn't make me develop a growth mindset, but it did further develop the growth mindset I already possessed. I learned so much about keeping to the task at hand, especially when we were trying to figure out our theory and then our interventions. We had some bumps, but we banded together to persevere. We used our growth mindset.

When I conducted exit interviews with other AP teachers, I asked them about how our research affected their attitudes. I also mentioned growth mindset. All of the AP teachers who participated in the PLC were positive about the AR team's work. Each of them felt as though our AP program as a whole would be better for it. When I asked how the research affected their attitudes toward gifted students living in poverty, most responded that it had a positive effect. Bryan remarked,

> *I don't know if we have even gotten close to solving the problem of gifted kids with low SES underachieving in AP classes. I do think that the work has begun, and it wouldn't have happened without your research process. Now we know that there is an issue. We know that teacher deficit thought is one of the causes. Knowing this will help us as we move forward in narrowing the achievement gap between our poor kids and higher SES kids.*

Many participants also mentioned the importance of developing and encouraging a growth mindset among both teachers and students.

Organizational Trust

The openness and trustworthiness of the AR team gave us a safe environment to analyze our own deficit thinking issues. We were open in providing evidence of our own practice, and we supported one another as we journeyed to remove deficit thinking from our own classrooms and ultimately, the school. At times, we did find ourselves making

statements reflecting deficit thought in regards to our peers. We were shocked to find that not only were we struggling with deficit thought in regards to our students, but as a team we had also gone down the rabbit hole so to speak in blaming the underachievement of our gifted, low SES students on our fellow teachers. We made statements like *"If she would just get over her preoccupation with making kids suffer and feel miserable, they wouldn't come to me the next year miserable"* and *"he says he grades his kids like they're in college, but he stinks as a teacher and uses the grades to cover that up."* To help increase our awareness as we worked, as someone began to convey a deficit thought, we would stop the conversation to analyze the statement by asking ourselves if there was any real truth to what we are saying about this colleague and how our statements might lead to a perpetuation of deficit thinking and a negative culture amongst teachers.

The development of trust within the group was paramount and helped to sustain our work. Not only did we feel that the work was important to our students, we did not want to let one another down. As Tschannen-Moran (2009) determined in her research on the effects of trust on the organization,

> Teachers' trust in their colleagues was related to the central mission of the school in important ways. Where trust was higher among teachers, teachers perceived greater professionalism on the part of their colleagues. Teachers were apparently more willing to extend trust to colleagues whom they saw as being competent, exercising professional judgement, and demonstrating a strong commitment to students. (p. 240)

Each member of the AR team communicated a high professional regard for the other members. The AR team itself came into the study already possessing organizational trust. The research process increased trust. As Beverly noted,

> *When you invited me to serve on the AR team, I was excited and honored. I mean, I saw who else was going to participate and they are all such great educators. I wanted to work with y'all. It was a no brainer.*

We had developed a good amount of organizational trust with one another.

Charlie also commented,

> *When I look back at all we've done or attempted to do, the thing that stands out the most for me is getting to work beside you. Sometimes, I feel isolated as a foreign language teacher because I don't have the opportunity to interact with other teachers outside my department. It was fun. And I saw firsthand why each of you have the reputation among students that you do…. Now you're my right-hand man/woman when I'm trying to problem solve a situation here.*

Interestingly, Tschannen-Moran (2009) also discerned that teacher trust of colleagues correlated to a higher trust of students and their parents. Knowing the importance of organizational trust within our school informed this research study in that we began to see how building more trust amongst us as a faculty might help us to dismantle teacher deficit thought as well. As the school continued to develop a more positive growth mindset, more trust among faculty members was built.

Effects of Action Research on the Organization

Research Question Three:

How does the action research process of developing and evaluating interventions designed to affect this population's achievement impact the school and/or system thoughts on this subgroup's potential to achieve?

When the study began, the AR team's focus was on AP teachers and how they were negatively affecting our gifted students living in poverty in terms of achievement. However, by participating in action research, members quickly realized the importance of the action research process to promote change within an organization. In fact, all of the AR team members cite that the actual action research process taught more about promoting change within an organization than it taught them about eradicating teacher deficit thought (see Table 15).

Table 15. Effects of Action Research on the School

Research Question	Category	Subcategory
How does the action research process of developing and evaluating interventions impact the school and/or system thoughts on this subgroup's potential to achieve?	Action research and inquiry impacted learning on various levels individually and within the school	• Individual learning • Group Learning • Organizational learning

Individual Learning

None of the members had previously been involved in a formal action research project, so member growth of knowledge in this field was great. One member said, "the process of developing interventions, carrying them out, then reflecting on the success of the

interventions is a good protocol for us to use as we continue to work on school improvement." The importance of self and group reflection became paramount in the study. Another member remarked that the action research process illustrated how cyclical learning can have a powerful impact towards change,

> *Secondary education is fast paced, and I'm not sure we take the amount of time we need before we switch something up. While I think our intentions are usually good, we do a lot of harm when we don't take the time to think through what we're doing. [Action research] forced us to do that. I will use this protocol again in future work to solve problems—both professionally and personally. The framework of this process gave me comfort in 'having a plan' even when our work was disorganized and chaotic.*

As a researcher, I not only learned about the power a group can have in executing change, I also learned how shared leadership within the group empowers members to actively participate. This action research project has been one of the most valuable experiences I have had as I work toward my goal in embodying the traits of a transformational leader.

Hoy and Miskell (2013) define transformational leaders as leaders who are "proactive, raise the awareness levels of followers about inspirational collective interests, and help followers achieve unusually high performance outcomes" (p. 449). Action research promotes qualities of transformational leadership while it encourages idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration. The action research framework provides leaders the opportunity to cultivate transformation within the organization. Through this process, I have grown into a

leader who listens more, collaborates often, and reflects always. As I continue in my career, the format of action research will inform my work as an agent of change within my school.

Group Learning

The process of this study also permitted AR team members to develop and further promote relationships with one another in an effort to sustain organizational change within our school. Because we had a positive history with one another, even if we did not work closely before this project, we were able to quickly establish rapport with one another. We felt as though we were a team; each member played an important role in the study and in executing change for our students.

Although I led the research, early in the project we worked to deconstruct any existing hierarchy among us. We all felt strongly about the negative effects of teacher deficit thinking on the achievement of our gifted students living in poverty; we were both incensed and passionately engaged in working to close the achievement gap between our students living in poverty and our students with a higher socioeconomic status. We decided to no longer stand by and bear witness or participate in the promotion of a system of inequality. Because all of us understood what and who was at risk, we quickly realized that full collaboration was key in attacking this problem and creating change.

Organizational Learning

When we began our work together, I do not think we could have predicted how we would affect the AP program at our school. While we unraveled the theory of deficit thinking in our classrooms and our school, school leaders began to see this group as a force to be utilized in creating a more successful AP program. The first step the school made in making the AP program more successful overall was to name Charlie, one of the AR team

members, the AP coordinator for the school. His work on the AR team proved his leadership capabilities to the administration. In the announcement of Charlie in this new role, TCHS's principal directly remarked that "Charlie clearly cares about our AP students and works hard to help them succeed." Charlie had no previous experience with AP programming until he joined the AR team. Every member of the AR team was incredibly excited at the possibilities that Charlie's new role would create as we continued our work to affect gifted, low SES achievement.

Another outcome of our work together came in the creation of a formal AP professional learning community (PLC) which continued after the research ended to meet monthly for kid talks and sharing of strategies and information. Before the implementation of the AR team, TCHS did not have a working AP PLC and AP teachers often went months without having conversations with one another. The AP PLC brainstormed and implemented with some great ideas to increase engagement of students in AP course work including the celebration of an AP day where each student who scored a three or higher on an AP exam last year wears his/her celebratory t-shirt to school in an effort to celebrate the success of students and to perpetuate this success for other students (See Figure 5).

Figure 5. AP Celebration T-Shirts

Our work together made a positive impact on our school, and we provided an example to other teachers to how to go about addressing a difficult problem. From watching member participation in the action research process, our colleagues saw that we were methodically working to positively affect student achievement. One AP teacher explained, *"from the beginning I knew that your group was using data to inform your process."* He then went on to discuss how this helped us establish trust with other AP teachers,

> *You weren't just flying by the seat of your pants, creating busy work that might actually work. You had a plan. You weren't sure that it would work, but you had a plan…and that gave you the ability to reflect on why something did work or why it didn't. I liked the structure around that.*

Answering the third research question of this study became the most important learning process within our research. Together we determined that individual learning in hand with that of the organization promotes positive change. Watkins and Marsick (1993) discuss the importance of "empowering people toward a collective vision" in organizational

learning (p. 83). This empowerment helped to develop shared authority among members of the organization and establish stakeholder buy-in. As Senge (1990) explained, “places where participants continually expand their capacities to create and achieve, where novel patterns of thinking are encouraged, where collective aspirations are nurtured, where participants learn together, and where the organization expands its capacity for innovation and problem solving” (as cited in Hoy & Miskel, 2004, p. 6).

CHAPTER SIX

ANALYSIS, CONCLUSIONS, AND IMPLICATIONS

The purpose of this action research study was to explore teacher deficit thinking and its effects on the student achievement of gifted student living in poverty in a rural area. The research questions guiding this study were:

(1) How does deficit thinking by teachers affect the achievement of rural, gifted students of a low SES?;

(2) How does the action research process of developing and evaluating interventions affect teacher attitudes in regards to deficit thinking when working with this subgroup of students?; and

(3) How does the action research process of developing and evaluating interventions impact the school and/or system's thoughts on this subgroup's potential to achieve?

This chapter serves as a summary of findings from participants in this study: Advanced Placement teachers along with one Foreign Language teacher, as they worked together to address teacher deficit thinking in regards to gifted students living in poverty (GSLIP) at a rural high school. In addition to the summary of findings, major conclusions from the study along with implications in regards to theory and practice are provided. Finally, this chapter concludes with recommendations for future research on the effects of teacher deficit thinking on the achievement of gifted students living in poverty.

Study Summary

This action research case study utilized a variety of data collection methods, such as interviews, surveys, and blog entries. The action research team (AR team), comprised of five members, worked together for over a year to attack the issue of underachievement of gifted students living in poverty attending a rural high school in the south. During the beginning stages of analysis, the AR team generated the theory of deficit thinking as the framework in studying this student group's underachievement. All members of the team worked closely to examine teacher deficit thinking in the school where they worked. The data collected from this analysis was then employed in the formation of interventions. All team members participated in the interventions established.

The impetus for my interest in studying the underachievement of gifted students living in poverty began in my work as a high school English teacher in the rural South. Before this study, I witnessed a disconnection between some of my best students and the education they were receiving. While I had previously experienced teacher deficit thinking in practice at my school, I had no idea the extent it was having on the GSLIP population at TCHS. I also previously considered teacher deficit thinking as an act by other teachers, not something that I personally needed to address in my teaching practice. However, through our work as an AR team, I was able to recognize that most teachers possess varying amounts of deficit thought when it comes to student achievement, and that every teacher must work to identify its presence in our own classroom. Only after teachers become able to pinpoint deficit thinking, can we begin to erase it from our classrooms and our schools.

While the AR team worked to overcome teacher deficit thinking in our school, we discovered the action research process in its entirety was the catalyst to promoting real

change. We came together as individual teachers who cared about our gifted students living in poverty, and we left the action research experience as a tightly knitted community who continued our work together in tackling other problems we encountered in our educational careers, even as the team became geographically separated.

The aim of our study was the improvement of the achievement of our gifted students living in poverty, but we left the study with so much more: a new understanding of our organization's culture and how we might create cultural shifts, the ability to form and maintain a cohesive group of all Advanced Placement teachers working with the common goal to better the AP program as a whole for all our students, and the knowledge of employing the action research model in an effort to find solutions to problems encountered the organization.

Teacher Deficit Thought and the Effects on Students

Utilizing a theory-generating technique in our attack of the problem of underachievement of GSLIP in Advanced Placement classes and on Advanced Placement exams, we were overcome with evidence of teacher deficit thinking. In fact, the data collected from the School Culture Survey (see Appendix B) and the coding of interviews convinced the team that teacher deficit thinking was an active practice at TCHS, with the result of a negative effect on student achievement.

We uncovered two major findings related to our first research question, which analyzed the effects of teacher deficit thought on GSLIP achievement. The first finding resulted in the discovery that teacher deficit thought created a larger environment of low expectations for both teachers and students, which in turn became a factor for the underachievement of our gifted students living in poverty.

Through our first research question we also realized that teacher deficit thought perpetuated deficit thought in students. Students who felt that teachers did not fully support their academic achievement or felt that teachers had lower expectations of them in comparison with other students began internalizing these thoughts as their own. GSLIP reported their own feelings of inadequacy due to teacher expectations, which manifested in language used, quality of work submitted, and their reported confidence in their own intellectual abilities.

The marginalization of our gifted students living in poverty did not end with that academic year, students also reported their own feelings of inadequacy in terms of academic achievement resulting in some students removing themselves from AP classes the next school year. Also, while students would remove themselves from some AP classes where they did not find much success and had experienced a classroom culture of deficit thought, the same students would continue work in AP classes where they had experienced success, i.e. many students would take AP US History and AP Language their junior year to drop the AP social studies (Economics) their senior year yet still enroll in the senior AP Literature class.

Action Research Effect on Teacher Attitudes

While the work of dismantling deficit thought in our school initially drove this research, the data collected in regards to the second research question became instrumental in the research experience as researchers worked to become agents of change within the school. Because the second question focused how the action research process affected teacher attitudes, the AR team paid particular attention to how they built relationships within the team along with other members of the TCHS faculty. Team

members learned that beginning the discussion of the effects of teacher deficit thinking on student achievement was challenging in that it required the teacher participants in the study to take risks in their own classroom behavior analysis. Team members also reported this particular experience of self-analysis as the most powerful of the entire research process.

In regards to the AR team, composed of five teachers, the process of action research had an overall positive effect on the group. First, we were able to study a topic we cared about; we were invested from the beginning. Second, we created a safe environment where we were able to push ourselves to think critically about salient issues. Finally, we encountered direct results from our work with both teachers and students. Many times we experienced immediate gratification as we witnessed subtle mind shifts among both teachers and students.

In respect to the effects on teacher attitudes outside of the AR team, most teachers involved (AP teachers) were receptive to our work. We believe that this occurred in part because we were transparent in sharing the process of our study with teachers. We offered them the opportunity to analyze the initial data from which we generated our theory, data that included AP score reports and findings from the School Culture Survey (see Appendix B). As we continued, we took time to explain to participants the theory of deficit thinking and how it might bear evidence within a school like TCHS. Most of these discussions took place in the AP PLC, which had previously established norms and purpose.

Because we were a group of teachers studying ourselves and our peers, we found that teachers trusted us more than they might trust outside researchers coming in to analyze our organization. One teacher remarked in her exit interview, *"I'm all for change if*

it's best for our kids anyway, but I also know all of you. We've worked together for awhile, and I think there is some trust that comes with that." Another teacher participant also discussed how he respected that we were teachers analyzing our own thought paradigms,

> *We all were more open to listening to you guys than if it came from the county office or even administration. Especially because you included yourselves in the problem. It wasn't like 'you all are perpetuating this negative thing and we are perfect.*

We became conscious of one of the most positive attributes of researching an organization of which we were a part—it gave us a home court advantage: we already knew our opponents, the teachers we needed to win over, and we had created a strong team. We could rely on the trust we had previously built with our participants because we worked beside them or one of us had taught the student participant in our classrooms. The action research process in this organization allowed researchers the opportunity to utilize already established ethos with participants.

The AR team also determined that participants who demonstrated positive attitudes in the research process also recognized that action research is what good educators do on a daily basis, and that our process was more formal because of what it would produce. Not only were we trying to create change in our organization, I was also responsible for reporting our findings in this paper,

> *I've worked with you closely on the integration of online learning into our school, so I know how you think. When we started the process of bringing Edgenuity to our kids, we did a sort of action research. Because we were hesitant to throw money*

> *away on a program that wouldn't benefit our kids, we went through various stages before we signed up for it. That's how I see what you all have done*.

While all teachers maintained a positive attitude in regards to the research, not all of them were as willing to participate as others. Just like many teacher collaborative experiences, we encountered some teachers who were reluctant to actively join in the study. All teachers initially gave permission to participate, but one teacher was more closed off than the others. He continued to participate when asked, but we could tell by his body language and other cues that he was doing so to check off a box. Unfortunately, this teacher left the school before I could ask him about the source of his reluctance.

Action Research Effect on School Thought Paradigms

This study ascertained that action research has a positive effect in creating change in an organization. Because of its organic nature, participants in action research are able to develop ownership over their work, which leads to higher engagement within it,

> Collaborative exploration helps practitioners, agency workers, client groups, students, and other stakeholding parties to develop increasingly sophisticated understandings of the problems and issues that confront them. As they rigorously explore and reflect on their situation together, they can repudiate social myths, misconceptions, and misrepresentations and formulate more constructive analyses of their situation. By sharing their diverse knowledge and experience—expert, professional, and lay—stakeholders can create solutions to their problems and, in the process, improve the quality of their community life (Stringer, 2014, p. 15).

The work we shared in became vitally important because it not only affected us individually, it also affected our students. The school and the system realized the

importance of our analysis, which led to most research subjects participating fully; we had the support of our organization and the support of stakeholders.

The findings from the data collected, shaped by the three research questions, inform the conclusions drawn from this study. Conclusions addressed the effects of teacher deficit thinking on GSLIP achievement; the analysis of how teacher deficit thought granted educators important opportunities to reflect on their own practice while also reflecting on its effect on all stakeholders; and, the process of action research allowed participants to highly engage in their organization.

Study Conclusions

Conclusion One. The action research process created important opportunities for educational stakeholders to develop awareness of deficit thinking in education and how it manifests itself in individual, school, and systemic levels of national policy.

Teacher Stakeholders. Teacher deficit thought, a relatively new theory, was thrust in the limelight by researchers such as Valencia (2010) and Delpit (1995). Much of their research had fallen into their analysis of how this type of thinking affected racial minority students, not white students living in poverty. In addition, at first glance teacher deficit thought might seem absurd in the discussion the achievement of our gifted students. A myth existed in the belief that teachers always held high expectations for gifted students. Unfortunately this was not the case. Gifted students living in poverty of multiple races, socioeconomic statuses, and sexual identity cited that their achievement was negatively affected because of teacher perception of the student.

Educators are taught early on to reflect on their own practice. Through this practice, teacher deficit thought might be identified. Once it is identified, practitioners can then work to deconstruct this thought paradigm in their classrooms and schools.

New Teachers in Teacher Preparation Programs. Not only do teachers need time to reflect on their levels of deficit thinking, they also need support from the school and the system. Ford and Grantham (2003) suggest that in order to move students in teacher preparation programs from deficit thinking to dynamic thinking constructs, students need more access to course work and experiences in multicultural education, gifted education, and testing and assessment.

By learning more about various cultures outside their own, teachers better understand cultural differences, such as those of class, and are less likely to view the differences as deficits; thus, they are more likely to engage in and maintain a positive learning environment for all students. Citing the monocultural education of most post-secondary schools, Ford and Grantham (2003) urge teacher preparation programs to include,

> multicultural educational experiences because educators are most responsive to diverse students when they are competent or striving to become competent in the students' culture. Just as teacher incompetence in a subject area hurts students, so, too, does multicultural incompetence (p. 221).

Ford and Grantham (2003) also suggest that new teachers in preparation programs are well schooled in gifted education in order to get rid of preconceived stereotypes and misconceptions about gifted students. Teachers often use the behaviors of White, middle class students as the basis for their classroom's code of conduct which leaves the diverse

needs of all students out of the classroom equation. Those teachers lacking strong gifted education preparation also have been shown to be ineffective at identifying gifted students (Cox, Daniel, & Boston, 1985). To deconstruct this type of deficit thinking in gifted classrooms, new teachers need better teacher preparation programs before they formally enter the classroom.

Teachers in preparation programs may also need more experience in the limitations of testing and assessment biases, so that they can better prepare their students for tests like Advanced Placement. The cultural backgrounds of students needs to be examined when teachers analyze standardized test scores. Teachers should ask themselves the following types of questions: did the test present cultural bias in questioning? Did all learners have access to test content no matter cultural background?

Teachers Currently in the Classroom. While teachers currently in the classroom need ongoing education in regards to multicultural education, gifted education, and assessment, they also require long-term professional development that allows continuous conversations in how to provide the best educational opportunities for diverse students in gifted classes. Teachers who actively reflect on deficit thinking constructs are more apt to engage in the work to rid their classrooms of these types of thoughts.

Teachers also require more professional development in regards to parent communication in the effort to build stronger relationships between families and the school (Ford & Grantham, 2003). Most school districts cite a belief in the importance of family as a central effect on student achievement. Rather than discounting families as "not caring about education for themselves or their students," teachers should operate from a more dynamic thought paradigm. Instead, they should ask themselves: what can I do, what

can we do to build better relationships with the families that we serve while more fully supporting parents in their roles as educators in the home?

Perhaps the most important professional development topic for current teachers lies in teacher reflection on how manifestation of deficit thought perpetuates deficit thought in our students. Fordham and Ogbu (1986) encountered that students internalize teacher thought as their own. When teachers hold deficit-thinking orientations about certain groups of students, students begin to question their own achievement and abilities. In order to prevent this internalization and subsequent underachievement, teachers need professional development in all the areas listed above along with learning the importance of eradicating deficit thought to promote high levels of achievement among ALL learners.

Administration Stakeholders. Administrators and other educational leaders also need education in deficit thinking and how it affects students, the school, and the system. Just like teachers, they need professional development focusing on multicultural education, gifted education, biases in testing and assessment, and building relationships with families from diverse cultural backgrounds. Furthermore, administrators need to familiarize themselves with multicultural education in order to serve as advocates for the students in their buildings.

Deficit thinking is not simply a teacher issue. It can be a source creating and perpetuating a negative school culture especially when administrators and school leaders participate in deficit thinking. Administrators have the opportunity to create a school

environment that values asset-based thinking by setting the tone for the culture of the school. As one participant in this study noted,

> *I think we underestimated the importance of administration in our research. When Dr. Dean[6] was here, I felt like we all had more positive attitudes about our work. I'm sure there were issues of deficit thought but it didn't seem as apparent as now. Going through three principals in eight months had a negative effect on our culture. I think we're just now righting the course.*

Weiner (2006) suggests that administrators focus on creating a school culture that focuses on the personal and ardently adheres to creating a positive learning environment for each and every student,

> School practices and assumptions emerging from the deficit paradigm often hide student and teacher abilities. These assumptions are especially powerful because they are unspoken. We overlook our taken-for-granted ideas and practices to an extraordinary degree (p. 42).

Administrators not only need to reflect on individual practices that promote deficit thinking. They also need to examine how school structure and school practices work to create and engage deficit thought paradigms.

Affecting National Policy. Only when educators of all levels begin to unravel deficit thinking in their practice and that of their school can educators truly advocate for the deconstruction of deficit thought on federal policy. We have come a long way from *Brown vs. Board of Education (1954)*, but we have much to do in education to ensure the equity of opportunities for all students regardless of their cultural backgrounds. By taking

[6] Pseudonyms used in this section.

a social justice stance in the education of our students rather than blaming certain subgroups for lower achievement, we will begin to see real change in schools.

In addition to a broader social justice stance, lawmakers and educators need to put a larger emphasis on place as they study school improvement. Place is a significant factor in a student's educational experience and in the reasons behind the existence of teacher deficit thinking. National leaders and educators must place as much emphasis on place as they do on race and social class to truly affect positive change in student achievement.

Conclusion Two. Teachers and other stakeholders' attitudes can be positively affected by the action research process through its use of informal learning structures.

Change naturally evokes fear in educators. For so many years, teachers have been subject to local, state, and federal mandates that did not quite fit the bill for the students schools serve. It comes as no surprise that many educators are resistant. Action research acts as a balm on educational change aversion for many reasons. The first being that action research utilizes informal learning as it works to solve a problem,

> Formal learning is typically institutionally sponsored, classroom-based, and highly structured. Informal learning, a category that includes incidental learning, may occur in institutions, but it is not typically classroom based or highly structured, and control of learning rests primarily in the hands of the learner (Marsick and Watkins, 1990, p. 12).

Because of this, educators feel a sense of ownership in regards to the research. It becomes "our work," rather than "another canned solution from someone up the line." In this study, participating teachers repeatedly remarked on their personal relationship with

the work. One believed, "the work was more meaningful because I could instantly picture the students we were trying to effect. They had names and faces. I knew some of their stories." The focus of informal learning on this study helped participants better understand the process while still working to build the project together.

Participants also remarked on how the project was generated,

> *When we first began, we knew there was an issue with underachievement and our gifted students with a low SES. We just didn't know why and we didn't know how we might positively change the school to increase the achievement. What was powerful for me is that we worked together to structure our learning. Sometimes we got off topic because we'd want to solve other problems, but those conversations were fun, too….We became a family or a league of social justice fighting heroes. We were responsible for contributing or working to eliminate the problem. I loved that!*

The informal structure of this study also promoted openness between the researchers and the participants. Because the team was studying their own organization, they came into the research having developed previous relationships outside of the study with participants. In action research, the role of the researcher is to "stimulate people to change" and "enable people to develop their own analysis of their issues" (Stringer, 2014, p. 20). Since the process is "bottom-up," participants share in the decision making; thus, participants in action research feel valued as more than a participant, but as an integral part of the research project as a whole. Attitude shifts are more likely to occur because of the democratic framework of action research. People are more open to change when they are a part of creating it.

Conclusion Three. Participating in action research promotes a group's collective vision. It is cooperative and gives researchers agency to execute change within an organization. Because of these qualities, the action research process can be a powerful tool in the execution of transformational leadership.

Action research also enabled participants to form valued relationships with one another as we worked toward a common goal. The development of relationships became paramount in our work; we needed and relied on one another to move further in taking action. There was not one person on the AR team who functioned as the leader, the authoritarian keeper of knowledge. We all built enough trust with one another to lead and/or follow when needed. We truly "reject[ed] styles of interaction that emphasiz[ed] power" and put an emphasis on our relationships with one another (Stringer, 2014, p. 25). We valued our relationships just as much as we valued the work.

The project also provided a format for continuous reflection and improvement. As educators, we are taught the importance of reflection in our practice; however, reflection can quickly be pushed to the side in exchange for lesson planning, assessing, and teaching. Action research demands reflection; it reminds educators of the value this reflection has on the ability to improve one's self or situation,

> [T]he researcher's professional context is the site for inquiry, and problems and issues within professional practice are the focus of investigation. Because the practitioner is a researcher and the professional context is the site for inquiry, the boundaries between research and practice often blur, creating unique opportunities for reflection and improvement of the practice… (Borko, Liston, & Whitcomb, 2007, p. 6)

The act of reflection becomes commonplace as one adapts an action research mindset. As one of the AR team members recounted,

> *Much of what we were doing together is just good practice overall. We need to reflect on what we're doing both in and out of the classroom in order to make positive changes. We always have room for improvement, but reflection, in my opinion, is mandatory to really effect change.*

The collaborative nature of action research also works to promote a collaborative school culture. Many school leaders turn to an authoritarian structure of school because they fear the establishment of a chaotic structure, one that promotes confusion and uncertainty. The authoritarian structure places the emphasis on rules and protocol to alleviate any issues of chaos. Action research creates a space for leaders to balance these two by providing structure and protocol but placing much of the power in decision making on the teachers of the school (Hoy & Miskel, 2013). The structure of the school becomes professional. Educators feel valued because they *are* valued as competent professionals whose contributions to the school and to solving any issues within the school are important. Action research deemphasizes the individual as bureaucratic authority and instead focuses on how each person might contribute to the whole. When educators feel valued as competent experts in their field, they work better together. Collaboration becomes common, and action research facilitates this collaboration.

The collaborative nature of action research helps to create an environment where transformational leadership might be obtained. Because transformational leadership involves all stakeholders engaging in a shared goal or vision, the collaborative roles of participants in action research lend itself well to this style of leadership. Action research

involves a key component of transformational leadership: a leader's consideration for each individual of his/her organization. Allen, Grigsby, and Peters (2015) found that transformational leadership "a key component in the success of a campus. Transformational leaders have great potential to impact a school's climate" (p. 15). Utilizing action research as a model for problem solving in a school along with a transformational leadership style may promote a positive change in school culture, which has been shown to affect student achievement (Allen, et al., 2015).

Implications for Theory

Much of the work in deficit thinking theory has aligned itself to racial bias. When scholars do discuss class bias it is often in correlation to race (Delpit, 1995; Ford & Grantham, 2003; Fordham, 1996; Valencia, 2010). This study shows the explicit need for more work to be done in regards to deficit thinking for gifted students living in poverty. The theory needs to be applied to students of all races, SES backgrounds, and achievement levels to analyze how it might manifest in particular subgroups.

An application of this theory on a diverse population of subgroups will help educators better understand how thought paradigms work to effect student achievement. Utilizing deficit thinking theory across various subgroups will shine light on dark corners of education where little research has been conducted. To truly become agents of change and purveyors of social justice, we cannot leave any student in the dark.

Recommendations

The journey of this project revealed that deficit thinking is too pervasive to be solved in a semester or two. Schools must make a concerted effort to battle teacher deficit thinking if they aim to maximize student achievement and to create a school culture that

benefits all stakeholders. The work should begin in teacher preparation programs and continue as teachers grown in their careers. Valencia (2010) gives his own characteristics in creating an optimum learning environment: (1) instill a sense of competence in all students; (2) build a learning community that encourages the membership of all students; (3) create opportunities for all students to put to use what they have learned in work as tutors, etc; and (4) make the classroom a secure place that encourages students to take intellectual risks. To do so requires that teachers give up some authority to offer agency to their students. This agency can be incorporated by offering students more choice in schools and can reach as far as allowing students to assist in forming curriculum that is meaningful to all students.

While the work to remove teacher deficit thinking from schools begins with teacher reflection, it continues with implementing a democratic response to the existence of this thought paradigm in schools. All stakeholders must play a role in understanding the effects of deficit thought on their own practices (as students, as teachers, as school leaders) and must work together to find ways to combat the "blaming of the victim" to rise beyond inequity in education and to give every student the opportunity to succeed. Once schools and the educational system as a whole begins to identify the structures and practices created out of deficit thought, the individual achievement of students will positively correlate to a system that honors the backgrounds of all students.

Future Research

More work needs to be done in the field of the deficit thinking construct. While deficit thinking exists when we analyze the education of our gifted, low SES students living in rural areas, more research needs to be conducted to ascertain how teachers, school

leaders, and other stakeholders might work together to solve this problem. It is time for all involved in education to stop playing hot potato with blame and to begin reflecting on our own thought paradigms and philosophies of education to bring deficit thinking to light as we work to make education more equitable for all students no matter their race, their gender, or their socioeconomic status.

Future research on deficit thinking should also include other constructs in education. All stakeholders in education, from those who create legislation to the parents of our youngest students, need to better understand deficit thinking to begin the analysis of how we perpetuate this type of thinking through the structure of our schools and the curriculum we teach. The study of teacher deficit thinking needs to be broadened if we truly desire to create an equal opportunity for all children to succeed.

Conclusion

This study analyzed how teacher deficit thinking affects the achievement of gifted students living in rural poverty. This action research study provided insights for all participants in regards not only to teacher deficit thinking but into how studying one's own organization can yield positive change within.

Findings suggested that teacher deficit thinking was alive and well in rural areas where poverty is pervasive. But identification of deficit thought was only the beginning to addressing it. The organization, in this case the school, must work diligently to create a safe environment in which all stakeholders are involved in conversations about deficit thinking. Beyond conversations about social class and the importance of place, stakeholders should participate in learning opportunities whether within professional development or within student led clubs. Teacher deficit thinking begets student deficit

thinking. Both must be addressed to truly influence school culture in an effort to increase achievement for all students.

Through the process of analyzing deficit thought's effects in their own organizations, the participants of this study realized the influence they hold to create real, sustainable change for their students. Furthermore, researchers and participants experienced how powerful the action research process can be for all stakeholders. Organizations that leverage human capital for the betterment of all participants have the ability to revolutionize both the organization and its people. In the work to find solutions to a problem, the organization may experience a small spark that begins systemic change. The most powerful result of this work is that the people who may need the change the most are the ones identifying the problem and working to solve it.

Educators are not the only stakeholders who need to study the effects of poverty and place on teacher deficit thinking affecting student achievement. Policy makers must take a closer look at how place influences factors of schooling. Further research in regards to the effects of place must occur in order to influence policy and student achievement. Rural areas deserve the attention that other factors like race and social class have received. A further exploration of the effects of place will assist in creating change in rural schools.

All educators must look within themselves to reflect on their individual practices in the process of dismantling deficit thinking. Teacher preparation programs and the professional development of current educators need to bring teacher deficit thought to the table to create a school environment that is more equitable for all our students—no matter place, class, or gender. It is imperative that educators break the cycle of teacher deficit thinking and end the marginalization of our poorest students attending school in rural

areas to prevent them from living "with long-term effects of feeling inferior and of internalizing shame, anger, and other complex emotions and ways of being" (Jones & Vagle, 2013, p.133). One might easily agree that our students living in rural poverty need not be punished, but through teacher deficit thinking, a punitive environment for even our best and brightest perpetually exists. Through implementing an action research framework in an effort to dismantle deficit thinking, school culture can be transformed leading to an increase in student achievement for all demographic groups.

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APPENDIX A

Pre-Intervention Survey for Students

1. I feel supported in my AP coursework by my AP teachers.
2. I feel supported in my AP coursework by my other teachers who do not teach AP.
3. If I have a question in my AP class, I can go to my parents for help.
4. If I need extra help in an AP class, my parents will help me find a resource outside of school (e.g. buy a AP test study guide).
5. What is your parent's highest level of education (choose the parent with the highest)?
6. Do you receive any assistance in paying for lunch at school?
7. If you do not receive lunch assistance, have you received it in the past?
8. What grade are you in?
9. If you'd like to share any information about the level of support you receive in your AP classes, please share below. Remember that your answers are anonymous. Please do not use teacher names.

APPENDIX B

School Culture Survey: Pre-Intervention Survey for Teachers
N=9

Directions: Please indicate the degree to which each statement describes conditions in your school using the following scale:

1=Strongly Disagree 2=Disagree 3=Undecided 4=Agree 5=Strongly Agree	1	2	3	4	5
1. Teachers utilize professional networks to obtain information and resources for classroom instruction.	0	0	0	7	2
2. Leaders value teachers' ideas.	1	3	0	5	0
3. Teachers have opportunities for dialogue and planning across grades and subjects.	0	1	0	6	0
4. Teachers trust each other.	1	3	0	5	0
5. Teachers support the mission of the school.					
6. Teachers and parents have common expectations for student performance.	1	4	0	3	1
7. Leaders in the school trust the professional judgments of teachers.	1	2	0	6	0
8. Teachers spend considerable time planning together.	1	5	0	3	0
9. Teachers regularly seek ideas from seminars, colleagues, and conferences.	0	5	0	4	0
10. Teachers are willing to help out whenever there is a problem.	0	0	0	5	4
11. Leaders take time to praise teachers who perform well.	2	3	0	4	0
12. The school mission provides a clear sense of direction for teachers.	0	5	2	2	0
13. Parents trust teachers' professional judgments.	0	5	0	2	2
14. Teachers are involved in the decision-making process.	1	2	0	5	1
15. Teachers take time to observe each other teaching.	8	1	0	0	0
16. Professional development is valued by the faculty.	6	2	0	1	0
17. Teachers' ideas are valued by other teachers.	0	1	0	5	3
18. Leaders in the school facilitate teachers working together.	2	3	0	4	0
19. Teachers understand the mission of the school.	1	2	3	3	0
20. Teachers are kept informed on current issues in the school.	3	4	0	2	0
21. Teachers and parents communicate frequently about student performance.	0	4	0	4	1
22. Teacher involvement in policy or decision making is taken seriously.	0	5	1	3	0
23. Teachers are generally aware of what other teachers are teaching.	4	2	1	2	0

24. Teachers maintain a current knowledge base about the learning process.	0	0	0	6	3
25. Teachers work cooperatively in groups.	0	1	0	5	3
26. Teachers are rewarded for experimenting with new ideas and techniques.	1	1	1	3	3
27. The school mission statement reflects the values of the community.	0	3	2	3	1
28. Leaders support risk taking and innovation in teaching.	1	2	1	3	1
29. Teachers work together to develop and evaluate programs and projects.	1	1	1	5	1
30. The faculty values school improvement.	0	0	0	5	4
31. Teaching performance reflects the mission of the school.	0	2	5	1	1
32. Administrators protect instruction and planning time.	1	1	0	6	1
33. Disagreements over instructional practice are voiced openly and discussed.	1	1	3	4	0
34. Teachers are encouraged to share ideas.	0	1	0	6	2
35. Students generally accept responsibility for their schooling, for example by being mentally engaged in class and completing homework assignments.	1	6	0	3	0

APPENDIX C

Interview for AP Teachers

1. Who are you and what is your background? How long have you taught AP courses? What AP courses have you taught?

2. What is your interpretation of "deficit thinking"?

3. Richard R. Valencia (2010) discusses deficit thinking as "blaming the victim" for failure in education, the blame being rooted in race and class bias. What are your thoughts? Do you think that we have some school structures in place that prevent our students living in poverty from achieving at higher rates?

4. How do you see deficit thinking affect our gifted students living in poverty who participate in our AP program?

5. Do you have any ideas for how we might address the issue?

6. Tell me about a time when you interacted with students and their parents who lived with a low SES status.

APPENDIX D

Interview for Students

1. Who are you and what grade are you in? How many AP courses have you taken? In how many AP courses are you currently enrolled?

2. How would you describe your achievement in AP classes?

3. How would you describe your achievement on AP exams? Does this achievement correlate to your achievement in AP classes?

4. Describe a positive moment you've experienced in an AP class.

5. Describe a moment when you struggled for any reason in an AP class.

6. Tell me about the relationships you have with your AP teachers.

7. Tell me about the support you receive from AP teachers as you prepare for AP exams.

8. Is there anything else you'd like to say about your experience in the AP program?

APPENDIX E

District Letter

November 5, 2014

Dear School and District Administrators:

The University of Georgia's Doctor of Education (Ed.D.) degree program in Educational Leadership is a performance-based program of study designed to prepare school and system leaders who can advance the knowledge and practice of PreK-12 educational administration and support school and system improvement. This program of study, in partnership with Georgia school districts, develops outstanding practitioner/scholars who can effectively lead schools and school districts in the 21st century.

As part of the Ed.D. program, candidates engage in action research, an evidence-based approach to problem-solving that involves cycles of defining a problem, gathering evidence to further define the problem, intervening to solve the problem, and gathering further data about the effectiveness of the interventions. Action research involves working collaboratively with members of the school, school district, and beyond who have a stake in the problem and its solution.

Included in this application is information which clearly describes the proposed action research project. Thank you for your review, consideration, and support of this work which, hopefully, will have value to students, educators, educational stakeholders, and the research community.

I have read the proposal of the action research project to be conducted and approve the project as described in the attached application.

_____ _____

Principal's Signature Date of Approval

_____ _____

District Administrator's Signature Date of Approval

Title of Research Project:

A. Applicant/Researcher Information

1. Primary Researcher's Name: Melissa Conway

   Address: [redacted]

   Primary Phone: [redacted]

   Email Address: meconway @uga.edu

2. Faculty Sponsor's Name: Dr. Sheneka Williams

   Name of University: The University of Georgia

   Faculty Sponsor's Address: [redacted]

   Faculty Sponsor's Primary Phone: [redacted]

   Faculty Sponsor's Email Address: smwill@uga.edu

3. Co-Researcher Name(s), organizational affiliation, and email address(es) (List all individuals who will be a part of the data collection or analysis):

   NA

B. Major Features of Proposed Action Research Study

1. Please provide a brief explanation of the purpose and importance of your action research study (include the theoretical framework and its application to school settings, and citations as applicable):

   This study will address how the overall culture of school achievement affects low-income gifted student achievement while using the lens of motivational theory. Our school's data represents the idea that students from a low socioeconomic (SES) status are underperforming students from a higher status in gifted classes. While our school has a high population of SES gifted students, it is troublesome to see that these students do not score as high as students from higher SES homes. Previous

research (MacNeil et al., 2009) shows that the overall culture of school achievement may be negatively affecting student achievement of this particular subgroup; this study seeks to explore this issue and find interventions to help these students achieve at higher rates.

From my own work with these students, I have witnessed a cycle of poverty that is often saturated with parents and grandparents who did not value education when they were young and did not see its value in future employment opportunities. The previous generations had opportunities to do farm work and other work that did not require formal education; however, the new digital age that we all live in has put more importance on formal education and finishing high school so that students can go on to learn a specific trade or study subjects that will lead them to better employment opportunities. This generational divide seems to place our rural, gifted students at a disadvantage if they lack an understanding of how valuable an education is in today's world. Ulrich (2011) in her study on educational attainment rates compared rural to urban areas and found that "although rural Americans from all community types have been able to attain higher educational levels than their parents, their progress has not been uniform" (p. 3). Ulrich (2011) argues further that "parents' education is important because the educational attainment of children is often closely related to that of their parents. When parents place a high value on education, their children are more likely to have the encouragement and financial support to pursue education themselves" (p. 2). Many of students at this rural school have parents with limited educational backgrounds and resources. Because of these issues, rural gifted students may need more extrinsic help and motivation within the walls of the school building.

2. List research question(s) or hypothesis(es) to be answered:

This study sets out to answer the following questions: (1) How does deficit thinking by teachers affect the achievement of rural, gifted students of a low SES?; (2) How does the action research process of developing and evaluating interventions affect teacher attitudes of school culture and expectations of school culture? And (3) How does the action research process of developing and evaluating interventions designed to affect this population's achievement impact the school and/or system?

3. Definition of terms (please include descriptions of acronyms, programs or theoretical frameworks related to the study, and operational definitions of constructs):

Motivational Theory: Students and teachers are motivated for both intrinsic and extrinsic reasons. School culture is an extrinsic force that may affect individual student achievement.

C. Research Design and Methods

1. Type of school research site(s) required. Please check all that apply:

   ___ Elementary ___ Middle __X_ High ___ Special Schools ___ Central office
   If not all schools, list specific schools and/or other locations you anticipate asking to participate in your action research project:

   [redacted] High School

2. Will data be collected about students? _X__ Yes ___ No
   If yes, please describe criteria for selection of students, the number of students, grade level, background information, and special sample characteristics. Specify the process and procedures that you plan to use for collecting the data. Include person(s) responsible for each phase of data collection and the person(s) needed to help in the process.

   Criteria for selected students:
   - Low SES (based on Free and Reduced Lunch data)
   - Identified as gifted
   - Enrolled in at least one gifted course
   - Grades 9-12

   Data Collecting Procedures: I plan on conducting interviews with participants and using standardized test scores to inform my research.

   Melissa Conway will be responsible for each phase of data collection.

3. Amount of time required for students:

   There will be no additional time required for students.

4. Will data be collected about school staff? __X_ Yes ___ No
   If yes, please describe criteria for selection of staff, number of staff, grade level, position, background information, and special sample characteristics. Specify the process and procedures that you plan to use for collecting the data. Include person(s) responsible for each phase of data collection and the person(s) needed to help in the process.

   Approximately six teachers of gifted classes will be selected for research. These teachers will be diverse in gender, ethnicity, and educational background. The only requirement in selection is that the teacher teaches gifted students using gifted curriculum.

5. Amount of time required of teachers/other staff:

This research will require little extra time as the action research team will be developing interventions. The teachers will participate in employing the interventions.

6. Desired time period for conducting your research: Begin: January 2015
   End: December 2016

D. Research Instruments

Provide all surveys, observation instruments, questionnaires, and interview protocols to be used in the research. Please include information about validity and reliability of instruments including citations. Procedures for administration and use(s) of the data should be clear from the information in this and other sections of your action research proposal. Please provide copies of all instruments to be used.

E. Research Results

1. Describe your procedures for analyzing the data and how data analysis addresses the research question(s) and hypothesis(es).

2. How might this research benefit the participants (e.g., students or teachers) in the action research project?

Students and teachers will benefit in a greater understanding of teacher deficit thinking affects gifted student achievement. The research sets out to determine types of interventions to increase achievement.

3. How might this research benefit the schools, district, or education in general?

This research will help positively affect gifted student achievement [redacted]. It will help inform gifted education in the [redacted] school district.

F. Reporting the Results

Describe how the results will be reported, including the purpose and audience for each type of reporting.

Results will be reported in my formal dissertation. I will also use the results in my presentations as I defend my dissertation.

G. Appendices

Append appropriate required documents to this application. Please indicate all attachments:

_X__ Informed Consent Letters (students, parents, administrators, teachers, staff, etc.)
__X_ Questionnaire/survey/test
_X__ Interview protocol
___ Other (please specify)

APPENDIX F

Participant Letter

November 15, 2014

[redacted]:

I am a graduate student under the direction of Dr. Sheneka Williams a professor in the Department of Educational Administration and Policy at The University of Georgia. I invite you to participate in a research study entitled Creating a Culture of High Achievement: How Motivation Affects Rural Gifted Students that is being conducted. The purpose of this study is to find ways to increase the achievement of gifted students of a low socioeconomic status attending a rural high school.

Your participation will involve participating in data driven activities to increase achievement, answering survey, and being interviewed and should not take any time outside of regular school hours. Your involvement in the study is voluntary, and you may choose not to participate or to stop at any time without penalty or loss of benefits to which you are otherwise entitled. If you decide to withdraw from the study, the information that can be identified as yours will be kept as part of the study and may continue to be analyzed, unless you make a written request to remove, return, or destroy the information.

The results of the research study may be published, but your name or any identifying information will not be used. In fact, the published results will be presented in summary form only.

The findings from this project may provide information on how school culture affects rural gifted student achievement in regards to students who have a low socioeconomic background. There are no known risks or discomforts associated with this research.

If you have any questions about this research project, please feel free to call me at [redacted] or send an e-mail to meconway@uga.edu. You may also contact my major professor, Dr. Sheneka Williams at [redacted] or smwill@uga.edu. Questions or concerns about your rights as a research participant should be directed to The Chairperson, University of Georgia Institutional Review Board, 609 Boyd GSRC, Athens, Georgia 30602; telephone (706) 542-3199; email address irb@uga.edu.

By completing and returning this questionnaire in the envelope provided, you are agreeing to participate in the above described research project.

Thank you for your consideration! Please keep this letter for your records.

APPENDIX G

UNIVERSITY OF GEORGIA
CONSENT FORM

Researcher's Statement

I am asking you to take part in a research study. Before you decide to participate in this study, it is important that you understand why the research is being done and what it will involve. This form is designed to give you the information about the study so you can decide whether to be in the study or not. Please take the time to read the following information carefully. Please ask the researcher if there is anything that is not clear or if you need more information. When all your questions have been answered, you can decide if you want to be in the study or not. This process is called "informed consent." A copy of this form will be given to you.

Principal Investigator: Dr. Sheneka Williams
Program of Educational Administration and Policy
[redacted]

Purpose of the Study

The purpose of this action research is to explore ways in which the achievement of gifted students of a low socioeconomic status are influenced by overall school culture.

Research Questions

This study sets out to answer the following questions: (1) How does deficit thinking by teachers affect the achievement of rural, gifted students of a low SES?; (2) How does the action research process of developing and evaluating interventions affect teacher attitudes of school culture and expectations of school culture? And (3) How does the action research process of developing and evaluating interventions designed to affect this population's achievement impact the school and/or system?

Study Procedures

If you agree to participate, you will be asked to …

- Participate in data driven activities that might help improve your achievement with no additional time commitment outside of school hours.
- Answer surveys that assess the school culture of our school and how it affects your achievement.
- Participate in interviews that discuss your individual school achievement and how it is affected by factors controlled by school.
- You may be photographed and your interviews will be recorded.

Risks and discomforts
- I do not anticipate any risks from participating in this research.

Benefits
- You will benefit from this research in that it is designed to help you achieve at higher levels academically.
- You will also be benefiting other students at our school and other schools to increase achievement.

Audio/Video Recording
Your interviews will be recorded for the researchers data file; however, these files will be destroyed upon transcription of your interview.

Please provide initials below if you agree to have this interview audio recorded or not. You may still participate in this study even if you are not willing to have the interview recorded.

_____I do not want to have this interview recorded.
_____I am willing to have this interview recorded.

Privacy/Confidentiality
The data I collect from this study will not include information that identifies you directly; rather it will be coded so that your personal information remains confidential. Coding will include pseudonyms if your data is included in the formal write up; otherwise, you will be designated a student number that only the researcher can link back to your personal information. The data will be stored in password protected files to ensure anonymity.

Researchers will not release identifiable results of the study to anyone other than individuals working on the project without your written consent unless required by law.

Taking part is voluntary
Your involvement in the study is voluntary, and you may choose not to participate or to stop at any time without penalty or loss of benefits to which you are otherwise entitled.

If you decide to withdraw from the study, the information that can be identified as yours will be kept as part of the study and may continue to be analyzed, unless you make a written request to remove, return, or destroy the information.

If you have questions
The main researcher conducting this study is Dr. Sheneka Williams a professor; Melissa Conway a doctoral candidate at the University of Georgia. Please ask any questions you have now. If you have questions later, you may contact Dr. Sheneka Williams at smwill@uga.edu or at 706.542.1615. If you have any questions or concerns regarding your

rights as a research participant in this study, you may contact the Institutional Review Board (IRB) Chairperson at 706.542.3199 or irb@uga.edu.

Research Subject's Consent to Participate in Research:
To voluntarily agree to take part in this study, you must sign on the line below. Your signature below indicates that you have read or had read to you this entire consent form, and have had all of your questions answered.

_____	_____	_____
Name of Researcher	Signature	Date

_____	_____	_____
Name of Participant	Signature	Date

Please sign both copies, keep one and return one to the researcher.

_____

[i] Pseudonym used