ABSTRACT

This study sought to examine why teachers in diverse 9th and 10th grade English classes lacked efficaciousness when differentiating lessons. Participating in a ten-week professional development plan, seven teachers attended weekly meetings for half an hour each week, where they were exposed to these strategies and had time to plan with their colleagues to determine how these strategies could be used in their classrooms with their students. This mixed methods study utilized quantitative data through the TSES efficacy survey that was conducted at the beginning and the end of this study, and qualitative data through recorded meetings, observation field notes, and personal interviews. This study sought to answer the following research questions:

1. How does comfortability and familiarity with differentiation strategies impact the self-efficacy of teachers to differentiate in their classrooms?

2. What specific differentiation strategies will be most effective in allowing for teachers at DHS to build efficacy for differentiating in the classroom?
3. What will the action research team learn about the effect of differentiation professional development on the self efficacy for differentiating for the teachers in the study?

Ultimately, this study determined how a professional development plan directly focused on differentiation impacted the efficacy of teachers to differentiate in their classrooms.

INDEX WORDS: Differentiated instruction, Self-efficacy, Tracking, Action research
THE EFFECT OF IMPLEMENTING A PROFESSIONAL DEVELOPMENT PLAN FOR CLASSROOM DIFFERENTIATION ON TEACHER EFFICACY FOR TEACHERS OF UNTRACKED ENGLISH CLASSROOMS

by

BENJAMIN TAYLOR CROSS

A.B.J., The University of Georgia, 2007
M.A.T., North Georgia College & State University, 2011

A Dissertation Submitted to the Graduate Faculty of The University of Georgia in Partial Fulfillment of the Requirements of the Degree

DOCTOR OF EDUCATION

ATHENS, GEORGIA

2018
THE EFFECT OF IMPLEMENTING A PROFESSIONAL DEVELOPMENT PLAN FOR
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by

BENJAMIN TAYLOR CROSS

Major Professor: Sheneka Williams
Committee: Karen Bryant
           John Dayton

Electronic Version Approved:

Susanne Barbour
Dean of the Graduate School
The University of Georgia
May 2018
DEDICATION

This dissertation is dedicated to my family. Without them I could not have possibly managed the work involved in obtaining this degree in its entirety, or this dissertation itself. The support provided by them was constant and limitless.

My wife, Christy, you were always willing to drop what you were going to do or find some way for me to complete my next milestone. You were always there telling me how proud of me you are, and without that, there may have been times when I would not have moved forward.

My daughter, Raine, while you were too young to realize it, you sacrificed by not being with me during the many hours I had to spend completing this document. I thought of you often though, as I thought what this research and this degree could do for the future of our family.

My mother and father have always been my consummate cheerleaders, and during this experience they have been no different. There is no task that they believe I cannot do, and knowing that has pushed me forward on many occasions. My mother, specifically, believes that I can do anything; therefore, I can.
ACKNOWLEDGEMENTS

Dr. Sheneka Williams was a guiding light throughout this entire process. Her quick wit and calm expression always kept me feeling like what I was doing was not more than I could handle. She helped me through various snags in my process, and for that I will be forever grateful.

I would like to thank my district, the City Schools of Dunbar, for allowing me to conduct this work within the organization. I felt all along that what I was doing would help my district, and with the help of many CSD employees, I believe that it has.

I am thankful for my action research team, which met many times when they probably did not want to. Even though I was often worried that I was asking too much, they were always there, making me feel like the process was worthwhile.

To my English department colleagues, I am thankful for your constant interest and participation in my study. You never made me feel like I was inconveniencing you or making you do anything extra, which I appreciated.

To the instructional coaches of DHS, I owe much gratitude for your work on my Action Research Team and also your conversations with me about my ideas, pushing me forward, and covering my classes when I needed it to collect data.

Thank you to Luke Cross, Cody Corey, and Ayoka Shakir specifically for always being willing to cover my class so that I could collect data.

To my cohort mates at UGA, even though I am graduating a year later than most of you, you have all been with me through the four years of this degree program, helping me with
projects in classes, meeting after classes to share frustrations over Mexican food, giving career advice, and generally being shoulders to lean on. Even though you have all graduated, if I have ever reached out to you for support, you have dropped everything to provide answers and clarity to me as I continued to pursue the completion of this degree.
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A veteran 9th grade English teacher at Dunbar High School* enters a classroom and scans the room, examining her pupils. The students have learned a new concept in class today, and each student is working toward showing understanding of that lesson. As the students work, the teacher notices and acknowledges different speeds and modes of progress around the room.

In this classroom there are heterogeneous groups of students present and learning together: high-achieving, often gifted students, some of whom have flown through the assignment and are now bored or distracted; intermingled with them are the students who have found this work to be adequately challenging and are progressing through it at an expected pace, amid the distraction of the students who are finished; also interspersed are students with an assortment of learning disabilities and are receiving extra help from a co-teacher and have an extra notes sheet, but even so, some of them are still struggling or off task; also present are various students who are struggling on the assignment, not because of aptitude, but because of a physical or mention distraction; additionally, there is a group of students that is having struggles on the assignment due to a lack of sleep, food, prior knowledge, love and support, and other resources that they need to be focused on the lesson. As a result of this complicated reality, even though this is a veteran teacher, this teacher feels inadequate and overwhelmed, as she tries to find ways to serve all of these learners, who come to her at the same time each day.
This classroom is an example of the typical untracked classroom at Dunbar High School that might include any of the following types of learners in one classroom: gifted, regular education, special education, Title I designation, and others. The teacher in this classroom is overwhelmed by the needs of her students, and while she knows she cannot possibly attend to every physical or emotional need of her students, she knows that she is charged with the duty to make sure they all learn and learn at a pace that helps them achieve their personal potential, while also meeting the standards set by the state.  

Overview of the Case

The City School System of Dunbar (CSD) is one of the oldest and most well-known in a Southern U.S. state. Dunbar High School (DHS) itself was established in 1912 (“About DHS”, 2016). This history has many proud traditions, and one of the most endearing and lasting traditions is academic excellence. CSD is this state’s first charter district, and this charter allows for various exceptions to state mandates and unique opportunities, such as implementing an International Baccalaureate (IB) curriculum from K-12, initiating a 1 to 1 technology platform for students along with a Dunbar Online Academy, and a STEM academy (City Schools of Decatur, 2016).

These innovative methods have led to a myriad of accolades for the district and DHS, specifically. DHS has been designated an IB World School and an AP Honor School, is #6 on the statewide CCRPI Index, is #13 in the state in the latest U.S. News & World Report list of top schools, has the highest performance of any district in the state on the SAT and the second highest ACT composite, has a designated Career Academy, and had a 97% graduation rate in 2015, the third highest in the state (City Schools of Decatur, 2016).

1 All names used in this document are pseudonyms
In the midst of this success, the City of Dunbar has experienced a changing demographic of racial and socioeconomic shifts over the last 30 years. In more recent years, due to the continually improving school system and the reemergence of families’ desires to live in the cities, the demographics within the city of Dunbar have shifted rapidly. “In 1980, [Dunbar] had 15,588 residents; 41 percent of them were African American. Three decades later, African Americans accounted for less than 20 percent of the city’s population” (Rotenstein, 2015). This shift in racial demographics has coincided with a socio-economic gap that is more divided than ever. “In the past decade, the median household income for Black residents plunged 50 percent, while White household income went up 10 percent. The city's overall median income is now north of $70,000 a year” (Ruch, 2014). Overall, the population of Dunbar has become much more White over the past couple of decades, and this has coincided with a parallel shift in higher socio-economic demographics.

The cause of this shift is rising property values, which result in rising property taxes, which many of the working-class families and senior residents, who are primarily African-American, have trouble keeping up with. Also over time as their neighbors have moved away, making way for young families who have torn down the existing, modest homes and replaced them with million dollar craftsman-style or modern homes, long-time working class residents no longer feel welcomed and a part of their neighborhood. This combination has caused many of these families to choose to leave or to be financially forced to leave. The phenomenon, which is not unique to Dunbar, is commonly coined gentrification, or urban renewal (Freeman, 2006).

Today, after years of gentrification, but with a focus always on the education of its students, Dunbar High School has a racial demographic of 56% White, 35% Black, 5% mixed race, 2% Asian, and 2% Hispanic (City Schools of Decatur, 2016). DHS still has racial and
socioeconomic diversity, although the scale is weighing heavier to a White, upper middle class majority more each year. While the students of DHS are more increasingly coming from wealthier households, DHS still has 18% of its students who receive free and reduced lunch and has enough students in poverty to be designated a Title I school (C. Gray, personal communication, September, 14th, 2015). These changes in population have created an increased need for differentiation in classrooms, as these diverse learners have different needs and come in with different skill sets.

Figure 1: Dunbar High School ethnicity demographics

Problem Framing in Context

Since the demographics of the City of Dunbar and the City Schools of Dunbar are changing socio-economically, the ways in which the students need to be served is changing as well. Within the last 10 years in CSD, the percentage of gifted identified learners in the 9th and 10th grade at Dunbar High School increased from 19% in 2007 to 26% in 2016, suggesting that with this socioeconomic shift, there is also a shift in students coming from households with more
education, resources, and support, thus giving DHS more designated gifted learners to serve (C. Gingrich, personal communication, November 8, 2016).

Over the previous decade, gifted education at DHS has been addressed through the tracking of higher and lower performing students, so that their needs can be met in specific clusters (W. Harper, personal communication, June 23, 2015). Harris (2011) described tracking as grouping students with similar academic abilities together. In recent years, the leaders of DHS have decided that all learners in every content area except math will be together in one, untracked learning environment. This decision was made because of the persistent patterns of tracked students that usually mirrored race, the research-based belief that students learn more effectively in heterogeneous groups, a goal of pushing as many students as possible to success in higher-level coursework and reducing preps for teachers so that they can collaborate more effectively (W. Harper, personal communication, June 23, 2015).

This decision has been positive in the sense that it keeps many varying types of learners together throughout the day, and groups of students are not sequestered from others. For teachers though, this has at times been a struggle due to the natural challenges that diverse classrooms present, such as potentially under-serving the prospective gifted learners, not giving special education or Title I students the attention they require, possible conflict of cultural differences, and political pressure from parents (Green, 2015; Siegel-Hawley, 2014; Tomlinson, 2005). These challenges are often met with a lack of preparation for how to serve the many different types of learners in one classroom (Tomlinson, 2005).

Overall, teachers in this state, who teach gifted students, are required to take a general, gifted training class to be initially certified to teach these students (Georgia Profession Standards Commission, 2017). This course can come from a variety of sources that may not be consistent
from course to course; also, as this is a one-time course, this information can be easily forgotten over time. At DHS, teachers receive a refresher course each year on how to teach special needs students, but from this point, there is typically no other training throughout the year to reinforce this focus. There is no similar training for the teaching of gifted students or for differentiating in the classroom, specific to any types of learners. There is also no annual training or designated course for providing teachers with the context of the lives and learning styles of Title I students. This annually compounding lack of professional development manifests itself in low self-efficacy for teachers to use differentiation strategies to address the needs of different students in the same classroom because teachers are not consistently aided with the ever-changing methodology and trends for reaching various types of learners in one classroom.

Evidence that this is a problem for DHS first lies in that CSD as a district has declared that differentiation should be a goal for professional development for all of its schools, so that all learners are receiving the proper instruction for their abilities and potential. The appointment of this goal as a focus verifiably designates that this aspect needs special attention; therefore, it is currently not something that the district feels is being adequately addressed. Also, as differentiation has become a topic of discussion in meetings and planning; teachers at DHS have self-reported that they do not fully understand what differentiation should look like in their classrooms or how to implement what they do understand. Others have a vague understanding, but do not feel comfortable enough in differentiating to employ it regularly. Others feel as if they are differentiating every day, but cannot clearly articulate how they are doing so, or report examples that are not true differentiation, suggesting a misunderstanding of differentiation.

The problem itself appears to lie in the self-efficacy of teachers to confidently employ methods of differentiation. Teachers do not feel knowledgeable about how to differentiate;
therefore, they are not motivated or able to employ this tactic in their classrooms. Tomlinson (2005) suggested “few of us as teachers automatically know how to lead a classroom that responds to the daunting reality of learner variance. It is a learned skill, in the same sense of any other art or craft” (p. 17). As a result, students of varying abilities, especially gifted students, are not receiving targeted material that challenges them and allows them to explore and reach their academic potential.

My position as a leader on the DHS gifted team gives me the opportunity to realistically enact the change I seek. My responsibility is to be sure that we are accurately canvassing our school for gifted learners, and from there, that they receive the services designated to help them reach their potential. To make this happen, I am responsible for ensuring that the teachers within my department are exposed to and understand the most up-to-date methods to reach gifted learners, as well as all diverse learners. This research opportunity allows me a tangible avenue through which to research and employ strategies for helping teachers understand how to reach all types of learners in their classroom that mirror the population of DHS and the City of Dunbar.

Additionally, this is a problem in which my organization has great interest. The achievement gap is an important topic nationwide, but especially in Dunbar, as school officials and community members recognize that with the changing demographics of the community being what they are, no stakeholders want to see any students fall behind. DHS has also been identified by the state as a school that has a general problem of inequity between the performance of majority and minority demographic students. This stated issue of low teacher efficacy to reach some of these learners that are receiving an inequitable education only further contributes to this problem. This problem is understood by all stakeholders of the City of Dunbar, and this research study has the potential to directly impact these stakeholders.
**Theoretical Framework**

Anfara and Mertz (2015) stated that “useful theory is one that tells an enlightening story about some phenomenon” and “is a story that gives you new insights and broadens your understanding of this phenomenon” (p. 5). Considering this approach of how to apply theory to this study, I sought to first look at what the true problems were and how existing theories could explain these problems or phenomena. The primary problem that I saw was that experienced teachers did not feel confident in doing something that should be mature skills for these teachers. Through research, I found two theories that seemed to join together to explain why this phenomenon was happening and gave clues as to how to potentially solve it: Bandura’s Social Cognitive Theory and Deci and Ryan’s Cognitive Evaluation Theory.

Anfara and Mertz (2015) stated that the use of different theories allows greater breadth in analysis of the situation. This gave me the confidence to use both to help explain why this situation was occurring to help give more context to developing an attempt for a solution.

**Social Cognitive Theory**

Albert Bandura (1986) established his Social Cognitive Theory in which he focused on the ability of humans to acquire knowledge through modeling, outcome expectancies, self-efficacy, and identification. Reflective self-consciousness and symbolic communication are key foci that Bandura stated are essential human qualities encompassed in Social Cognitive Theory. Bandura (2005) gave further perspective on his Social Cognitive Theory by focusing on human agency and its capacity to enable self-reflectiveness and understanding of purpose.

As it applies to implementing a differentiation program with teachers at DHS, teachers who are not confident in their knowledge of differentiation or their ability to differentiate in the classroom are less likely to effectively differentiate in the classroom. Saka, Bayram, and
Kabapınar (2016) found that self-efficacy plays an important part in effective teaching, and if teachers are not equipped with the knowledge and confidence to deliver on a strategy, then further self-efficacy is difficult to develop, and preexisting self-efficacy could be harmed. Defining differentiation for the teachers of Dunbar High School and providing models for ideas to implement this concept in their classroom will lead to higher self-efficacy in teachers, which will then in turn help students and increase student achievement. Additionally, as Bandura (2005) intoned that self-efficacy illuminates teacher to self-reflection, the ability to conceive the impacts this new knowledge can have on student learning is of dire importance to the effectiveness of this study and its analysis.

**Cognitive Evaluation Theory**

Deci and Ryan (1985) stated that intrinsic motivation is the innate, natural propensity to engage one’s interests and exercise one’s capacities, and in so doing, to seek and conquer optimal challenges. Deci, Koestner, and Ryan (2001) stated that Cognitive Evaluation Theory (CET) proposes that underlying intrinsic motivation are the innate psychological needs for competence and self-determination. According to the theory, the effects on intrinsic motivation of external events such as the offering of rewards, the delivery of evaluations, the setting of deadlines, and other motivational inputs are a function of how these events influence a person's perceptions of competence and self-determination.

Events that decrease perceived self-determination will undermine intrinsic motivation, whereas those that increase perceived self-determination will enhance intrinsic motivation. Events that increase perceived competence will enhance intrinsic motivation so long as they are accompanied by perceived self-determination, and those that decrease perceived competence will diminish intrinsic motivation (Deci, Koestner, & Ryan, 2001).
The goal for this study is to use the trappings of Cognitive Evaluation Theory to explain a potential increase in perceived self-determination in teachers through effective professional development on differentiation concepts. This increased self-determination will then enhance intrinsic motivation for implementing differentiation in the classroom, so that teachers will have the efficacy to more effectively deliver these methods in the classroom. The relationship between the chosen theories are conceptualized in Figure 2.

*Figure 2: Theoretical framework*

The ideas considered in Social Cognitive Theory and Cognitive Evaluation Theory explain the relationship between experience and familiarity and self-efficacy and intrinsic motivation. Teachers are not efficacious for differentiation in their classrooms because they have not been taught how to do so. Because they have not been taught how to do so, they do not have experience differentiating, which furthers the lack of efficacy. Bandura (2005) stated that self-efficacy directly affects the ability to enable self-reflectiveness and understanding of purpose.
Deci, Koestner, and Ryan (2001) stated that events that increase perceived competence will enhance intrinsic motivation so long as they are accompanied by perceived self-determination, and those that decrease perceived competence will diminish intrinsic motivation. Teachers who are not efficacious and are not able to reflect and understand the purpose of their work are not intrinsically motivated to do whatever task may be at hand, in this case: differentiate for the diverse groups of students in their classrooms.

Purpose of the Study

All major players in the school and school system are stakeholders of this study. From a district leadership structural standpoint starting from the top down, the district has decreed to all schools and teachers of CSD that the goal of differentiation in the classroom for all learners is a focus, and schools are responsible for ensuring that differentiation is occurring within their schools so it can positively affect student achievement. Concurrently, the administration of each school is responsible for ensuring that differentiation occurs in the classrooms for their individual schools. The teachers, as they are the educators in direct contact with the students daily, are tasked with directly differentiating in the classroom for the students. Students, who at this time particularly in most 9th and 10th grade classes at DHS, find themselves in classrooms of diverse learners, and could gain from differentiated instruction as struggling and prospering learners can both find challenges and successes within the differentiated classroom. Parents have also stated concern over the years about the lack of consistent differentiation in untracked classrooms for students at Dunbar High School, so this will be of interest to parental stakeholders as well (C. Gingrich, personal communication, September, 20th, 2017).

This study will align with the highest-level stakeholders, district leaders, as they have determined that the entire district focus should be differentiating in the classroom. With this
being a stated initiative, alignment with administration and teachers follows as this study looks to support the administration in informing teachers on best practices for differentiation. Teachers, being the subjects under direct study, are the most directly impacted stakeholders, as they will be receiving the training and implementing the strategies, and their efficacy will be measured to determine if the program had an effect. Also, parents will benefit as their concerns about a lack of differentiation for their gifted and struggling learners will be addressed in this study.

For this study, the Action Research Team will look specifically at the 9th and 10th grade English teachers and will need to understand exactly what these teachers need to differentiate effectively in their classrooms so that they feel efficacious to do so. Data will be collected to determine if these interventions made an impact on their self-efficacy as teachers. Overall, this study will seek to answer these three research questions:

1. How does comfortability and familiarity with differentiation strategies impact the self-efficacy of teachers to differentiate in their classrooms?
2. What specific differentiation strategies will be most effective in allowing for teachers at DHS to build efficacy for differentiating in the classroom?
3. What will the action research team learn about the effect of differentiation professional development on the self efficacy for differentiating for the teachers in the study?

Self-efficacy is related to self-judgments about how well an individual can perform the actions that are required for coping with possible situations (Bandura, 1986). Studies on improving teacher qualities have pointed out that teachers must be aware of their own effectiveness (Çakır, 2004). In that CSD is a small, city school district that is extremely attractive to teachers given the landscape of more challenged districts surrounding it, there are 300 applicants for every job opening within the City Schools of Dunbar (H. Barowski, personal
communication, October, 1st, 2015). That said, the stated lack of efficacy for differentiation for a
group of teachers that is purported to be the most qualified and desired in its profession is
alarming. As this is a district-wide push to have teachers differentiate in the classroom, it would
be helpful to the action research team to know if the impact of providing professional
development on differentiation will make teachers more confident in differentiating in their
classrooms. The assumption is that it would make them more knowledgeable, but the confidence
to employ the strategies learned is paramount, as it will provide the knowledge a vehicle for
impacting students of different learning styles potentially for years to come.
CHAPTER 2
LITERATURE REVIEW

Gentrification in Education

Pearman and Swain (2017) stated “Racial and socioeconomic stratification have long governed patterns of residential sorting in the American metropolis” (p. 213). Presently in America, this stratification is being abetted in many urban areas by gentrification. Gentrification is coined by Smith (1998) as “the process by which central urban neighborhoods that have undergone disinvestments and economic decline experience a reversal, reinvestment, and the immigration of a relatively well-off middle- and upper middle-class population” (p. 198). The impact on this phenomenon of gentrification on education consistently shows a disproportionately negative effect on students of color nationwide (Green, 2015; Green, Sanchez, & Germain, 2017; Pearman & Swain, 2017; Siegel-Hawley, 2014). Even in areas where opportunities abound, due to spatial arrangements and district policies, there continue to be inequitable opportunities for students of color living in poverty (Green, Sanchez, & Germain, 2017).

Causation of these lack of opportunities manifest themselves in a variety of factors including attendance boundaries, distance, transfer, and selective enrollment policies cause de facto racial segregation, ultimately with less resources directly making their way to students of color (Green, Sanchez, & Germain, 2017). Typically, the group with the most power to enact change is the gentry. In most cases nationally today, this gentry consists of middle to upper-class Whites moving back into the city, which is a reversal of the White Flight that was seen in the 1960s (Siegel-Hawley, 2014). Too often amid this human geographic change, this gentry group
of Whites is opting to choose educational options that require more financial resources such as private schools and homeschooling, rather than investing their time and resources into improving the local neighborhood school (Siegel-Hawley, 2014).

One of the policy recommendations to reverse the negative trends of gentrification on minority communities is school choice. Pearman and Swain (2017) stated that “in the absence of thoughtful, informed policy, expanded school choice has the potential to allow White gentry of means to move into neighborhoods without enrolling their children in neighborhood schools, elevate the neighborhood’s cost of living, and ultimately, displace residents of color to less desirable locations” (p. 228). Pearman and Swain (2017) also stated “One implication of this trend is that schools located in districts with expanded school choice options can look increasingly unlike schools’ surrounding neighborhoods” (p. 214). This occurs as the families with more cultural capital, in most cases the gentry White families, choose the option that puts their children in schools with the least amount of poverty, regardless of if the school districted to where the family lives may be a school of mostly students in poverty (Siegel-Hawley, 2014). This creates a situation where the White gentry families are no longer motivated to improve the local school; therefore, they no longer put their resources or cultural capital toward the local school, from which their students, often minority students in poverty, could greatly benefit (Pearman & Swain, 2017).

This trend of White families utilizing school choice in urban areas where they are gentrifying has led to a disconnect nationally in the percentage of White families living in urban areas, and the percentage of White students in those areas who attend local public schools (Siegel-Hawley, 2014). This causes a disproportionate day-to-day exposure of poverty to the children in these areas who are of poverty. Most groups live in areas of at least some level of
economic diversity, but in these cases, the gentry’s unwillingness to send their children to school with children of poverty exposes a lack of exposure to diversity to both the gentry children and those in poverty, with both being neglected of the potential academic and social impacts of spending time with those outside of their sphere (Saporito & Sohoni, 2007).

The other side of this discussion exposes the ways in which gentrification could potentially help previously blighted areas, which may extend to schools as well. Siegel-Hawley (2014) stated “Recent population trends in central cities herald new possibilities for school integration in areas that have long been extremely isolated” (p. 530). While integration is a goal that many urban educational visionaries share, the reality is that the White gentry tends to be in control of these trends, and ultimately, short-term benefits of neighborhood improvement could be short-lived for long-time residents of color. Hwang and Sampson (2014) stated “Whiter neighborhoods that tend to gentrify and continue on upward trajectories offer the potential for established low-income residents to receive the benefits of gentrification, although negative consequences such as displacement may be part of the bargain” (p. 728). This can only occur in education though, if there is purposeful educational reform directed toward making sure that integration is a priority, as Green (2015) stated “There is a link to school reform and community development to address such concerns in low-income, urban communities of color” (p. 682).

A wide view of policy solutions will likely be needed to offset the negative consequences of gentrification for the disrupted and displaced lower-income minority communities. Pearman and Swain (2017) argued that “In the absence of thoughtful, informed policy, expanded school choice has the potential to allow white gentry of means to move into neighborhoods without enrolling their children in neighborhood schools, elevate the neighborhood’s cost of living, and ultimately, displace residents of color to less desirable locations” (p. 228). This cycle of
displacement could eventually destroy any reality of integration if minorities no longer live in these neighborhoods that they once solely occupied. Hwang and Sampson (2014) indicated “Laissez-faire or state-sanctioned policies that rely on gentrification to improve declining cities and neighborhoods may not reduce concentrated neighborhood poverty if reinvestment occurs far less, or to a lesser degree, in poor, minority neighborhoods. Such a pattern perpetuates, and perhaps worsens, urban inequality” (p. 747).

Thus far in education, gentrification has not lead to an overall improvement in education for all students (Green, 2015; Green, Sanchez, & Germain, 2017; Pearman & Swain, 2017; Siegel-Hawley, 2014). The White gentry families send their students to either private schools or other school choice options like charter schools (Pearman & Swain, 2017; Siegel-Hawley, 2014). Gentrification, which has the potential to improve bordering neighborhoods that may be more impoverished, tends to eventually cause minorities in poverty to be unable to afford living where they are and to eventually be uprooted by rising taxes and other cost of living factors (Pearman & Swain, 2017). Even in situations when minority families have the ability to stay, the gentry families are not contributing to helping to improve the local neighborhood schools that are meant to serve all taxpayers living in the community, resulting in under-enrolled, and often underperforming schools of minority students in poverty (Saporito & Sohoni, 2007; Siegel-Hawley, 2014).

**Tracking**

Tracking is the commonly held educational practice of placing students of homogeneous ability levels into the same classrooms so that there tend to be varying “tracks” of classes: those of higher-ability learners and those of lower-ability learners. Unfortunately, this tends to result in segregation of classrooms mimicking the dichotomy of higher-level classes that include White
and Asian students and lower tracked classes including Black and Latino students (Oakes, 1985; Oakes & Wells, 1996; Oakes & Wells, 1998). This is a consistent theme throughout educational history that is hard to reverse (Archibald & Keleher, 2008; Oakes & Wells, 1998). While the research of Oakes (1985) suggested that detracking students can be beneficial to lower performing students and can have no impact on higher performing students, there are still many political factors that keep tracking entrenched as an educational practice. That said, approaches to justify detracking exist in a variety of forms.

One way that schools may avoid tracking is to group students by their capacity to complete the task, known as ability grouping, within untracked classrooms to expose all students to the diversity of different types of learners. This essentially “tracks” within the classroom to offer different levels of work to students as a means of differentiation (Kulik, 1992). While tracking and ability grouping may sound similar, Fiedler, Lange and Winebrenner (2002) delineated a clear difference between tracking and ability grouping in that tracking is a full-time scenario, while ability grouping can change and adapt from lesson to lesson and unit to unit, making it a versatile method of differentiation.

Tieso (2003) found that while ability grouping as a strategy to specifically target learners in an untracked classroom is a worthy attempt, unfortunately over time, issues of equity and accusations of racism have essentially shut down this practice of ability grouping in many places, which has led to fewer educational opportunities for some students in areas where tracking has been removed. Tieso (2003) further highlighted that “Equity is a noble goal, but not at the expense of students who lie on either end of the normal curve, especially in these days of political rhetoric and a heightened concern for educational accountability” (p. 30). Fiedler, Lange and Winebrenner (2002) agreed stating that if ability grouping is abolished due to perceived
inadequacies of opportunity, then students on both ends of the extremes in classrooms stand to suffer as a result. This conflict exhibits the political tightrope walk involved in detracking classrooms in places where it is a long-held practice.

In a study of an attempt to detrack six racially diverse schools, Yonezawa, Wells and Serna (2002) found that these political ideologies can be entrenched in cultural and hierarchical foundations and these can be extremely difficult to uproot. Citing that schools cannot simply put students in different classes and expect results, Yonezawa, Wells and Serna (2002) stated the schools must be aware of “the hierarchies that exist and how these hierarchies create separate spaces within schools, spaces that carry within them important meanings that affect students' perceptions of self and belonging” (p. 62).

Even though intermixing learners from all ability levels can enrich the experience of the previously lower tracked students, while not harming and possibly even benefitting the formerly higher-tracked students, schools that detrack run into political blocks such as assumptions about students, racial conflicts, parental pushback, and ideological beliefs that often are too great to be overcome (Oakes & Wells, 1996; Yonezawa, Wells, & Serna, 2002). The parents of gifted or higher achieving learners often provide that block. One solution to providing rigor without tracking is to provide gifted instruction to all students to give them the opportunity to stretch their ability, but this often can cause the parents of gifted learners are often angry that their students are not receiving a different curriculum (Yonezawa, Wells, & Serna, 2002).

Providing choice for traditionally lower-performing students of color is an option attempted by the research of Yonezawa, Wells and Serna (2002), who found that “For minorities working their way through majority-dominant institutions, this reassessment of oneself and one's ideology is arduous and explains why some successful African-- American and Latino students
choose to remain in middle-to-low-tracked classes where they feel more comfortable” (p. 55). This shows the complicated cultural and social barriers that exist for some students, but not others. This makes solutions for schools attempting to rely on other methods besides tracking seem difficult to find, as choice seems to be a clear opportunity to provide equity, but students do not always take the opportunities due to reasons of identity and self-identification.

Tracking is a long-standing method of separating types of learners that tends to mirror racial and socioeconomic divides (Oakes, 1985; Oakes & Wells, 1996; Oakes & Wells, 1998). While there is evidence to suggest that all students can succeed in the untracked environment, political issues of race and socio-economics keep it a common practice that is hard to overturn (Oakes, 1985; Yonezawa, Wells, & Serna 2002). Ability grouping and choice are ways in which educators have attempted to find success in untracked environments, with mixed results (Fiedler, Lange, & Winebrenner, 2002; Yonezawa, Wells, & Serna, 2002). Regardless of the challenge of finding solutions to making detracking successful, Tieso (2003) implores researchers to keep trying as they must “have the strength of their convictions to address and challenge educational correctness and investigate programs that may result in improved achievement for all students” (p. 29).

**Differentiation**

Teaching a mixed-ability class is a difficult and complex issue for today’s educators (Dixon, Yssel, McConnell, & Hardin, 2014). Defining differentiation is an imperative step to being able to help teachers be efficacious in utilizing it as an effective tactic in the classroom. In its very basic form, differentiation means doing something different. Recognizing that there are different types of learners in the classroom, the teacher who differentiates incorporates different strategies or assignments to meet the specific needs of different students (Juntune, 2016).
VanTassel-Baska and Straumbaugh (2006) stated that differentiation for gifted learners in heterogeneous settings requires great skill on the part of teachers and the support of peers and principals. As a result, implementing a school-wide differentiation program is essential for teachers because they need this support to feel confident in implementing this strategy (McAdimis, 2000).

More specifically, Juntune (2016) stated that differentiating for gifted students is not identical to general differentiation. If all students are able to complete the options provided by a teacher through differentiation, then that activity may be differentiation, but it would not be differentiation for gifted students. Differentiation options for gifted will usually be options that most other students either cannot do, or do not want to do (Juntune, 2016). McAdimis (2000) stated that the goal of teachers should be to provide gifted students with learning opportunities that develop their ability to enter into a learning experience matched to their academic need; differentiating accomplishes this. Reis, Kaplan, Tomlinson, Callahan, and Cooper (1998) found that the way that teachers do this is that they offer differentiated curriculum and instruction and view students as individuals with their own skills, interests, styles, and talents.

Another consideration of differentiation is that it is based on the composition of elements to develop a curriculum structure (Kaplan, 2016). This suggests that for differentiation to occur systematically, it must be incorporated into the framework of the curriculum. Endepohls-Ulpe (2017) was in agreement that “methods of internal differentiation should be imparted in teacher training for secondary school teachers at universities as well as in advanced teacher training” (p. 150). In regard to differentiation, especially with gifted education, this implementation of curriculum is important, but it can demand a top down approach, which does not come without pitfalls. Kettler (2016) opined “The hyperbole surrounding contemporary differentiation, which
promises elixir-like qualities in terms of meeting the needs of all students, has instead failed to meet the needs of the very students differentiation had been developed to meet--the gifted” (p. 32). This creates a chasm of pressure for teachers who want to help all learners, but struggle to find the point at which their efforts are successful to all. Vocal support is not enough to encourage teachers to differentiate. Although teachers can support gifted learners on their own, systemic change occurs only when leaders proactively support differentiating practices (VanTassel-Baska & Straumbaugh, 2006).

**Differentiation Challenges**

Differentiation is not a new phenomenon, and many studies have shown how difficult it can be to implement differentiation in classrooms. VanTassel-Baska and Stambaugh (2006) analyzed primary challenges that impede educators from differentiating in their classrooms for students. The primary impediments discovered were a lack of sufficient subject matter knowledge to go deeper for gifted learners, limited classroom management skills as they apply to differentiation, the attitudes and beliefs that educators have about learning, a lack of ability to appropriately modify the curriculum, having the skill set to respond to diverse populations, difficulty in finding and utilizing resources, lack of planning time, a lack of administrative support for differentiating practices, and a lack of relevant pedagogical skills. These deficiencies all led to a decrease in efficacy for implementing differentiation in the classroom. This study serves as a cautionary tale to help fine-tune future studies attempting to help a staff differentiate and build self-efficacy (VanTassel-Baska & Stambaugh, 2006).

VanTassel-Baska and Stambaugh (2006) provided suggestions for improving differentiation in classrooms. This primarily fell on improving the school climate for accepting such practices as a necessary first step, followed closely by the development of teacher skills in
content and pedagogy. Only when individual differences are acknowledged, embraced, and acted on in the classroom, will gifted students be adequately served. This consideration of school climate informs future studies to consider their faculty’s mood for accepting this type of change in general, and specifically a change toward differentiation.

One common practice to serve gifted learning is the common practice of tracking. Harris (2011) concluded on the effects of tracking, also known as ability grouping, as a strategy for serving the needs of gifted students. This is a highly controversial approach as track placements are closely associated with race and socioeconomic status (Gamoran & Mare, 1989; Mickelson & Everett, 2008; Oakes, 1985). Weiss and Schindler (2017) stated that tracking does tend to keep students in their tracked group in terms of their success and often there are “social class-specific distributions across the differentiated categories of education attainment, we in fact find quite pronounced inequalities” (p. 90). Based on this evidence, if tracking continues in a school, it will continue to perpetuate the educational disparities that federal and state policies are working toward eliminating (Harris, 2011). This study focused on how standards-based curriculum can help to provide equity within tracking, but the act of tracking itself contradicts its intentions of equalizing student outcomes and creates actually larger disparities. For schools that do not track their students, the focus on equity through differentiation can still resonate as an approach to close the gap for students who struggle.

Similarly, Dunn and Darlington (2016) studied the impact of removing “tiering” from testing and test preparation for geography students in England and found that initially that teachers were hostile to the idea and believed that having different types of students preparing for tests together in the same setting would be detrimental to both teachers and students. The impact of this study, which was intended to determine what resources geography teachers use
and need to help differentiate in their classrooms, resulted in teachers realizing the worth of the methods and determining that three specific aspects of differentiation were effective for them: differentiating through setting, lesson design, and classroom practice. In the end, the apprehensions that teachers felt were unfounded although teachers did cite challenges with the process of differentiation, they were able to learn and utilize many strategies that could impact their students.

Missett, Brunner, Callahan, Moon, and Azano (2014) studied the impact of teacher expectations on their implementation of differentiation strategies. The findings were that teachers grouped and accelerated students differently based on what they believed about students. If a teacher believed that the group of students was generally prepared for a level of work, then they were more likely to individualize for students, and if they believed that a group could not handle a certain concept, then they were more likely to target the entire group similarly. These findings are impactful for studies involving teacher efficacy as teachers’ own beliefs can affect their comfortability to differentiate, when their predetermined beliefs may not be correct, or may not accurately inform the teacher of what the students are capable.

Kaplan (2007) provided a warning that teachers must be clear on the meaning and intent of differentiation, or these teachers could be a liability in regard to teaching the gifted. Without ample understanding of intent and meaning of differentiation, there is a risk of fostering elitism, altering learning outcomes, and tracking students which could invalidate or compromise the efforts of differentiation. This focus on the clarification of intent serves as a timely warning for studies or classroom practice that could do more harm than good without realizing it.

Further exampleing the need for communication of the expectations and methods that the impact differentiation can have on students, Endepohls-Ulpe (2017) studied the consequences
anticipated by teachers of gifted students specifically related to the tactics of acceleration, enrichment, and internal differentiation. Endepohls-Ulpe (2017) found in order to counter the consequences that teachers somewhat unrealistically assume about using these tactics with gifted students, it is necessary to help teachers understand the potential impacts of varying levels of gifted education. These negative assumptions were aspects like “work overload, social marginalization and lack of leisure time and organizational problems for teachers” (p. 148). The primary conclusion drawn here was that “methods of internal differentiation should be imparted in teacher training for secondary school teachers at universities as well as in advanced teacher training” (p. 150). This is a key piece of research suggesting professional development for teachers specifically regarding gifted education can impact teachers’ approaches to differentiating for gifted students.

**Differentiation Solutions**

Many studies on this topic have provided a glimpse into the potential that successful differentiation can have on a classroom and even an entire community. Altintas and Ozdemir (2015) conducted a study that aimed to evaluate a differentiation approach that was developed to teach mathematics to gifted middle school students by studying the effect of the approach on achievement levels among both gifted and nongifted students. The students were given mathematics projects based specifically on their interests and abilities. Through a mixed methods study, the findings were that student achievement in both groups increased significantly, and teachers reported positive feedback in the methods stating that they were beneficial, interesting, the students were more active in their learning, and the changing of approaches enhanced the students’ social skills as well. In general, the teachers reported that lessons were more effective,
and teachers understood their students better than before (Altintas & Ozdemir, 2015). This shows that both teachers and students can benefit directly from differentiation.

McAdimis (2000) analyzed differentiation implementation in the Rockwood School District in Missouri and made myriad positive assessments. This district differentiated extremely effectively across elementary and middle grade levels and is a model for how districts can potentially differentiate in the classroom. Methods including a vast array of approaches including grade-skipping, dual-enrollment, early graduation, curriculum compacting, telescoping curriculum, challenge program, and elective system were analyzed as effective models for differentiating for gifted students. This push came from the top down, evidenced by Rockwood School Board Policy (1995) which included the statement "The Board of Education believes it is important to encourage, support, and assist each student to develop academically. Where ability is concerned, equality consists of providing equally well for all kinds and levels of individual differences" (p. 6). This example of top-down, school-wide implementation serves as an effective model for schools attempting a similar charge, but less effective for high school settings, as the high school setting can have more challenges as it is later in a child’s educations, so more time has been allowed for students to stratify in their learning and abilities, so the ability gap between students can be larger. All-the-same, this ambitious approach still acts as a successful model.

Kaplan (2016) looked to evaluate the connection between “challenge” and differentiation. She noted that today’s interpretation of a challenge should be aligned to the match between the learner and the learning experience. What educators should also consider is the “consequence” of the challenge that they provide students, also a focus on “appropriateness”. Kaplan (2016) stated that appropriateness refers to the degree to which the learning experience reinforces the
academic, personal and/or social needs, interests, and abilities of the learner. The conclusions here are that an educator must first understand the needs of their learners, so that they can then define an appropriate challenge for specific students, and this challenge will produce appropriate consequences. This is an applicable study for a study on differentiation, as it helps the researcher define how targeted differentiation can affect varying student populations.

Kanevsky (2011) focused on the concept of “differential differentiation” which means deferring to the differentiation that the student prefers, rather than the teacher’s judgement. Gifted identified and non-gifted-identified students were surveyed and self-pacing, choice of topic, and choice of workmates were most popular with students in both groups of students. Most of the students identified as gifted wanted to learn about complex, extracurricular topics and authentic, sophisticated knowledge and interconnections among ideas; to work with others some of the time; and to choose the format of the products of their learning, while the non-identified students were statistically less likely to choose these. More students identified as gifted also disliked waiting for the rest of the class and asking for help. Overall, the preferences of the two groups differed in degree rather than kind, and reflected cognitive abilities frequently cited as distinguishing characteristics of learners with high ability (Kanevsky, 2011). This study helps inform some strategies that suggest that giving gifted students the opportunities to research and think beyond will result in a richer, learning experience (Juntune, 2016).

Lanz, Speirs Neumeister, Adams, and Pierce (2009) studied mentors and teachers in a peer coaching setting for differentiation. In this study, an observation schedule was set up for mentors and teachers and mentors were tasked with identifying differentiation in lessons and recording the results of those lessons. The findings were that differentiation was occurring infrequently in the classrooms. This is a predictable outcome, and the subsequent meetings with
mentors brought illumination of this fact to teachers. This result is valuable in that the reality of infrequent differentiation is not uncommon, and this study goes to show one way to address this directly and identify it in classrooms.

Dixon, Yssel, McConnell, and Hardin (2014) studied how professional development in differentiation affected teacher efficacy. The study found that hours of professional development with differentiation was positively associated with higher teacher efficacy, which led to a higher likelihood of teachers differentiating in their classrooms. The study determined that teacher efficacy is an important factor in the process of having a staff increase differentiation in their classrooms. This occurred at all levels: elementary, middle, and high school, suggesting that efficacy is important at all levels for implementing differentiation programs into the curriculum.

**Teacher Efficacy**

This study seeks to determine if teachers learn how to effectively differentiate in their classroom, will that lead to a higher self-efficacy for doing so? Self-efficacy is related to self-judgments about how well an individual can perform the actions that are required for coping with possible situations (Bandura, 1986). Self-efficacy is an important variable in the teaching process, as it reflects on teaching. Individuals spend more effort and are more motivated and resistant towards difficulties in situations in which they have high self-efficacy belief when compared to those with lower self-efficacy beliefs (Saka, Bayram, & Kabapınar, 2016).

Efficacy has a direct impact on a teacher’s ability to be open-minded to new concepts and confidence in his or her implementation of those concepts. Studies on improving teacher qualities have pointed out that teachers must be aware of his or her own effectiveness (Çakır, 2004). The awareness of this effectiveness results in more intrinsic motivation to complete the task in question (Deci, Koestner, & Ryan, 2001). This also suggests that a lack of awareness of
effectiveness, or ineffectiveness, would result in less intrinsic motivation to complete a task or overcome challenges. Akyol (2016) stated that:

Teachers and the candidate teachers are expected to put value on learning throughout the lifespan. For this reason it is assumed that lifelong learning tendency can be considered as one of the most valuable determiner of teacher self-efficacy perception and motivation for candidate teachers.” (p. 19)

Furthermore, it may be more than only the learning itself that impacts efficacy, but also the way in which the teachers learn.

Capps and Crawford (2013) stated that it is imperative that teachers engage in authentic scientific investigation, supporting teachers in how to use the inquiry approach, and supporting the reflection of teachers. This suggests that teachers must engage in the process of the learning or the lesson being taught itself to truly glean its intention. Ultimately, it is the belief in a strategy or concept that a teacher has that makes the most impact in whether that teacher will use the strategy or not (Voet & De Wever, 2017; Tschannen-Moran & Hoy, 2001). Colson, Sparks, Berridge, Frimming, and Willis, (2017) found that long-term (one year) professional development in the areas of classroom management, instructional strategies, and student engagement had a higher positive impact on the efficacy of those teachers than did teachers only in a half year program, suggesting that in the case of efficacy, sustained specific instruction can have a larger impact than more periodic sessions of development.

**Empirical Findings**

The literature reveals that the reasons that teachers find it challenging to differentiate in the classroom are multi-faceted. Making assumptions about students causes some teachers to be unable to accurately differentiate for students because of their fear of misplacing students
Also, once teachers can trust and designate students, the reasons for inadequate differentiation range from teachers own lack of qualifications or confidence, to a lack of resources, to a lack of support organizationally (VanTassel-Baska & Straumbaugh, 2006). In addition, while tracking is sometimes viewed as a solution to be able to differentiate for gifted learners, it often perpetuates racial and socioeconomic disparities, and even within tracked groups, there is still differentiation that needs to occur (Harris, 2011). Ultimately, whatever strategies teachers embrace or master for differentiation, these attempts can be a liability in their classrooms. If teachers do not accurately communicate their ideas to their students, then without intending to they could cause more harm to students by fostering elitism or tracking students (Kaplan, 2007).

Solutions for providing differentiation in the classroom are far-reaching and diverse. System-wide examples of implementation using a top down support approach, focusing on a variety of specific strategies tailored to each classroom can be effective (McAdimis, 2000). Kaplan (2007) honed in on why some of these strategies may have worked by discussing how the challenge of differentiation must be appropriate for each child, and how every child’s “challenge” is different and should be adequately determined. Kanevsky (2011) went a step further connecting the idea of student preference and how they would like for differentiation to occur for them specifically; this was reiterated by Juntune (2016). Dixon, Yssel, McConnell, and Hardin (2014) focused on how professional development built self-efficacy for teachers in the classroom for differentiation. Similarly, Lanz, Speirs Neumeister, Adams, and Pierce (2009) studied peer coaching and observations of how this can increase efficacy and reveal inadequacies within classrooms related to differentiation. Altintas and Ozdemir (2015) aimed to determine how differentiation strategies affected both gifted and non-gifted students to ensure equity.
Overall, leveraging teacher efficacy is a key cog in understanding how effective the implementation of a PD plan centered around differentiation can be. Bandura (1986) stated that self efficacy directly relates to the belief in one’s ability to accomplish a task, and posited that this directly relates to a person’s willingness to try to do something (Saka, Bayram, & Kabapinar, 2016). Voet and De Wever (2017) and Tschannen-Moran and Hoy (2001) found that for teachers, this directly explains how likely a teacher is to implement something that they have learned, making teacher efficacy a primary factor in any professional development in education.

As a result of these findings, the gap in the literature that this study attempts to fill is if implementing a differentiation program for the teachers at a high-achieving public high school that does not track its students to serve their gifted needs can impact teacher efficacy. The lack of tracking for gifted learners is a rare occurrence, especially at a high-achieving high school, and the classroom reality for teachers of untracked classrooms is very different than for teachers in most environments that rely on tracking students into specific classrooms, where differentiation is still necessary, but the ranges of students’ abilities and needs are much smaller.
Table 1

Empirical Analysis Summary Table

<table>
<thead>
<tr>
<th>Author/Date</th>
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| “Evaluating a Newly Developed Differentiation Approach in Terms of Student Achievement and Teachers' Opinions.” Altintas, E. and Ozdemir, A. (2015) | * Academic achievement increased after using a newly implemented differentiation approach  
* Teachers reported strategies were beneficial                                      |
| “Acceleration, Enrichment, or Internal Differentiation – Consequences of Measures to Promote Gifted Students Anticipated by German Secondary School Teachers.” Endepohls-Ulpe, M. (2017) | * Showed teachers were worried about the negative consequences to their workload of having to plan multiple lessons for one classroom  
* Teachers assumed positive outcomes for students                                  |
| “Curriculum Differentiation and Comprehensive School Reform: Challenges in Providing Educational Opportunity.” Harris, D. (2011) | * Tracking persisted even in environments where there were attempts to limit it                   |
| “Peer Coaching to Improve Classroom Differentiation: Perspectives from Project CLUE.” Latz, A., Speirs Neumeister, K., Adams, C., and Pierce, R. (2009) | * Development and implementation of mentoring programs helped teachers able to handle the strains of differentiation |
| “GCSE Geography teachers' experiences of differentiation in the classroom.” Dunn, K. and Darlington, E. (2016) | * Proved the varying ways in which teachers can differentiate and different teachers prefer to differentiate in different ways |
| “Exploring Teacher Beliefs and Use of Acceleration, Ability Grouping, and Formative Assessment.” Missett, T., Brunner, M., Callahan, C., Moon, T., and Azano, A. (2014) | * Teacher beliefs about abilities and expectations of students affected how much and the methods in which they differentiated for their students |
Dixon, Yssel, McConnell, and Hardin (2014) found that the more time teachers spend with professional development toward differentiation that their efficacy increases. While Endepohls-Ulpe (2017) stated that teachers were worried about the negative consequences to their workload of having to plan multiple lessons for one classroom, and Latz, Speirs Neumeister, Adams, and Pierce (2009) determined that the development and implementation of mentoring programs helped teachers able to handle the strains of differentiation. Additionally, Dunn and Darlington (2016) proved that there are varying ways in which teachers can differentiate, and different teachers prefer to differentiate in different ways. For these reasons, providing the teachers with systematic professional development together as a team so that they can discuss and plan together, and so that each teacher can benefit from one another’s perspectives and views on the strategies will be valuable (Lanz, Speirs Neumeister, Adams, & Pierce, 2009). Also, the variation of strategies submitted will present a differentiated menu of options for teachers to build upon to use in their classrooms and give teachers with differing styles, multiple options.
Differentiation is difficult to employ in any classroom, but especially in a classroom with heterogeneous learners (VanTassel-Baska & Stambaugh, 2006). Experience and confidence are primary factors in giving teachers the self-efficacy and competence needed to effectively differentiate for students. Renzulli (as cited in Knobel & Shaughnessey, 2002) stated that differing types of learners can succeed in a heterogeneous environment, but teachers need explicit instruction for this to happen. A professional development plan that seeks to provide the knowledge and instruction, but also focuses on communication to build the confidence for teachers to be intrinsically motivated is an important step to help a staff reach all of their students (Dixon, Yssel, McConnell, & Hardin, 2014).

Providing a structured professional development plan for teachers that includes strategies that will help them more practically differentiate for their students is clearly an avenue that can yield positive returns in giving them the knowledge to differentiate (Dixon, Yssel, McConnell & Hardin, 2014). Having teachers do this in teams and implement the strategies together and give
one another feedback will help them have a support group for this new endeavor (Lanz, Speirs Neumeister, Adams & Pierce, 2009). Giving the teachers the knowledge to differentiate will give them the confidence to be able to do so, and this will begin a cycle of teachers more willing to differentiate (Saka, Bayram & Kabapınar, 2016). This cycle will cause teachers to be intrinsically motivated to differentiate in their classrooms, so that it will become a normal part of their planning routine for their students (Deci, Koestner & Ryan, 2001).
CHAPTER 3
METHODOLOGY

This action research study was conducted by me, the primary researcher, but in concert with and with input from the Action Research Team (ART). The group under study was a team of committed educators at DHS on the 9th and 10th grade English teams of untracked classes at Dunbar High School. Action research was the most appropriate method for this study because it “shifts its locus of control in varying degrees from professional or academic researchers to those who have been traditionally called the subjects of research” (Herr & Anderson, 2005, p. 2). In this way, the researcher is someone familiar with the organization, so they can analyze it through a lens of experience and direction. Additionally, action research is done “by or with” insiders to an organization or community, so as to create change within that organization, which is what I did (Herr & Anderson, 2005, p. 3). Additionally, this study’s intention was to serve as a catalyst for work that needed to occur within my school, which is ideal for action research. Herr and Anderson (2005) stated “action research moves this problem-solving process to a more formal level involving systematic data gathering and analysis” (p. 4). In this way, action research allowed for teachers to put into practice strategies to improve their self-efficacy for differentiation in their classroom and report on the successes and failures of that approach at DHS. Keeping everything in house and focused on practices intended to affect the students at DHS and was intended to make this experience seamless and logical for the teachers who knew the purpose of this research was primarily for the benefit of themselves and indirectly, the students that they taught at DHS, but also to the educational landscape overall.
The action research phases followed Beckhard and Harris’s (1998) framework for organizational change, which states the following steps: 1. Determining the need for change. 2. Defining the future state. 3. Assessing the present in terms of the future to determine the work to be done. 4. Managing the transition. Coghlan and Brannick (2014) stated that “taking planned changed as the most likely approach for insider action research” (p. 79). In my context, my action research team and I decided that these steps adequately fit my intentions and the positioning of my intended work within the framework and opportunity within my organization. Coghlan and Brannick (2014) also stated that the process of planned change is essential in situations where “you are the agent of a tightly-controlled, directed change approach, then you may find that it conflicts with action research values of participation” (p. 79), which was one concern that I had. Coghlan and Brannick (2014) stated that this model is “more likely to be linked to action research at the doctoral level, where there is collaborative engagement in multiple cycles of action and reflection” (p. 79), which was where I found myself.

This change process also flexibly fit the conceptual framework listed in Figure 3. During the first phase of determining the need for change, the action research team detailed the problem. In the “defining the future state” stage, we determined a faculty that could differentiate flexibly and thoughtfully was desired. In “assessing the present in light of the desired future” we determined that using already established course teams of untracked classes and finding research-based strategies to share with them would be prudent. Finally, in the “managing the transition” phase, I implemented the PD plan and reported feedback to the ART for analysis.
*Review and learning occur at each stage*

*Figure 4: Change process (Beckhard & Harris, 1998)*

**Description of Cycles**

The cycles for this research occurred in eight total phases. The original intent was 10, and reasons for the reduction are explained in Chapter 4. Each phase, except for the initial and final phase, involved a session of professional development over a research-based differentiation strategy or tool and time to discuss how this strategy or tool could be implemented.

For the first cycle, the teachers first signed their consent to participate forms. Next, they took the TSES for initial quantitative data. Finally, I explained to them in more detail what the consent form may not have made clear, and they asked questions about the study to get a better idea of what we would be doing.

Beginning the second week, the cycles became more repetitive as the professional development plan portion of the implementation began. Teachers were first exposed to a
research-based differentiation strategy (described later in this chapter), an example of this strategy in action in an English classroom, then an opportunity to work within their team to discuss and plan a potential unit or lesson in which this strategy could be utilized. Over the course of the six weeks of professional development, teachers were exposed to six strategies or tools. Teachers were not held directly responsible for implementing each strategy every week in their classroom, but they were expected to have authentic conversations with their teams about places within the current unit calendar at that time or their year-long unit calendar, where this strategy or tool could potentially fit to provide differentiation for their students.

Beginning the third week, after the teams had a week to potentially consider or utilize this strategy in the classroom, each session included five to ten minutes of reflection on the previous strategy, before the new week’s strategy was introduced. Including this element of reflection was supported by Bandura’s (1986) assertion that self-efficacy opens the mind to quality reflection. This is something that I wanted to follow throughout the meetings to see if there was a change in the way the teachers reflected over time, as they potentially became more efficacious for differentiating.

The structure of each cycle began with five minutes of reflection, 10 minutes of learning a new strategy, and then 15 minutes of time to plan and discuss the strategy with their team. During this time, I recorded conversations and took field notes on what teachers said and did during this time.

The final, eighth cycle followed a different path, as it included the second and final administration of the TSES for quantitative data. The cycles of the study are depicted in Figure 5.
Figure 5: Order of research cycles

*Each of the middle, non-data collection cycles involved the following process:

Figure 6: Model of each cycle
Following the change process of Beckhard and Harris (1998) each of these eight total cycles of meeting and collecting quantitative data encompassed reflection, learning, and planning, which built on one another week to week until the final quantitative data collection phase occurred.

**Differentiation Implementation Strategies**

Each of the following research-based strategies were provided by, or vetted by, all members of the ART. This was perhaps one of their most important roles in the entire process, as determining that the actual strategies provided would be meaningful and would contribute to helping the teachers feel more efficacious for differentiating for learners. The ART felt that each strategy selected would do so. Below is a detailed background of each strategy and why it was chosen for a professional development session:

**Grouping**

Levy (2008) stated that there are times when grouping by ability is the most appropriate action depending on the short or long term goals of the instructor. Shields (2002) found that homogeneous grouping had a significant, positive effect on gifted students' academic achievement, their attitudes concerning themselves as learners, and their school experiences. Burns and Mason (2002) cited that gifted students benefited from high-ability classmates who contributed to an improved academic climate and had better self esteem in the heterogeneous classroom, suggesting that ability grouping can help the gifted students academically and also socially and psychologically. Levy (2008) stated that grouping for student interest is a natural choice in the literature environment. Students of all levels who have a certain interest can work together and support each other, whereas those who have no interest in that topic can chose a topic that is of interest to them.
Grouping is a logistical basis for differentiation because it allows for different instruction to occur for different types of students. Kettler (2016) stated that grouping should be a frame that educators will further contextualize based on student learning experiences. In this lesson, teachers learned how to analyze Measures of Academic Progress (MAP) testing scores from earlier in the fall as a basis for ability-grouping data. Teachers also learned how to navigate this website and visually group data so that it was easy to follow and use. This removed the barrier of ignorance that previously plagued the accessibility of this data. Additionally, I explained the merit of grouping by student interest, using a member of the sample as an exemplar for effective interest grouping, as well as examples of this in the literature classroom.

The belief was that the initial exposure of methods and merits of student grouping within the heterogeneous classroom would provide a vehicle with which to deliver future strategies in the professional development program.

**Differentiator Tool**

This online tool provided a tangible, flexible tool that teachers could use essentially in any lesson at any time for varying groups. The Differentiator is based on Bloom's Taxonomy, Kaplan and Gould's Depth and Complexity, and David Chung's product menu ("The Differentiator", 2017). Cash (2017) stated that Bloom’s “continues to be a standard reference in defining quality curriculum, instruction, and assessments” (p. 111). Combining these proven entities into one tool allows teachers to select categories of “thinking skill”, “content”, “resources”, “products”, and “content”. The goal for this tool was to produce an instruction specific to what the teacher would want for each group based on these categories. For example: a more advanced group the teacher may have derived from this tool the instructions of “Students will formulate the ethics of the relationships of sixteenth century Europe using a primary text and
create an essay in groups of three” for the gifted group, while for a group that needs a more basic assignment, the tool could have provided instructions such as “Students will list the patterns of the relationships of sixteenth century Europe using a textbook and create a drawing in groups of two”. In each case, the assignment assessed the same content and basic skills, but the range of depth of thought and product could vary as much as the teacher deemed necessary.

**Taba Model for Concept Development**

Taba (1962) developed a model for concept development through categorization of ideas for students to apply abstract thought and organize this thought through patterns. Joyce and Weil (2000) stated that when Taba developed this model, she utilized three main assumptions when she developed this framework: 1. thinking can be taught 2. thinking is an active transition between individual and data 3. processes of thought evolve by a sequence that is “lawful”. Taba developed effective strategies in the inductive model that enable students to form concepts, interpret data and apply principles through concept formation, the interpretation of data, and the application of principles.

This model is favorable to student grouping and would allow different level groups to work at different paces and depth in determining concepts applicable to a text. Each group would be able to explore ideas of a text, but this model could give flexibility and freedom to allow for support when needed and extension where appropriate. Critical thinking is a key required component for the Taba Model to be successful. Ketter (2016) stated that critical thinking is an essential skill not just in the English Language Arts classroom, but in the “history/social studies and science/technical subjects disciplines” showing the universality that critical thinking plays in the education of modern students. Tomlinson (2005) stated that lessons for all students should emphasize critical and creative thinking” (p. 20). This puts great weight on strategies, like the
Taba Model, that could promote skills that could stretch traditional thinking into the realms of new, applicable thought processes.

**Thinking Like a Disciplinarian**

Dr. Sarah Kaplan (2014) of the University of Southern California developed the concept of Thinking Like a Disciplinarian to allow students to exist within the mind of a specific expert or professional as they analyze content or a situation. Common approaches would be for students to view a certain conflict in a text like an attorney and determine who is innocent or guilty, or to view a particular character as if they were a psychologist and use their own research to determine that the character made certain decisions, due to a specific psychological phenomenon or condition. One interesting way to approach this strategy is to give students a situation or a story and have them choose the discipline that most interests them as their lens of approach. In this way, students can apply their interest to the analysis so that they are more likely to participate and put forth their maximum effort.

This strategy could be applied to all students and serve as differentiation through the choices, or it could be offered only to students who have mastered analysis writing or discussion and need an extension to push their thinking. This is a strategy that can be applied to nearly every text, situation, and the possibilities for disciplines are endless.

**ThinkTrix**

The ThinkTrix chart (see Appendix K) was developed by Dr. Frank Lyman (1987) and uses a thinking matrix to develop varying levels of questions for a topic or unit. It is presented as a chart so that students can easily and visually see their thinking and identify where they would like to extend their thought. There are seven consistent types of thinking on the y axis: recall, cause/effect, similarity, difference, idea to example, example to idea, and evaluation. The most
rudimentary types of thinking are recall, similarity, and difference, while the more challenging types of thinking are the cause/effect, idea to example, example to idea, and evaluation (Winebrenner, 2012).

The variance of thought processes presented on a chart allows students to choose certain ways of thinking and line them up with specific content that the teacher can input on the x axis. Students can line up their thoughts on each axis for a specific question that they would like to answer. This allows for maximum differentiation as students can do this individually or they can pair up in like or different groups, which enables gifted students to appreciate the independence and ownership of working with the ThinkTrix grid (Winebrenner, 2012). In homogenous groups, they can think of similar questions, and in different groups they can tier their findings and see how they relate. The most important aspect of this tool is that it is versatile and can be used with any text or scenario quickly and seamlessly once the students know how the system works. The overall importance of this strategy is stated by Fogarty (2016) “differing the accessibility of questions for varying students during a lesson may be important to allowing all students to be able to contribute to the discussion” (p. 140).

**Conceptual Roundtable**

This is a conceptual worksheet (see Appendix L) that I developed in my American Literature class several years ago. I designed it to be used when teaching any complex piece of literature like a novel or drama. First, the teacher chooses a concept that is varied throughout a text like characters, symbols, themes, and perhaps settings if there are multiple. I most commonly do this with characters, as there are often several primary characters of a story.

The logistics of this assignment go as follows: the teacher numbers off the class with each number representing a different character. The teacher can specifically assign characters or
concepts to certain students based on how challenging they are, but this is optional. Once the students are assigned, they write what they know about their chosen character. I often put questions on the paper like “what are the primary personality traits of this character?” or “what motivates this character’s actions in the story?”. Once they answer all of these, the action begins. Students at this point go around the room and look to speak to students who represent the other characters and when they find a person, they are to write down their character’s name and how their character is in conflict or agreement with their own character. At this point, the students must discuss the interactions, conversations, and direct and indirect connections between the characters and figure out their relationship. Some of the connections between characters are obvious and easy, while others may be very indirect and require much thinking. Once the students have finished discussing the connections between that character, they move on and find someone else who represents a different character. Once students have written down their connections for all the characters represented in the assignment, they return to their seats, and class discussion ensues.

This assignment provides differentiation in a variety of ways. For one, the level of difficulty can be assigned by giving a student a character or theme that is more thoroughly represented in the text, while for a higher level student, they could get a more obscure or abstract concept. Also, the students must go around the room and speak with other students at random, so they are exposed to all levels of students and all levels of discussion. This can also be tailored though by breaking the class into two groups with one group doing a simpler concept like characters, while a higher group does a more complex concept like theme.
**Data Collection**

This study used a sequential mixed methods approach from a pragmatic worldview. In a pragmatic worldview study, the researcher focuses on the research problem as opposed to methods and uses all approaches available to understand the problem (Rosman & Wilson, 1985). Creswell (2009) stated “sequential mixed methods procedures are those in which the researcher seeks to elaborate on or expand on the findings of one method with another method” (p. 14). Both quantitative and qualitative data collection were used so that the overall strength of the study would be greater than just qualitative or quantitative would be on their own (Creswell & Plano Clark, 2007)
Table 2

Triangulation of Research Methods

<table>
<thead>
<tr>
<th>Research Question</th>
<th>Data Collection</th>
<th>Analysis Approach</th>
<th>Timeline</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q1: How does comfortability and familiarity with differentiation strategies impact the self-efficacy of teachers to differentiate in their classrooms?</td>
<td>Teacher Sense of Efficacy Scale</td>
<td>Mean Score Analysis</td>
<td>September 2017 &amp; December 2017</td>
</tr>
<tr>
<td></td>
<td>Recorded Meetings</td>
<td>Coding for Themes</td>
<td>September - December 2017</td>
</tr>
<tr>
<td></td>
<td>Interviews</td>
<td>Coding for Themes</td>
<td>December 2017</td>
</tr>
<tr>
<td>Q2: What specific differentiation strategies will most effectively allow for teachers at DHS to build efficacy for differentiating in the classroom?</td>
<td>Interviews</td>
<td>Coding for Themes</td>
<td>December 2017</td>
</tr>
<tr>
<td></td>
<td>Recorded Meetings</td>
<td>Coding for Themes</td>
<td>September - December 2017</td>
</tr>
<tr>
<td>Q3: What will the action research team learn about the effect of differentiation professional development on the self efficacy for differentiating for the teachers in the study?</td>
<td>Interviews</td>
<td>Coding for Themes</td>
<td>December 2017</td>
</tr>
<tr>
<td></td>
<td>Researcher Journal</td>
<td>Reflections</td>
<td>Ongoing</td>
</tr>
<tr>
<td></td>
<td>Recorded Meetings</td>
<td>Coding for Themes</td>
<td>September 2017</td>
</tr>
</tbody>
</table>

Quantitative

Quantitative data analysis measures were used through the Teacher Sense of Efficacy Survey (TSES), to determine initial self-efficacy for differentiation in the classroom (Tschannen-Moran & Woolfolk Hoy, 2001). This survey was selected because it is an already developed, respected method of capturing quantitative data on the efficacy of teachers, and building my own would have likely been repetitive because Tschannen-Moran and Woolfork Hoy (2001) had already captured what I wanted to gather from teachers quantitatively, and also because the
process of developing and testing a new tool for validity would push my capacity and time frame to the limits. Essentially, it was not a necessary step because of the pre-existing TSES.

The questions in the TSES relate to the topics of teachers’ efficacy for three specific areas: student engagement, instructional strategies, and classroom management. These areas all directly impact teacher efficacy. For the purpose of this study, all three areas were analyzed, but the instructional strategies strand was the most closely monitored, as it aligned most specifically with the intentions of this study.

For the analysis process, mean scores were taken from each participant from the initial data gathering and compared at the end to the mean scores at the second data gathering at the end of the study, to see if statistically significant growth in teacher efficacy was achieved.

**Qualitative**

To supplement this quantitative data collection, I used qualitative data to gain more specific information from participants to more fully elaborate on the quantitative results. I interviewed the participants individually at the close of the professional development plan. I waited until the end so that the impact of the plan would be heard in the interviews, but also I was looking to get a sense of how each feels about various aspects of their profession and their background in teaching. These interview questions originated from discussions with the ART where we ensured that each interview question related specifically back to at least one of the three research questions. These questions looked to gather contextual background data from the participants and eventually explored areas such as institutional perspective, differentiation, self-efficacy, and the implementation of the study itself. The nature and scope of these questions were appropriate to what I sought to gather to answer my research questions.
I also used observation during the professional development meetings, as each team learned and planned for using each strategy. According to Stringer (2014) “Observation in action research is more ethnographic, enabling an observer to build a picture of the lifeworld of those being observed and to develop an understanding of the way they ordinarily go about their everyday activities” (p. 113). This method was conducted to balance the interview data in that it was the actions and interactions of the teachers, not just their stated vision of what they believed was true. “Observation enables researchers to record important details that become the basis for formulating descriptions from which stake-holding groups produce their accounts” (Stringer, 2014, p. 113). This balance allowed for more rich analysis from diverse sources of qualitative data.

**Data Analysis**

Once I collected and recorded the qualitative data, I used the website scribie.com to transcribe the data into Microsoft Word files for analysis. As a full-time teacher and father, I valued my time more than monetary resources to the extent that scribie.com allowed, so it was worth it to pay a service to transcribe the data, so that I was able to analyze it in a timely manner and put my available capacity to analyzing and coding the data.

Once the data was collected and transcribed, I used In Vivo coding as the method of analyzing my data. Saldana (2013) stated that a code is a segment of data that a researcher attaches a label to. These pieces of data are labeled and then categorized into the thematic groups to find patterns in the data for analysis. More specifically, I used In Vivo coding through the computer website dedoose.com. Dedoose is a powerful software tool that categorizes and labels the data in visually decipherable ways and helps the researcher find patterns in the data that
might otherwise be difficult for the researcher to find or may take an inordinate amount of time to achieve otherwise.

I used this coding software to organize the codes, so I could analyze the data. I then found patterns and themes in the data and made determinations on trends and consistencies. From this point, I drew conclusions based on the results of the quantitative data and the trends in the qualitative data to make final determinations about the impact of the study as related to the research questions.

**Limitations of the Study**

A critical specification of this study was that it I conducted it within my organization, as a member of the organization. One important factor in the case was that I was typically a part of this case in my everyday job. I was a 9th grade English teacher at DHS. This was a potential challenge, as I was delivering professional development, to the team of educators of which I was a part. Ravitch and Wirth (2007) stated that a significant struggle of someone who is part of an organization doing research within that organization is role duality. Being familiar with the different personalities and perspectives is helpful, but preconceived notions can compromise the researchers’ ability to remain objective. Finding a place for myself within the research was a challenge. Simons (2009) stated that the “main reason for examining the ‘self’ in case study research is that you are an inescapable part of the situation you are studying. You are the main instrument of data gathering” (p. 81). I overcame this challenge by being a presenter at the beginning of each meeting when I shared the strategy, but then I slid into more of an observer role during the planning and discussion portions of each meeting. I did not count myself as part of the case in terms of my thoughts or potential input to the strategies or planning. I chose to do
this because I did not want to influence the data with potential bias I may have had toward
certain outcomes that I may have desired from the study.

Additionally, as another limitation, this was a small case of seven individual teachers at
one school and in one department. While this is often the nature of case study research, it still
had the potential to paint a narrow picture. While the teachers were of varying grade levels and
had very diverse backgrounds (Table 4), the size limitations of this case restricted the scope of
impact that these results could have had. Without a doubt though due to this diversity of
experience and context, the information that these teachers shared due to their experience with
differentiation in the classroom likely mimicked those of peers with similar experience in the
educational community state and nation-wide.
CHAPTER 4

CASE STUDY

Stake (1995) defined a case as an integrated system focusing on specifics rather than generalities. Stake (1995) also noted “Case study is the study of the particularity and complexity of a single case, coming to understand its activity within important circumstances” (p. 10). Simons (2009) purported a variety of strengths of the case study as a research method. Some of the most applicable for this study’s context are “interpreting events as they unfold in the ‘real-life’ setting...it is flexible, that is, neither time-dependent nor constrained by method...that case studies are written in accessible language...case studies have the potential to engage the participants in the research process” (p. 23).

For these reasons, I determined that I would analyze one single case, albeit a diverse case. Understanding Stake’s claim that a single case has “subsections, groups, occasions, and many other dimensions and domains” I knew that one case would be a challenging undertaking (2006, p. 12). The case itself was a group of 9th and 10th grade English teachers at Dunbar High School. There were four 9th grade English teachers under study and three 10th grade English teachers under study. These teachers came from a variety of backgrounds and had varying levels of experience. What made this group logical for one case was that they all similarly taught English at Dunbar High School in an untracked environment. They all were required to document differentiation that occurred in their classrooms, yet were not consistently receiving training on how to specifically differentiate for the learners in their classrooms. Additionally, they all planned together each week as teams to ensure that their units were aligned, and they
created common assessments together. For these reasons, I determined that analyzing them as one case would be appropriate, although their individual opinions and views will be discussed in later chapters looking to expose what Stake (2006) called looking to reveal experiential knowledge of the case through the situationality of the case.

**Description of the Context: Dunbar High School**

Dunbar High School (DHS) is a high-performing high school in Duncan County, an urban sector in the metropolitan area of a major city in the Southeast United States. Dunbar High consists of approximately 1,700 students, 100 teachers, with an administration team of six. As previously discussed in Chapter 1, Dunbar High School and the city of Dunbar have experienced significant demographic changes that have affected the types of learners at Dunbar High School. Shifts toward more middle to upper class families with more education have created a situation where a dichotomy of the wealthy and the impoverished is apparent. Families with more education and income, that are typically White, are quickly outnumbering the families that had previously been the majority: those with less formal education, with blue-collar jobs, and that are typically African-American.

These shifts have coincided with the district realizing that reaching all of its students, while valuing the diversity it has, is paramount. Teachers of 9th and 10th grade students in all major content subjects but math have classrooms that are untracked, meaning that there are no designated “honors” or “gifted” classes for those learners, but all learners are in the same classroom. This creates an inclusive environment where all learners can engage with one another, but it also situates a strain for teachers, who want to reach all of their students that learn in diverse ways, but are not always prepared to take on this multifaceted task.
Upon being hired at DHS in the fall of 2015, I quickly realized that while the district had recognized these shifts and responsively made differentiation a priority directive for its teachers, many teachers were struggling with the task, and few professional development opportunities to support them were offered by the district. As I completed my first year at DHS, I determined that this was a problem that was directly affecting not only teachers, but students as well.

Process of Engagement with the Client

To obtain approval for this study, I first reached out to the Superintendent of CSD, Dr. Derek Dunn. Typically, this would be an unorthodox first step, as superintendents are at the apex of district leadership structures and would not have the responsibility of approving studies such as this, but I did this due to the small size of the district and because I felt as if Dr. Dunn would find interest in my research. He quickly referred me to the Director of Assessment, Accountability, and Federal Programs for the City Schools of Dunbar, John Aldred. Aldred’s signature was ultimately what was required from the district to pursue studies within CSD on teachers. He approved my topic, making note of it for the purposes of accountability for the College and Career Readiness Performance Index (CCRPI) later on, as CCRPI takes into account the academic growth of various subgroups, research focused on subgroups is of particular interest to the district.

I also spoke with Cathy Gingrich, Gifted Coordinator for City Schools of Dunbar, to ensure that the topic fit with the initiatives and goals of the district from that standpoint. She confirmed that my intentions paralleled the goals of the district; she also agreed to be my sponsor for this study. Since DHS was an International Baccalaureate (IB) school, I also met with Dr. Cherith Namath, Instructional Coach and IB Coordinator for Dunbar High School, to ensure that the idea was in line with the goals and initiatives of DHS and its IB foci. She was instrumental in
implementing instructional ideas with the faculty in her role as instructional coach, and she also had extensive experience with initiatives such as these as well as research, so I knew her perspective would be invaluable to the process. Also, I spoke with Assistant Principal over curriculum, Whit Harper, for specific details about school data and plans. Finally, Principal Angela Whitman, my mentor for my EDAP residency courses, approved the topic, noting that it lined up with school and district goals as well.

I received IRB approval on June 21st, 2017 from UGA. This was vital for this study to move forward. My lead professor, Dr. Shanice Quilliams, helped me navigate this process once I defended my Critical Milestone #1. This approval allowed me to move forward knowing that the ethical implications of my study had been thoroughly considered by experts at the University of Georgia, and I could rest assured that I would not be having a negative impact on my colleagues under study.

**Action Research Team**

As this was a study with wide-reaching implications and a wide variety of stakeholders, my Action Research Team (ART) reflected this diversity for the purpose of making my study as authentically representative as possible, but also for the benefit of these individuals, as they led their respective areas affected by this study.

The sponsor of this study was Cathy Gingrich. She was integral in the beginning helping to clarify the topic overall, and as the study went on, providing district data and resources, as well as keeping me up to date on the relevance of this study to district goals and initiatives. The other members of the team reflected the other primary groups of student learners at DHS: Dr. Cassie Chalmers, Co-Department Chair of the English Department at DHS; Katie Brown, Title I coordinator at DHS; Beth Duncan, Response to Intervention (RTI) Coordinator at DHS; Betsy
Harris, Special Education teacher at DHS; and Dr. Cherith Namath, Instructional Coach and IB Coordinator for DHS.

Table 3

*Action Research Team Members*

<table>
<thead>
<tr>
<th>Name</th>
<th>Role</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cathy Gingrich</td>
<td>CSD Gifted Coordinator</td>
</tr>
<tr>
<td>Dr. Cherith Namath</td>
<td>DHS IB/Instructional Coach</td>
</tr>
<tr>
<td>Dr. Cassie Chalmers</td>
<td>DHS English Co-Department Chair</td>
</tr>
<tr>
<td>Katie Brown</td>
<td>DHS Title I Coordinator</td>
</tr>
<tr>
<td>Beth Duncan</td>
<td>DHS Response to Intervention (RTI) Coordinator</td>
</tr>
<tr>
<td>Betsy Harris</td>
<td>DHS Special Education Co-Department Chair</td>
</tr>
</tbody>
</table>

Each of these six groups, represented by each of these individuals, represented the identified subgroups that were represented most prevalently in the untracked 9th and 10th grade English classrooms at DHS: gifted, English (not a subgroup but the content area of the teachers under study), Title I, RTI, SPED, and IB. Gifted and IB represented the higher level students whose needs were specifically considered in this study. Title I, RTI, and SPED represented different ways in which students with specific academic or sociological challenges need specific interventions and differentiation. These areas ranged from familial and financial challenges that affected learning, to physical and mental handicaps or situations that served as barriers for students.

A designation for students that was purposely omitted from the ART was English Language Learners (ELL). This was a specific omission for directed reasons. ELL is typically a critical area of focus for schools looking to differentiate due to nationwide rising populations of
speakers of languages other than English. This was no different at DHS, as Marcia Burns served as the ELL coordinator. At DHS though, these students represented less than 1% of the student body, so this group was not deemed to be significant enough to specifically have a team leader included on the ART.

One other group that was not to be forgotten in this study and was represented essentially by all of these members in some regard, was the regular education student, who was not targeted for any specific accommodations or differentiation, but surely needed to be met where they were in terms of their stage of learning. Many students who have no designation for interventions, are still in need of or could benefit from these interventions. These students are essentially considered to be the “on level” students, but they are certainly not a homogenous group. This reality only makes navigating the waters of reaching all students that much more opaque for teachers.

One note about the ART is that they were all White females. I would have preferred more diversity in this group, but the paramount diversity I was looking for was diversity in how students were represented by the roles of the individuals. It was out of my control the race and gender of these professionals who held these roles that represented the students in the classroom. There was some diversity in the amount of time they had spent with CSD though, with the shortest tenures being around five years up to multiple teachers who had spent 20 or more years in the district.

A unique benefit of this team was that two of the members had received their doctoral degrees. They were selected for their positions as stakeholders within CSD, but also strategically because of their experience with going through the research process. I highly valued their
perspective in having conducted doctoral research, and for that reason, I leaned on their expertise and judgements as I went through this process.

**The Story**

This study was conducted from September 2017, until December 2017. The study took place in the form of weekly professional development meetings during each team’s planning time. The Action Research Team met twice prior to the study to plan, once to assess data and discuss progress, and once after to discuss final data and discuss recommendations and conclusions.

**Planning Phases - Action Research Team**

The Action Research Team (ART) played an integral role in shaping the study from the outset. I was very apprehensive about the nature of doing research within my organization as this study began, due to the potential personal conflicts that could arise, defined by Coghlan and Brannick (2014) as involving the researcher as “natives and actors, immersed in local situations generating contextually embedded knowledge which emerges from experience” (p. 4). The ART was able to help me structure this study in such a way that allowed me to navigate these local situations and my apprehensions of affecting them, and ultimately helped me create positive change.

I conducted three ART meetings before data collection began. The first meeting was on February 3rd, 2017, solely with my sponsor, Cathy Gingrich. At this meeting, we determined the goals of this study as they related to the goals of the district, talked about stakeholders, and discussed potential utility for this study for the district.

After this meeting, I conducted my first official, full-scale ART meeting in February of 2017 where I shared my initial thoughts about my cycles. I only shared the ideas for cycles and
logistics of implementation, but nothing yet on the specific strategies that I ultimately used during the implementation of the professional development plan. I received extremely valuable feedback from members which changed the direction of my study. Dr. Cassie Chalmers, department chair of the English department suggested that my initial goal of eight weeks may be light, considering that it would likely take two weeks alone to do pre and post surveys as well as explain the study on the front end and get final feedback on the back end. I took this advice and did indeed extend the study from the original eight weeks planned, to a ten-week study. Also, Title I teacher, Katie Brown, reminded me of my focus not just on gifted learners, but also on students who struggle, which I kept in mind while searching for differentiation strategies so that they not only were targeted to gifted-level learners. ART Chair Cathy Gingrich reminded me that she had access to data that I was not privy to, that she would be able to share, which she ultimately did do, which helped tremendously.

In the second ART meeting in late April 2017, I got specific feedback about my chosen differentiation strategies. I was apprehensive going into this meeting because while I felt that I had adequately researched strategies and considered all angles of needs, I still felt a bit like the strategies I chose would not be validated by my AR team. I think I partially felt this way because there were so many different types of voices in the room, (by design) and I would somehow fall short of representing each group equitably. This is something that would be hard to do in any scenario, but I truly wanted my work to be impactful for all.

I was surprised when the feedback was overwhelmingly positive for each strategy. One helpful piece of feedback I received from IB Coordinator, Dr. Cherith Namath, was to use google forms to keep track of data. I ultimately did not use google forms, but this advice was a nice reminder to keep data collection organization at the forefront of my priorities, which I did
throughout. Special education teacher, Betsy Harris, suggested having a plan for troubleshooting for apprehensive teachers. This was something I had not previously considered. As a teacher who feels comfortable trying new strategies in any classroom, it did not occur to me that some teachers may feel anxious about trying a new strategy. This made me remember to be extremely clear in how I portrayed each strategy, but also to expect that some may not have my willingness to try new things in the classroom and to be prepared to support them.

Another piece of feedback I received was also from Dr. Kerri Chalmers, and that was to make sure that my final reflection questions for teachers in the last meeting were specifically tailored to my research questions. This was good to remember because, ultimately, I needed to make sure that my data was directed toward answering those questions, specifically. This was directly considered in my interview questions in Appendix G. Overall after these meetings, I felt comfortable moving forward into the data collection phase of my research. As a team, we decided that our next meeting would occur near the halfway point of my data collection so that the ART could provide feedback and understand how their input was impacting the study.

An important decision that was made in this second ART meeting that became very impactful when I began taking interview data was the question of: should we require direct accountability for using the strategies in each cycle, or should we allow it to happen organically and let teachers use the strategies as they naturally would? The risk of allowing organic usage was that it could be difficult to track if teachers actually used them to build efficacy, but if we required them to use the strategies each week, then this could have potentially impeded their normal planning and spacing of their units or lead to inauthentic usage that may not actually impact data. The latter risk mirrored worries I had in general with this entire study: that I was already asking a lot of my colleagues, and I was afraid of overstepping boundaries.
Ultimately, the ART decided that we should not pose rigid accountability and giving the participants this chance to discuss the strategies and plan through conversation still represented some form of accountability, but more importantly, it gave teachers a chance to authentically talk about how they felt about each strategy with their peers and determine if each strategy was a possibility for them. Additionally, hearing thoughts from peers was meant to spark ideas to one another, all to see if efficacy would be affected.

**Study Participants**

Since the action research team decided on specific academic teams as participants for the study, the individual participants were predetermined based on their roles as members of their team. These members ranged from new teachers to the profession, to those who had been teaching at DHS for nearly 30 years, and those who had taught only at DHS, to those who had taught at many other schools. This diverse grouping of teachers provided rich feedback for the consideration of how differentiation affected self-efficacy in practice. The Table 4 gives a look at specific demographic information related to these participants.
Table 4

*Study Participant Information*

<table>
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<tr>
<th>Name</th>
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<th>Years Experience</th>
<th>Years at DHS</th>
<th>Total Number of Schools</th>
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**Data Collection**

Once I scheduled the meetings, I felt confident and comfortable in the plan for executing these strategies, although there were a couple of apprehensions that I had. Knowing that I was asking my colleagues to meet ten times with me over a period of several months, I was nervous that no matter how valuable these strategies may have been perceived to be, that this *extra* element being added to the teachers’ already busy schedule would cause stress and perhaps even animosity between myself and my colleagues, which could hurt efficacy. I valued the relationships I had with my colleagues, and in no way did I want this study to seem as if it was asking too much of my colleagues. The irony of this was that, ultimately, this study’s intention was to provide a means to potentially build their efficacy as teachers, but I was not sure if they would perceive the study’s intentions as such. Secondly, even though I had received mostly positive feedback from my action research team about my differentiation strategies, I knew that
if the strategies were not deemed to be effective by the teachers, then the success of the study would be at risk.

Another issue that I had anticipated and planned to overcome, but still worried me, was the fact that I needed coverage for the 1st half of my 3rd period each Tuesday throughout the 10-week implementation of this study. The cause of this was that I was not a natural member of the 10th grade literature team as I was on the 9th team, which meant that I did not have the same planning period as the 10th team. When they conducted their normal meetings, I was teaching a class of my own of 30 students. This created yet another scenario where I would be asking other colleagues to disrupt their normal flow of activities for the sake of this study.

**PD cycles introduction for participants.** The original start date was the week of September 11th because it was a week before CSD’s fall break week. The ART determined that starting too early in the year would be tough on teachers because they wouldn’t yet know enough about their students to truly be aware of which ones needed certain differentiation, and in general, teachers need time to get their year started and build some familiarity before they would be receptive to something that would interrupt their norm.

As a result, the thought process was that it would be good to go ahead and give them an initial explanation of the study, get participation signatures, and collect initial quantitative data before the week off so that when teachers returned, the PD sessions could begin. This was not meant to be though, as Hurricane Irma came through on Monday, September 11th and devastated trees, homes, and the power infrastructure of Dunbar. The City Schools of Dunbar were closed nearly all week due to power outages at schools and the homes of residents. Obviously, this delayed the study as teachers were not present at work, and this study did not take precedence over the other pressing priorities following an event like that. The following week was the
scheduled fall break, so this effectively pushed back the start of my study two weeks. This did not concern me initially, as there was plenty of time to conduct the study, but this certainly did not represent a clean start.

Once teachers returned from break, I was able to communicate with the participants and reschedule meetings to begin the study. From this point, I began to remember how flexible and open-minded these teams under study were, which would be of paramount importance because there would be many more challenges to implementing this study throughout the semester (see Table 7). These challenges mimicked how Coughlin and Brannen (2014) defined the aspects of a single case.

**First meeting & second meeting cycle - grouping/differentiator.** The first actual PD session occurred in a very different setting than the ART had planned. From the outset, this researcher was introduced to how Stake (2006) defined a case as “dynamic. It operates in real time. It acts purposively, encounters obstacles, and often has a strong sense of self” (p. 3). This would echo itself throughout this case study, due to forthcoming events.

As the study was already a week behind, and because there was a previously scheduled professional development day upcoming on the calendar on October 9th, I seized the opportunity to hold a joint meeting between the 9th and 10th English teams (the entire case) to cover the first two strategies, since the study was already behind schedule. I decided to do this for the reason of making up time, but also because I thought it would be preferred by the participants, as it would seem a more efficient use of their time. Knowing that professional development days typically offer open afternoons for teachers to work, I thought that scheduling a meeting during this time would be more appealing to teachers than taking time out of a busy, typical work day when they would be teaching. I needed to get the study going because at this point, because I was already
three weeks behind schedule and was starting to get a bit apprehensive with such a delay and with so much ground to cover and limited time.

This initial session itself was a bit awkward for several reasons. This was mostly because it was the first session with both teams, who normally do not meet together, in a room for something they had never done before. I was nervous, so I talked more than I should have, which was reflected in the transcript of this meeting. This meeting was scheduled as such to improve timing efficiency, which it did, moving the sessions forward closer to the original schedule. An unintended consequence of this though was that the data from this session, which covered ⅓ of my overall scheduled PD sessions, was not as rich as the later ones would be. In this way, I regret conducting this first meeting the way that I did, but I was able to learn the importance of making sure the sessions were about the participants and that I was giving them ample opportunities to share their feelings.

Third meeting cycle - Taba model. After the first meeting’s hiccups, I had various conversations with ART members, although we were unable to meet together as a whole team during this time. Their aggregated feedback along with my observations helped me to determine that putting the teachers through the process of enacting the strategies themselves as they learned about them might be a good way to help them visualize their potential more effectively and might be different than the more “theoretical” PD they had received before. This might also generate more authentic discussion about the strategies.

In this way, the process began to settle in to how the sessions would unfold for the remainder of the cycles. Another major difference this time was that, as intended, the teams were back to meeting as individual course teams and not both teams together. The sessions began by reflecting on the previous session, and I immediately started to see that in these smaller groups of
homogenous teams, the data and feedback was more rich and plentiful. This was positive because that was always the intention, but this strong meeting provided notable reinforcement. In the 9th grade meeting, I saw full participation from all members right off, and they were very forthright about the strategy, producing excellent data.

For the 10th grade meeting, there were more notable happenings. The instructional coach that had agreed to cover my 3rd period class forgot to cover my class that I teach during that time, so I stayed in communication with the 10th grade team via email, while I tried to get my class of students started and waited for my coverage. Finally about 15 minutes into the period, it was apparent that my coverage was not going to arrive, so I let the 10th grade team know that I would not be attending their meeting that day. Shortly after, the instructional coach let me know that she had forgotten and would reschedule for next time.

There were a couple of impacts for the future as a result of this. First, I felt very frustrated because as previously stated, I already felt as if my study was an impediment on the participants’ already busy schedules, in addition to being behind my original implementation schedule. This only heightened my apprehension for asking so much time of them. Positively though, the instructional coach was extremely apologetic for her error and offered to cover my class an extra session in the future. This turned out to be helpful later, as I was trying to avoid inconveniencing too many people to cover my class.

Also, once I rescheduled the meeting for the following week, my sponsor for the study, Cathy Gingrich, Gifted Coordinator for City Schools of Dunbar, let me know that she would be in attendance from a district angle to note how my study was affecting teachers. This was helpful because she was able to give me the feedback that I needed to be clearer about how the strategy
could be used specifically for English. This helped to show me a benefit of having an ART member at a cycle session.

**Fourth meeting cycle - Think like a disciplinarian.** This week saw another smooth delivery and response of the actual material with quality discussion and data. One notable aspect at this point in the study was that all members had been present for each meeting to that point. The 9th grade meetings ended up needing to be pushed it until Friday because our school was doing a weeklong session of student meetings during teacher planning periods, and several members of the 9th grade team were overwhelmed by the number of student meetings that they were required to attend during this time. I decided that giving them some flexibility would be the prudent action and, ultimately, I believe it only built further rapport between myself and my participants, as they could see that I was doing this study primarily for them, to serve their needs.

The following week, I opted to cancel our meetings and push them to the following week because the instructional coaches had given the English teams a “grading day” in which the teachers could put in for a substitute teacher and use the whole day to calibrate grading practices and help relieve the grading burden that English teachers feel, due to the large amount of essays they assign and have to grade. This was an example of the professional development that DHS does afford its teachers, but it is notable that as previously stated, it does not address differentiation directly. I did not want to interfere with the intention of the day, so I felt it best to push my study back a week. At this point, my study was about three weeks behind schedule, even though I had done my first two sessions together as one meeting to try to earn back some time. I was a bit concerned at this point, but I knew if I was able to stay on schedule from there, that I still had enough time built in at the end of the semester to finish up with time to analyze.
Administrative interference. The next roadblock represented the most potentially devastating conflict within my organization that I had faced to that point and reminded me of how Coughlin and Brannen (2014) stated that “doing action research in your own organization is intensely political and involves you in concurrent and sometimes conflicting roles” (p. 80). As such, I was asked to meet with my primary evaluator, an Assistant Principal at DHS, on a Thursday afternoon where she shared with me that someone within the organization felt as if my study was being conducted only for my benefit, and its progress was to the detriment of the planning time of the 9th and 10th grade English teams. My evaluator said she could not share with me the origin of the complaint, but that I should not move forward with my study until I met with the principal because the principal needed to confirm that conducting this study during teacher planning time was permissible. I was surprised at this because I had previously received clearance from my district to conduct the study, and I had been forthright with my principal and my participants about the nature of the study. I communicated this to my evaluator, but she maintained that she was following chain of command, and I needed to meet with the principal before I could proceed.

This was shocking news, mostly because I had heard nothing about this type of concern to that point, and because I had taken such great care from the outset to be transparent about my intentions and the processes and protocols that the study would be following throughout. I was already worried about the strain I was causing within my organization, and now this surprise only caused me to doubt the positive impact I was potentially having, as well as caused me to be paranoid for who was disgruntled about how my study was being conducted, and if there were others. I had no way to know if it was a participant, another member of the organization, or even someone outside of the organization. Knowledge of the origin of the complaint would have
potentially helped me to solve the issue, but I understood the nature of confidentiality and why my evaluator could not share with me the source of the complaint.

The most negative issue logistically with this development was that my principal was out of the building for the week on a leadership retreat and would not be available for a meeting for at least a week. Also, the process of requesting a meeting with my principal was overly bureaucratic and typically took a bit of time to come to fruition. I was already behind in administering my cycles, and now I had to put the entire study on pause for an unforeseen amount of time, due to this development.

Knowing I must take action to fight for the resumption of the study, I immediately met with my department chair, Dr. Kerri Chalmers, to get her advice, because she was a veteran teacher of 27 years whose opinion I greatly valued. She advised me to contact the participant teams and let them know that the study was paused, and to put in a request to speak with the principal. This advice was helpful because it helped me form a plan, but did not directly help me to solve the issue of further delaying the study.

The next step was to reach out to my major professor, Dr. Shanice Quilliams, to seek her advice. Her guidance was to be critical due to her role in my journey of seeking my degree at UGA as mentor. Her advice was to cease data collection and use what I had at that point, because I had already collected enough to make definitive conclusions, to avoid further conflict within my organization. She stated that she did not want this conflict within my organization to cause any political issues for me that could affect my future or my graduation. This advice helped to ease my concern, helping me know that I was supported, but also that I had a clear avenue to completion, even if my organization forced me not to continue.
The next development went a long way into helping me make my final decision on how to proceed through this conflict and helped me to understand how supported my study was within the district. Cathy Gingrich, my study sponsor, called me because I had emailed her letting her know my next session was cancelled, and she was wondering why. When I explained the situation to her, she seemed very concerned because the conversations taking place in these meetings and the documentation of those conversations was part of DHS’s state accountability for gifted differentiation, and any interference with the study was therefore an interference with state-mandated reporting. Also, there were multiple participants in my study who were also pursuing their gifted certification, and they were using these meetings as documentation of their professional development to assist gifted learners. She then spoke to several district leaders, and they conferred and determined that my study needed to continue due to these interwoven factors that the district was utilizing through this research. One of these district leaders acted, contacting the assistant principal, who had paused my study, and let her know that the study needed to resume.

This sequence of events made me feel extremely supported by my district, when previously, the shutdown of my study due to one complaint had made me feel as if I was alone, and my study was not concurrent with the goals and desires of the district. I also decided to take my major professor’s advice and shorten the study, as I was already very behind, and I had a thorough collection of data to that point. I was going to shorten it, but I still wanted to cover two more strategies and conduct my interviews. This compromise allowed me to continue with the professional development meetings for a few more weeks to satisfy the district, and it also allowed me to finish closer to the window that I had originally set out to work within. This change ultimately trimmed my study from eight professional development sessions, down to six,
for a total of eight meetings including the initial meeting and post meeting, when I had originally intended ten total meetings.

The final step in this process was to meet with my principal to review what had occurred and get her blessing to continue the study as planned. The primary issue at hand was if these sessions could be conducted during scheduled teacher meeting time. Upon reviewing my approach and what we were accomplishing each week, and that there were only three weeks remaining in the study, the principal determined that carrying on the remainder of the study as planned would be the prudent action.

During this time I had met with most all of my action research team to enlist their help or advice to overcome this challenge. This midpoint check in with each of my ART members represents the third ART meeting. In each previous meeting the team discussed the same topic and for the same purpose; this time we did so, but we were unable to get together as one group. This ART meeting was perhaps the most impactful and certainly served to help the study move forward the most.

**Fifth meeting cycle – Thinktrix.** Once the study was live again, the participants expressed that they were very eager to receive the weekly strategies that they had become accustomed to. This was very positive feedback to hear following the stressful disruption of the previous weeks. The 9th grade team was again all present and very receptive to this strategy. In the 10th grade meeting, ART Sponsor, Cathy Gingrich, was again in attendance since she was so instrumental in reinstituting the study. Dick was absent due to family issues, which was the first absence of the sessions thus far, which I was pleased about because I felt strong participation would make my data as authentic as possible, possibly overcoming the timing disruptions.
At this point in the study, teachers and students were out the following week for Thanksgiving break. Had the study gone originally as planned to that point, this would have signaled the end of the PD sessions, but due to the aforementioned setbacks, there were still two meetings to go.

**Sixth meeting cycle - Concept roundtable.** This meeting represented the final PD session of the study. This was a landmark meeting because it represented the completion of this important phase of data collection, especially in the face of the many challenges that had impacted the study.

Implementation was smooth, and at this point, members lamented that this would be the final session. This was impactful for me as it culminated a full circle of emotions, from my being an apprehensive first-time researcher, to being a researcher who felt like regardless of what the quantitative data showed, that the qualitative impact seemed to be positive to that point, to realizing the true impact that I was making on my organization. This was important because there were points within the study where I wondered if what I was doing was an impediment on my organization, but by the end it was apparent that it was a boon.

Logistically, the data collection again ran smoothly with Dick being the only absence. I was not worried that he had missed two sessions of professional development because he had received the prior four, and I knew going in that there would not be 100% attendance throughout, and circumstantially, attendance had been very consistent throughout.

**Final data collection and interviews.** Originally, I had planned to have a final meeting with each team present to collect final quantitative data and have a final group discussion. The ART determined that this final meeting would not be required since the quantitative data could be collected by distributing the surveys to be completed at the convenience of the participants.
Additionally, since I was conducting personal interviews with each participant, it would be unnecessary to hold a final group meeting to collect qualitative data.

For the final interviews, I created a doodle.com invitation to let participants communicate to me when it would be most convenient for them to speak with me to answer my interview questions (Appendix G). These questions were each intended to connect with a specific research question. These interviews were completed with a two-week time span, with each lasting between 10-15 minutes.

**Final ART meeting.** Once the data was tabulated, the final ART meeting was conducted for the team who had developed the study to see the results and determine how the school and the district could use the findings. This meeting was attended by most members of the ART: Cathy Gingrich, Dr. Cassie Chalmers, Katie Brown, and Dr. Cherith Namath. Gingrich again provided specific district-related ideas and conclusions, and Brown, Chalmers, and Namath provided school-specific feedback and discussion. As always, Namath provided some larger more open-ended feedback. The feedback from this meeting is reflected in Chapter 6.
CHAPTER 5

FINDINGS

The purpose of this action research study was to determine if a regiment of professional development specifically focused on providing teachers with strategies to help them differentiate in their classroom with their students could help build the efficacy of those teachers. The specific group of teachers under study was the 9th and 10th grade English teachers of Dunbar High School, a school that did not track learners in these grades, so that all levels of learners were present in the same classroom with the same teacher, providing difficulty for the teacher to challenge and support each student. The research questions that this study attempted to answer were:

Q1: How does comfortability and familiarity with differentiation strategies impact the self-efficacy of teachers to differentiate in their classrooms?

Q2: What specific differentiation strategies will be most effective in allowing for teachers at DHS to build efficacy for differentiating in the classroom?

Q3: What will the action research team learn about the effect of differentiation professional development on the self efficacy for differentiating for the teachers in the study?

This chapter disaggregates qualitative and quantitative data for the case study broken down by research question. Data was compiled from the TSES and qualitative interview data, as well as recorded meetings. The table below shows the findings broken out by strand.
Table 5  

*Summary of Research Findings Chart*

<table>
<thead>
<tr>
<th>Research Question</th>
<th>Findings</th>
</tr>
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| Q1: How does comfortability and familiarity with differentiation strategies impact the self-efficacy of teachers to differentiate in their classrooms? | Theme 1 - Efficacy was directly affected by comfortability and familiarity with differentiation strategies  
Theme 2 - TSES scores indicated an overall improvement of efficacy, but especially for instructional strategies  
Theme 3 - TSES scores indicated similarities but also differences in the impact of the professional development plan on teacher efficacy  
Theme 4 - Professional development sessions built or fed a culture of collaboration and teamwork  
Theme 5 - Teachers generated specific ways in which they would use the strategy or did use the strategy during the study  
Theme 6 - Teachers stated specific ways in which the strategies would help them differentiate in their classroom |
| Q2: What specific differentiation strategies will be most effective in allowing for teachers at DHS to build efficacy for differentiating in the classroom? | Theme 1 - Some consensus of best strategies in practice, but generally preference was by teacher  
Theme 2 - Flexible strategies appreciated and flexible strategies morph in practice  
Theme 3 - Specific purpose for specific students noted per strategy |
| Q3: What will the action research team learn about the effect of differentiation professional development on the self efficacy for differentiating for the teachers in the study? | Theme 1 - The want for accountability for using the strategy or not varied by teacher but feelings were strong  
Theme 2 - If teachers are provided quality, research-based strategies, then they will use them and be grateful  
Theme 3 - The decided upon approach to use course team meeting time was effective  
Theme 4 – Having the teachers experience the strategies themselves was valuable  
Theme 5 - Teachers stated benefits to other classes besides the course teams they represented  
Theme 6 - My worries of wasting the teachers’ time was completely unfounded  
Theme 7 - There were unintended positive consequences for my district with this research |
Research Question 1: Experience with Strategies Affecting Efficacy

To determine if there was a correlation between teacher efficacy and differentiating in the classroom, I first used personal interviews to take quantitative data on the mere question outright: Does your ability to differentiate in the classroom affect the way that you perceive yourself as an effective teacher? Secondly, I used the quantitative measure of the TSES to specifically determine in which specific ways might the PD plan affect efficacy in different ways.

Theme 1 - Efficacy Was Directly Affected by Comfortability and Familiarity with Differentiation Strategies

The most applicable question for this first research question was the direct question of asking the teachers in interviews if their ability to differentiate in their classrooms affected their efficacy to do their jobs as teachers, which was done in both September and December. The answer from aggregating the data from this question in these personal interviews was an overwhelming “yes”, with six respondents stating that it did affect their efficacy, and only one stating that it did not for a percentage of 86% of teachers who said that differentiation affects their efficacy, up from 58% at the outset (Figure 7). This supports the work of Dixon, Yssel, McConnell, and Hardin (2014) who stated that hours of professional development with differentiation was positively associated with higher teacher efficacy.
These questions were asked at the beginning of the study in September and again in December as part of the personal interview process, after the professional development program had been implemented, suggesting that after the implementation of the program, there was a 28% spike in respondents stating that their efficacy was affected by differentiation. Moira, a first year teacher gave some context to why this may be:

Yeah, I believe in the philosophy behind differentiation. When I do it correctly, I see it making a big difference in my classroom and light bulbs going on for students, and students who have a lot of difficulty achieving in ELA, being able to take those steps, and then the students who are not challenged, being challenged.
The exposure and implementation of strategies for differentiation likely had an effect on teachers, who understand that differentiation is important, but struggle with how to do it or do not have the tools to do so. A more experienced teacher, Gertie, echoed this sentiment:

*I think differentiation is expected right now in this climate, and I think that it is necessary. And so I think that if I looked at each student as if they were the exact same person, that would be a weakness that I would hope that administrators or someone would address with me and help me to improve.*

This showed a desire to differentiate to the point of desiring accountability for differentiation. A veteran teacher, Cassie, near retirement, had similar thoughts on her educational philosophy and where differentiation fits:

*I feel good when I employ differentiation because I feel like my goal of going into education is... I believe education is every kid's ticket to getting to the place they imagine themselves to be. And so when I successfully differentiate, I am giving them what I'm able to give them to help them on that journey of life so that they get to options and places that they would like to have.*

These responses from a diverse group of teachers may suggest a desire from teachers for knowledge about how to differentiate because their ability to differentiate directly impacts their stated efficacy.

**Theme 2 - TSES Scores Indicated an Overall Improvement of Efficacy, but Especially for Instructional Strategies**

Bandura (1986) stated that humans acquire knowledge through modeling, outcome expectancies, self-efficacy, and identification. In the case of this study, comparing mean scores from the TSES given in September before implementing a professional development plan around
differentiation strategies and then again in December after implementing such a plan, self-efficacy was shown to have slightly increased overall for both the 9th and 10th grade teams by .5. Specific to strand, there was less impactful growth or none at all in the strands of Classroom Management and Student Engagement, but the increase in Instructional Strategies was very significant with an increase of .9 (Figure 8).

Figure 8: Combined efficacy of 9th and 10th grade teams before and after PD from TSES data

Student engagement & classroom management. These strands showed stagnant or no growth. Student Engagement stayed at 6.3 in both deliveries of the TSES and Classroom Management increased by a measure of .1. In that they relate to teacher efficacy overall, these strands were important because teacher efficacy is related to a variety of aspects of how a teacher may view his or her ability/capacity to his or her job, but these aspects were initially deemed less
specifically applicable than the Instructional Strategies strand. The data for each of these strands of the survey were not deemed to be statistically significant.

**Instructional strategies.** The vast jump in efficacy for Instructional Strategies shows a direct parallel in what this study sought to determine: effects in efficacy for differentiation in the classroom. Differentiating in the classroom is directly affected by a teacher’s knowledge and comfortability with a variety of ways in which they can present content or teach their students. There was an increase of .9 suggesting that between September and December teachers felt an increase in efficacy for differentiating in their classrooms. This was shown in interviews as well by a 10th grade teacher named Luther who stated:

I have been given new constellations of ways in which I can help students access material and use that material in the development of new skills or into the improvement of existing skills.

This increase in efficacy was shown throughout the qualitative data with statements from teachers like Gertie, who stated a desire to use strategies right away:

I have an idea. I think I'm gonna use this on Monday.

Additionally, after running a t-test on the data for instructional strategies, if the population mean of improvement were equal to 0 (the null hypothesis), and the sampling process were performed repeatedly, the probability of getting a value for t this great or greater would be 0.017, making this data highly significant. This suggested the results were not random, and this data was valid.
Theme 3 - TSES Scores Indicated Similarities but also Differences in the Impact of the Professional Development Plan on Teacher Efficacy by Team

Figure 9: Comparison of 9th and 10th grade teams’ efficacies from TSES data

These two teams were analyzed as one case because of the similarities in the makeup of the classes that they teach, but they were separate teams with unique dynamics. The 9th grade team was comprised mostly of teachers, who had taught at DHS for several years, and taught together, while the 10th grade team was a group that had worked for less time at DHS, and the team was working together for the first time.

This data suggests that the team that was perceived as a cohesive, experienced team increased efficacy in all three strand categories with an overall increase of .5 and .2 jumps in both Student Engagement and Classroom Management. Instructional Strategies saw the largest bump of .9. This suggests that overall, this cohesive team increased efficacy in all areas, but specifically Instructional Strategies.

For the 10th grade team, there was a miniscule overall jump of .1 overall, with the area of Student Engagement remaining constant and Classroom Management actually going down from September to December by -.3. Instructional Strategies increased significantly by a mark of .6, showing that while other aspects of this newer team’s efficacy may have been unaffected, the Instructional Strategies strand saw an increase, causing an overall efficacy decrease of .1.
Theme 4 - Professional Development Sessions Built or Fed a Culture of Collaboration and Teamwork

Teachers cited throughout meeting observations and interviews that working with their peers while receiving new strategies was beneficial. One 10th grade teacher, Dick, stated: “Hearing other people's points of view is important, not important, valuable.” A veteran 9th grade teacher, Cassie, in relation to coming up with how to utilize these strategies as a team, declared “It could be fun, it could be really fun.”

As the meetings went on throughout the professional development program, teams were more and more willing to share and build off one another’s ideas. Teamwork dynamics were shown in both teams, regardless of their differing make ups, suggesting that professional development received as a team can be beneficial.

Theme 5 - Teachers Generated Specific Ways in Which They Would Use the Strategy or Did Use the Strategy During the Study

In most cases teachers suggested that they would or did use each strategy as the sessions went on, and this varied between the strategy being something completely new that they were interested in implementing, or a strategy that they knew or could pair with something they already do. Sven offered a specific reflective idea of how she could have used the Thinktrix strategy in her prior unit:

Kind of building up what you're saying, for the test that we were doing, I was like, "How am I gonna keep 29 other students paying attention, while the speech is going on?" I've already done this, so I'm not gonna go back, like I wish you would have had this last week, because I would have changed the thing that the rest of the class is doing. So I just made a quick eval sheet that was like, "Praise, question, suggestion." What I could have
done instead was just like, "Write a question based on, just one question based on what you've heard that you would ask the speaker." And I could assign different rows like, "You ask a recall question, you ask a cause and effect," so on and so on across the room, and then rotated it for the next speaker. And so all they were doing is writing one question, but they have to pay attention to what they're listening to to ask an appropriate question for that speech. So if you haven't come up with something yet for your TEDs, that could be a good thing to use this for.”

Gertie had a similar response about application for the Think Like a Disciplinarian strategy:

And then ask them to come up with a career, it would be a lot for them to process and a big chunk of the class would do really well with that and the other chunk would be behind, and I would be nervous about setting that, pressing it up going forward towards this operative. So I think I would have some other things kind of built in to give them, and I don't wanna take away the creativity or the thinking from them, but I would have a couple activities probably where they have the character in the conflict and they get to pick from a couple different occupations. And maybe for the gifted there's like a fourth option where they get to pick something else, but having a little bit of those bones built into it going forward I think would be helpful.

Dick, a veteran 10th grade teacher, had an epiphany regarding content he had taught for years regarding how he could utilize the Grouping strategy:

It's interesting that this had never occurred to me before but there's is this kind of dry expository stuff in the beginning of ‘The Crucible’ in the context. And that if I were going to a group by ability, the kids who are reading the informational stuff, they might
not be the same groups if I'm grouping by ability who actually engage in the actual meat and potatoes characters.

There was also evidence of teachers taking a concept presented and weaving it into strategies that they already felt comfortable with. Gertie, a veteran 9th grade teacher stated “Yeah, I used the Taba model and then a lot of the more creative pieces, I think, give a chance for the kids to be a little livelier and to just engage with the text a little bit more” reflecting on actually using the model with her creative summative assessments. Essie, another veteran member of that 9th grade team suggested pairing the Taba Model with multiple assessment uses she uses on a regular basis:

Yeah, I think this would be a great strategy to use to practice maybe prior to a socratic seminar or to a pop-up debate, and so they can give them the time to practice sharing their information with someone, but in a smaller... Well, not unofficial, in a smaller setting or a much smaller audience, and just to help them get their practice, sharing their answers and build their courage so that when it comes to the full group session, that they'll have more confidence to share their information. I think that'd be a good strategy for that. Or an exercise in voice, when we're teaching students about that we could assign different characters and say, "Okay, you take on that persona, that voice and practice doing that."

This trend extended out to the lone first year teacher of the 9th grade group as well, Moira, who generally showed more apprehension in responses as compared to her veteran colleagues:

I think that if I scaffold it so that we were already talking about conflict and maybe if we did this assignment and I wanted them to have some sort of summative version of this, some sort of paper where they're taking these ideas, I think I would probably give them a
couple of journal prompts where I go ahead and give them the scenario and give them a
couple of occupations and they pick one, so that they have some practice making an
argument in this way and going through something that I've already given them the
framework, 'cause I think it would be a little bit overwhelming for some of my students,
'cause one, even if we've gone over conflict, like character versus character and
character versus society, I think that some of them would be, if I just asked them to
produce this, a little overwhelmed.

Theme 6 - Teachers Stated Specific Ways in Which the Strategies Would Help Them

Differentiate in Their Classrooms

Specifically related to certain learners, teachers expressed how certain strategies would
benefit some groups of students more than others. Recognizing strategies that can accelerate a
certain group or support another is a clear step toward differentiating in the classroom. Sven
noted that the Concept Roundtable would create a kinesthetic environment beneficial to
struggling learners who could learn from their more advanced peers:

Well, I like what you brought up earlier, that by forcing them to move, and I think you
would have to force them to not be with their friends as well, but then you can have that
high flyer be talking to an at-level, or on-level, or below-level student, and then glean
more from it, have them take more from it.

Moira stated how this could benefit specifically gifted students:

I like the real world value that this has, particularly like if it was something that was
gonna be second semester, where I feel some of my students kind of losing some of their
momentum in some of the more academic pursuits. I think it has a lot of value for some of
my more higher achieving students and students who are my gifted students, I think would do really well with this 'cause they have their own perspectives on things.

Gertie suggested a specific use for the Grouping strategy for those who may struggle with making choices:

Another way I thought this would impact my classroom is with the independent reading assignment in 9th grade, where we ask them to pick a reading focus. If some of them are having trouble with that I can say well, make suggestions. Well maybe you should think about vocabulary acquisition. So it could be helpful with that, helping the kids find a reading focus for independent reading.

Cassie provided insight into how the Thinktrix could similarly help students with focus:

I think it benefits students who need help with focus. They may be really right and really get the literature, but they don't know how to lasso what they see, or they may really struggle when they're reading, because none of it seems to have connection or significance. In both cases, I think the questions help groundwork.

Summary of Findings for Research Question 1

Between TSES and qualitative data, it was clear that teachers felt increased efficacy for differentiating instruction after participating in the professional development plan. TSES data showed that all teachers felt more efficacious for using Instructional Strategies after three months of professional development for differentiation strategies, while the 9th grade team also saw significant jumps in the Student Engagement and Classroom Management strands as well. Teachers cited specific strategies that made them feel more comfortable differentiating in the classroom and for both the group that was familiar with one another and the inexperienced group, working within a team to receive professional development was deemed effective.
Finally, teachers cited various ways in which they would use these strategies or had used these strategies, and more specifically, how certain strategies would or did benefit specific groups of students in their diverse classrooms.

**Research Question 2: Effectiveness of Specific Strategies**

The second research question was intended to dive deeper into which specific strategies and types of strategies were most beneficial to students. It was clear from the outset of data collection that the diligence put toward selecting valuable strategies was well spent as teachers like Sven stated the importance of strategies that they found value in:

*Always the strategies. That's always the most helpful thing, and I always say that about professional development in general. It should always be about, cut the philosophy and let's just talk about practicality. How can you use what you're trying to convey to us? How can I use it? What can I do with it in my room? And so, yeah, the strategies are always the most helpful.*
Theme 1 - Some Consensus of Best Strategies in Practice, but Generally Preference was by Teacher

Responses of Benefit by Strategy

Figure 10: Interview responses of the benefit of strategies

The strategies chosen for this study, as mentioned in Chapter 4, had specific purposes. As such, it was found that different strategies served different teachers for different reasons. In Figure 10 the data shows patterns of strategies that were deemed to be thematically more preferred, but few definitive conclusions could be drawn from this due the variance.

Strategies with positive feedback. The strategy that reported the most positive feedback with four total respondents mentioning it as a strategy they felt that they would use in the future, was the Taba Model for a variety of reasons. It’s flexibility and tangible applicability were cited multiple times, as with this quote from Moira:

*The Taba Method, I used the Taba Method. I'm not entirely sure I used the Taba Method correctly. But, interesting things did happen with the Taba Method. A lot of my more*
gifted and higher achieving students really went ham with the categorizing and coming up with different ways to link ideas. And some of my other students, they really struggled with that, but they got with the picture. They weren't able to do the entire method, which was fine. But we were all able to come up with some sort of thinking map and then, they had to come up with thesis statements based off of that on identity and relationships. And I actually used part of that stuff with my summative, so that was good. Yeah, I would do that again. I'd do it differently, but you know, I'd do it again.

Essie stated another specific use for the Taba “I love that. I love that as to let kids think deeply about a concept. I like that one as well.”

The Thinktrix strategy was another that teachers felt they could use often and quickly for a variety of purposes. Three respondents in personal interviews stated this strategy as one they would potentially use in the future. Essie stated:

The Think-Trix one, I feel that that would make its way into my classroom, because I feel that it's easily accessible for all types of learners and so I feel like that one could make its way into my classroom, that I could have fun with it.

Think Like a Disciplinarian was a strategy that teachers often found to be new and innovative in terms of how it could make their students think about content. Three respondents also stated that this strategy was one they would use. Moira offered an example of how:

Think Like a Disciplinarian. I can see that being used both with Shakespeare but also with other areas where we're studying characterization and thinking about plot and motivations, and conflict on a deeper level.

This feedback suggested that strategies with flexible outcomes were generally preferred by teachers.
**Strategies with negative feedback.** Teachers were asked in the interviews which strategies they would least likely use in their classrooms, and as with the strategies they preferred, there was little consensus. One interesting aspect of feedback amongst the strategies teachers were least likely to use was that two of the three strategies mentioned most in this category were the first two strategies I presented. These strategies were also presented in a meeting with both teams in attendance. I mentioned in Chapter 4 that this meeting was an awkward meeting because I felt as if I spoke too much because I was nervous, two teams that were normally not together were meeting, and we covered two topics, so the meeting went long. These factors could possibly have influenced this data, but the qualitative data suggests it could be more about the strategies themselves.

The Differentiator strategy received the most mentions of being less than useful with three. This strategy was likely the most rigid and prescribed strategy of all of them, suggesting the perhaps teachers like more freedom of possibility with their strategies. Moira offered insight:

*I did not like the first one we did, where we had the like, differentiator, Yeah, that. I don't think I'm at a level of comfort where I want my students to have, most of my students to have that much freedom in deciding what their assessment is gonna be. Yes.*

Grouping was another strategy that was covered during that first meeting that at least one respondent mentioned as not helpful. Sven noted:

*Yeah. The one I probably won't use is, I probably won't use maybe the MAP testing just because I... Well, I mean, no, because by the time that we even do MAP testing, I already have an idea of their different levels without having to look at those scores. I mean, I guess I could use that to validate what I'm already doing in terms of the staggered groups. But that's probably... I like the differentiator, I thought was cool, but I don't*
know. I might not never ever use that one either. Even though I think it's a great idea, I'm just not sure if I'd ever go there and actually do it. It's supposed to make your life easier, but I don't know. I also feel like it's limiting. It does have an array of ideas, but there are so many more out there, I don't want to become dependent on it ever.

This was a veteran teacher who was new to the district, so MAP testing was not a common measure for her, so this could have influenced this response, but this response suggests that the teacher had her own methods of grouping students, so the method shared in the PD was not necessary for her, but that grouping itself as a general strategy was still important.

The Concept Roundtable was a strategy that teachers seemed to suggest was a high risk/high reward strategy. It requires teachers to allow some freedom to students, which some teachers were apprehensive to do, but if conducted well, this strategy could get students involved in ways that they typically may not experience. Gertie voiced a possible concern with this strategy:

This makes me nervous. Yeah, I can see this being kind of the first shot for a lot of my students at analyzing these characters and thinking about characterization in this way, and I can see it leading into something else, whether it be some sort of written characterization study or something where they have to come up with some sort of scenario with two characters in a different setting, but with the same scene happening to flesh things out.

This type of feedback seems to suggest that teachers are not completely closed off from some of the strategies they are unfamiliar with and are cautious doing something they have yet to try.

**Theme 2 - Flexible Strategies Appreciated and Flexible Strategies Morphed in Practice**

A prevalent theme that emerged with the data was the appreciation and desire for flexible strategies that teachers could use for a variety of purpose. When asked how the Thinktrix
strategy could be used in her classroom, Essie stated in agreement with another teacher’s view on the strategy’s versatility:

Yeah, I agree. Socratic Seminar and just any class discussion or just letting them use this when they're reading a short story or whatever they're doing for homework, and then say, "Okay, now you're gonna create the quiz for your classmates." Sometimes they do, if my kids create a quiz and this will help them create wonderful quiz questions. I'll read whatever text they're reading at home, they'll use this thinking matrix to create their quiz questions. And then when they get back to class, they'll swap papers with someone and take someone else's quiz and then we'll discuss, so I really like this.

Sven, a teacher from a different team, agreed about the versatility of the Thinktrix, “Yeah, that's just subjective for whatever you're doing, so you can swap out whatever you want to there.”

These quotes echoed general trends in feedback from the teachers about strategies that they could use for a variety of purposes and types of students, as being valuable.

**Theme 3 - Specific Purpose for Specific Students Noted per Strategy**

As differentiation is generally a difficult undertaking for teachers, strategies that can be of specific help to certain groups of students were appreciated by teachers. These categories of types of learners ranged, but one theme that emerged was a desire for strategies to help students be independent. This impactful conversation between Dick and Sven about the Think Like a Disciplinarian strategy illustrates this preference for independence:

Dick: I had a student while we're... When we finished Act I of The Crucible, I had a student word for word say, "This is bullshit, I'm going to be an architect, and this does not help me at all." So I saw "architect" up there and I was, "Ehhh it doesn't really... " I was thinking of this kid Phoenix. I'm like, "How does that apply?" But then I could turn
that around and be like, "This is on you. You tell me how this applies, and if not
"architecture" then how do you want to reframe it? Design? Working with material? Is
architecture art? Do you want to look at this through the lens of art?" But forcing that
kid to reframe the text as more than just text. So I think it would work great on kids who
are just frustrated, because they're... And I think that would work well with kids who
perhaps struggle understanding the text, and the kids who understand the text too well.
Both groups being bored. I think this would be an excellent exercise for...

Sven: Yeah. That engagement level for the two extremes.

Dick: Yes. Yes.

This specific example from veteran teachers plays out a scenario that was common for
teachers: when they have the single student that they seem unable to reach. Teachers suggested
that strategies that give independence could potentially solve this dilemma.

Another thematic need that arose from these conversations regarding specific student
need was the idea that giving the students more control could potentially help motivate certain
students. Dick, a veteran 10th grade teacher offered an example:

I was thinking you could actually put this in the kids’ hands. Like if you had a group of
really driven kid you could just give them the link and say do you have a proposal for
what you wanna do? Use this and defend your choices, like write a paragraph defending
your choices and we'll consider it a done deal.

This second quote from Dick shows how differentiation may increase the motivation of students
specifically related to student motivation:

I think they expect personalization. And I don't know if that's a cultural thing or a
generational thing, but I think differentiating, particularly by product, when I do that, I
tend to capture more attention. Kids get more excited, and particularly, if you forecast the summative down the road, it seems like they make a bigger investment.

Sven noted here how the Concept Roundtable strategy could mix up the status quo for students to motivate them by simply getting them up and moving:

Well, I like what you brought up earlier, that by forcing them to move, and I think you would have to force them to not be with their friends as well, but then you can have that high flyer be talking to an at-level, or on-level, or below-level student, and then glean more from it, have them take more from it.

Summary of Findings for Research Question 2

Overall, the second research question sought to determine what specific types of strategies were deemed to be beneficial to the teachers under study. Results surfaced in multiple ways. Quantitative data suggested certain strategies that teachers were more likely to use in the future, such as the Taba Model, the Thinktrix, and Think Like a Disciplinarian. In the same vein, teachers stated strategies like the Differentiator and Grouping as strategies they were less likely to use.

Qualitatively, the data suggested that strategies that could help answer some of the more complex issues that teachers have with students were of value. Teachers stated that they tended to struggle when differentiation was needed for a small group of students or even just one student. Strategies that were deemed to be flexible and adaptable were the ones most likely to be used in the future. Specific to students, strategies that could provide independence to students who may normally be less willing to participate were appreciated, strategies that could motivate certain students in ways that the typical lesson may not inspire, or strategies that could allow students to lead lessons themselves were highly valued.
Research Question 3: Benefits to the Action Research Team

In that this study was predicated on a preexisting district initiative and that the members of the ART were specifically chosen for their roles in helping specific types of students, the conclusions and recommendations that the ART drew were perhaps the most directly impactful aspect of this study. Upon reviewing the data and determining the implications within the context, the ART was able to glean many positive conclusions that they could tangibly work with going forward at DHS and within CSD overall.

Theme 1 - The Want for Accountability for Using the Strategy or Not Varied by Teacher, but Feelings Were Strong

The primary conflict of the ART during the creation of the professional development plan was to require teachers to use the strategies week to week or otherwise hold them accountable in some ways for using the strategies. While the data merits of doing so were desirable, the fear of asking too much of the participants amid an already trying profession, and when so much time was already being asked of them to participate in the study. Ultimately, the team decided that requiring the participants to use the strategies would be too much.

This then became a key area of study for the third research question as the ART sought to determine after the fact, would the participants have found this valuable or intrusive? The data suggests as much potential conflict as the ART perceived over this issue. There were two camps of respondents in the final interview data about this. Some felt that if there was accountability that they would be more likely to use the strategy and that would have been a good thing, while others felt as if this would have made them uncomfortable or stressed. Luther offered insight into the perspective that requiring the use of the strategies would have been welcomed:

*I think that it would have been really interesting if you had asked me for evidence of*
taking a day or taking part of a day and then employing one of these new ideas and then assigning me or asking me to provide some evidence of its effectiveness.

Gertie also suggested that perhaps accountability through having materials to take with them for later would have been helpful, as a busy teacher can easily forget what they’ve learned:

*I had trouble remembering my favorite one, maybe just having a list or a Google Doc or something that I could refer back to with the names and the resources just so I can make sure that the fact that we went through this together, and we were presented with these great ideas that I can actually put them in practice because they were all good. It’s just right now I’m worried that I would forget them.*

Building on this idea of having materials but taking it a step further, Sven offered powerful evidence for why finding a way to have teachers implement the strategies would be impactful:

*I'm a very conscientious teacher on my professional development, and these two files are full of stuff from professional development that I've never implemented, because I don't have time. I don't have time to do it. Like, give me the time and I will take what you taught me and I will put it into practice immediately. But if it goes in here and I say to myself, "Oh, I'll plan for it next year," I will never look in here again 'cause I don't have time. That's all I can say about that. When my other school gave us that time, I did it immediately, and I feel like we got results from it.*

Sven continued this point in a separate meeting, almost as if she greatly desired accountability to use these strategies:

*If as a team, we immediately talked about, "Okay, let's implement this with Their Eyes Were Watching God or Gatsby or our Transcendentalist Unit or Modernism." That*
would be interesting. How can we immediately use it, and let's jot some ideas down somewhere in a shared drive so that we remember to finish it out when it comes time.

While these accounts in favor of accountability were stirring, the opposite perspective was seemingly just as passionate. The viewpoint was clearly summed up by Essie who felt that a study requiring her to use the strategies immediately would be inauthentic:

*I liked the use it as you like and then it allows me to... I think that makes for more... I can't think of the correct word, authentic incorporation into your plans as opposed to, "Oh man, now I have to plan something around this piece, around this model." And so that... I don't think I... I wouldn't do well with that and so I like that, "Okay well I have this." And now I know that, "Okay during my Romeo and Juliet lesson..." You know once I get there, I'm not there yet, but once I get there, okay this is something I can use. As opposed to, "Oh god, now I have to figure out how I'm gonna fit this into fiction." So I like having the option to use it as and when you feel comfortable, when you're ready and when it works in your classroom...It's always beneficial to be given new information and to be told that, "Hey, here's some information, use it the way in which you feel comfortable." So I like that, it wasn't like, "Hey this is it, I'm giving you this, I need to see you use it within the next month." Or what have you.*

Dick, directly in response to the question of if it would have been negative for the strategies to have been required to be used week to week, offered a firm negative opinion:

*I think that would be intrusive, actually. Particularly because the administration has gotten uptight about lesson plans and particularly, our evaluator who wants to see what's on the page for that day occurring in that sequence on that day. I think just because they're so...Not only because of the proceduralism of the administration, but just 'cause I*
think I'd need more than a week. It might be really artificial, sometimes to, "Hey, you have the next four days to... And actually probably three because of the block day, to find an application for this strategy." I don't think it's that easy. If you gave us like two weeks... No, seriously, I think just like an extra week would probably do the trick.

Ultimately, the crux of the conflict that the ART had was summed up by a very experienced teacher, who was also department chair:

To be fair, I wouldn't wanna do that 'cause I wouldn't wanna do that to my colleagues. But I do think that if I had to be accountable for saying, and this is how I implemented it in this unit, in this week. And we can do that as a department and make it not be part of your stay but part of something that's happening with us as the year progresses, because we've got the gift of unlimited time in front of us with the rest of this year with students, the rest of our lives with students. But what the accountability would do for me is, I'd have the write up, I'd have the handouts that I created where I've taken it and adapted it, and I've had a chance to talk to other people about it. And I think he nature of it being a study that takes place within a semester means that we don't get the reflection time built in as much for professional development. That's something that I think that we would be able to do. Do I think that I would ask my colleagues to do some extra homework? No.

This very complicated response shows that she knew it would be valuable to get this data, but in the end, she would not be able to ask her colleagues to disrupt their flow of operations this much for the sake of research, even though it may ultimately prove to be helpful. There appears to be no clear answer to this question, but perhaps a compromise of offering opportunities without actually requiring them could prove to be a valid solution.
Theme 2 - If Teachers are Provided Quality, Research-based Strategies, Then They Will Use Them and Be Grateful

This theme was shown throughout the study in the exuberance often expressed in many of the previously shared quotes. This spirit though was perhaps most fervently displayed through Gertie, the veteran 9th grade team member, who repeatedly throughout the study seemed appreciative for the information to the point that she seemed starved for ideas to challenge and improve her practice:

So I think I'm gonna do this with identity, 'cause I was gonna have them define identity anyway. And what usually happens when we define identity is that I have a few kids that are engaged and like to think conceptually. And so they kind of lead that discussion, and we quickly come up with a definition and everyone else just writes it down and agrees with it. But I think what this does, it allows kids that maybe are a little bit more reticent to talk about conceptual ideas or to take a risk. It allows them, in a low-risk place, to think about conceptual words and ideas. So I'm using it on Monday. Thanks.

She again here shows a gratitude for the information that her colleagues also shared throughout:

I think that's interesting, but it would be something that I wouldn't wanna do once. I'd wanna come back to it in some way. I'd want it to lead into something else. I really like it though, so you're gonna share it with me. Thank you.

School administrations can at times point fingers when some students do not appear to be learning, but the encouraging positive attitude about these strategies seem to suggest the answer lies with the school or district to ensure that the teachers are always learning to differentiate.
Theme 3 - The Decided Upon Approach to Use Course Team Meeting Time Was Effective

The ART very carefully planned out the format for holding meetings during a team’s common planning and meeting time, providing consistent, weekly development, and giving the teams time to discuss and come up with ways to implement the strategies. Overwhelmingly, each member of both teams shared that this model was appreciated, effective, and efficient. Moira, the only first year teacher of the sample, cited the benefit of not receiving a glut of information at once:

_Getting it in chunks was effective instead of sitting down and reading through a chapter in a book, having time to implement strategies and look over and digest what they are. And then also being introduced to these concepts and these strategies with a group of experienced peers. 'Cause I have my perception of if something is gonna work or if I wanna try something. But I don't always have the experience to evaluate, which can be a good thing, 'cause I'm more willing to just try things and see what happens. But to be able to talk about that with a colleague group, I don't know what, or a PL or professional learning group kind of community was really good for me and enjoyable._

The digestibility of the information as a benefit was repeated by Essie of the 9th grade team:

_The digestibility of the information as a benefit was repeated by Essie of the 9th grade team: I feel that, I guess just the way it was structured in terms of time, like, "Okay, just once a week we'll meet. I'll give you a strategy." I felt that that was very digestible, doing it in pieces as opposed to, "Hey, we'll just take a day and I'll give you all these strategies, all at once." That could've been a little overwhelming. So, I liked that you just gave it to us piece by piece, just gave us the small pieces of the puzzle week by week._
On the other spectrum of experience, Cassie suggested that the development enriched an already strong team’s time together:

*I loved that it took place as part of my time with my planning team. It provided some unity of thought and I also think that it planted some seeds that we’re gonna be able to use as we move in to the units moving ahead. And we've got you as a resource which also I find to be very helpful. [chuckle] We could say, "You remember that thing?" And you can help us do it so that we're able to systemize the ability to implement it and I'm very excited about that.*

Dick noted the efficiency of the study’s implementation that was effective “*It was really well thought out and considerate of our time and our needs. I don't know how you could have done it better. *”

Luther also enjoyed the regularity of the meetings, as well as the applicability:

*I think that having these punctuated meetings and these presentations in which... They're informative, they're also probing...Regularly punctuated on the calendar. And so the information that's provided during these sessions in some cases could be immediately incorporated into the classroom.*

Overall, the data from this particular theme supported the work of Lanz, Speirs Neumeister, Adams, and Pierce (2009) who stated that mentorship and learning together in teams is an effective model. This was the most prevalent of any other theme for any research question and was an impressive takeaway for the ART to know that this useful structure was an effective, powerful, and appreciated model for professional development in the future.
Theme 4 – Having the Teachers Experience the Strategies Themselves Was Valuable

Informal data taken before the study by the ART suggested that often, professional development is not effective because it is presented as “theory”. Often, teachers had a hard time conceptualizing an idea if they had not put it into practice themselves. This was considered by the ART, and based on the results of the interview data, it appeared to have been a boon to the study. Gertie provided insight into this point:

*I think that there was just time given to kind of think about how we could use it and to actually go through the activity itself, made them all seem really easy to implement and not as if they would be kind of another thing that we had to do, which it could fit in naturally.*

Dick also noted how this approach affects “personal understanding”, which can have a positive outcome:

*I think that it's challenging. It makes you think in ways that you wouldn't normally think. In addition to that, if you're asking people to do that individually and then share as we did, it really focuses on the particularities of your personal understanding.*

Luther stated this point to be one of the brightest aspects: *“The little simulations of what could happen in the classroom, I think that was most helpful.”*

Theme 5 - Teachers Stated Benefits to Other Classes Besides the Course Teams They Represented

A completely unexpected theme that makes sense when one considers that nature of teachers’ desires to help all students they teach was that often teachers not only suggested ways in which the strategies could help the students in the courses taught on the course team, but they would also provide ideas for how the strategies could benefit other classes that they taught as
well. This could provide added benefit for schools that offer this professional development, as it could support the students affected by the team receiving the strategies, but other classes throughout the school taught by those same teachers could glean benefit as well.

The Taba Model was particularly effective for this point, illustrated by Cassie:

> And they generate ideas and then they think of non-examples and they still have to categorize everything. I think that is something that they're already prepared because of their age and because of the nature of the class they're asked to perform in. They're already prepared for that higher order thinking. And I think that that's an example of something that I'd really see a lot of 11th graders being able to run with. And even kids who aren't running would be able to walk with it. And that's an example of something that I not only want to do in a literature based class, but I could use a lot in other English classes as well.

Gertie was Cassie’s teammate for this other course, and she also offered ways in which the Taba Model could benefit those students:

> I have a couple ideas. I really liked it for... Cassie and I just did a Socratic Seminar with our Juniors and it was based around asking questions of the text. And that was kinda our skill for this last unit and it's something that I ask my students to do with each text, 'cause I do Cornell notes with them. And after they read it by themselves and then we talk about it together, I have them come up with at least five questions that they could ask of the text because that prepares them for their IFC down the road where I ask them questions of the text, and maybe they can anticipate some of those deeper questions. But I love the fact that there are these question starters and these different types of questions because I think that sometimes my Juniors who are on the lower end get in a rut and they ask the
same type of questions over and over again. And so I thought this would be great for a
Socratic Seminar, it would be great for Cornell notes. I just thought I would... I really,
really like this. I will definitely use it. I'm upset I didn't have it in July or August. I love it.

**Theme 6 - My Worries of Wasting the Teachers’ Time was Completely Unfounded**

As a culmination of many of the other themes, the apprehension I noted in Chapter 4 was
unfounded in the end. Since this was my first research study, I was nervous, not knowing how
my colleagues would receive this work. Themes 2-5 from RQ 3 show many positive outcomes
that teachers reported from this study. Dick made a comment in his final interview that best
summed up how the study turned out, in relation to expectations going in:

> I was not expecting your study to be useful to me. I thought that we would be aiding you,
> but we... Obviously, you're getting a degree, which is awesome but I think we gleaned as
> much from your study as you did, hopefully. I mean, that's what you were aiming for.
> Yeah, so I think your model of research was very helpful.

Not only does this evidence give me confidence were I to ever do another research study,
but I would look to follow similar themes to try to mimic the success of this study, such as
prepare with a team of stakeholders like my ART, and keep an open mind and be willing to be
flexible in the face of adversity that may ultimately come in the midst of a longer study.

**Theme 7 - There Were Unintended Positive Consequences for My District with this
Research**

The ART determined various uses for this study beyond the direct stated intentions
throughout. The nature of professional development implicated various potential staff benefits.

One unintended way that the district stated a benefit from this study was to stay in
compliance for Full Time Equivalent (FTE) funding for gifted services. The 10th grade English
team did not have a teacher that was gifted certified, so for the school to receive FTE gifted funding for 10th grade gifted students, a certified gifted teacher needed to be present during planning meetings and provide insight, advice, strategies, contextual conversation, etc., that enriched the planning of the team, so that the gifted students were getting the differentiation the state required for this funding. As the Gifted Lead for English for DHS, and a gifted certified teacher, the meetings with the 10th grade team served as this collaborative planning so that the district was in compliance without having to inconvenience another qualified teacher.

Additionally, as stated before, the 10th grade team was a more fractured, independent team whose members were newer to DHS and did meet as a team, but not with the regularity of the 9th grade team. Given that this PD plan required the team to meet weekly in a documented fashion, this created a scenario where the school knew the team was meeting and was developing plans around differentiated instruction collaboratively, so that continuity could develop and exist within the team.

A way in which specific individuals benefited from the study was that the teachers who were undergoing gifted certification training would log their time as hours spent planning and learning about gifted differentiation. As many of the strategies could be used to help gifted learners, this time satisfied requirements for this course for these individuals, which was an added layer of benefit to the school, as at the end of gifted training, these teachers would be qualified to adequately differentiate for their gifted students, and DHS would then get FTE funding for the gifted students in those teachers’ classrooms.

Summary of Findings for Research Question 3

Overall, the ART was able to glean a variety of takeaways from this study. The apprehension of requiring accountability for teachers to use the strategies was justified in the
lack of consensus on this from teachers. A similar number of teachers stated that they would have liked an opportunity to have been held accountable, as said they would have found that to have been an inconvenience. Regardless, teachers showed a gratitude for being exposed to quality, research-based strategies to enhance their practice. Also contributing to this positive feedback of the PD was an appreciation for time to work with their colleagues and receive the information in consistent installments and to participate in the strategy itself, so they could more effectively understand how each worked and how each could be implemented in their classroom. In addition to benefiting the course team represented for the study, teachers also provided ideas for other classes that they taught, indicating further value to the organization beyond the intended.

For all these reasons, the initial apprehension felt by this researcher due to worries of the participants not seeing the value in the PD and assuming they would want to use their planning time differently was unfounded. The teachers’ excitement and gratitude toward the strategies diminished the anxiety and turned it into confidence for this researcher as the study went on. The experience proved to be more than just a valuable experience for the participants, but due to their positive feedback, a memorable, positive experience for the researcher as well. This positive experience extended also to the district in that there were value-added aspects of the study for the district that were not anticipated.

Summary

This study sought to determine if a professional development plan dedicated to delivering weekly strategies to help teachers differentiate would make an impact on teacher efficacy. The first research question specifically inquired about if this could happen. Using quantitative data from the TSES, there was an increase in both overall teacher efficacy as a result of this study, but
more specifically a statistically significant increase in efficacy toward Instructional Strategies, which fits more closely with differentiation. There was a difference in efficacy increases between the 9th and 10th grade teams, which mirrored the differences of those teams in some ways, but overall, each team saw an increase in efficacy. Additionally, qualitative interview and meeting data suggested that teachers built on their team dynamics during this study, and teachers cited specific ways in which they intended to use or would use these strategies for differentiation, suggesting that their efficacy for using strategies such as this had increased.

The second research question sought to determine which specific strategies had the most impact on the teachers. Quantitative data collected in the personal interviews suggested very little consensus on what strategies were most preferred. There were some slight preferences shown, but overall, it was a very diverse set of answers for both strategies that were preferred and strategies that were less likely to be used. One theme amongst strategies that did emerge was the preference for flexible strategies that could be used in a variety of ways for teachers. To this end, teachers cited specific uses for certain strategies that they believed would help certain groups of students, suggesting again that a variety of strategies provided in PD could serve a variety of types of students.

The third research question was related to how the ART could use these findings in their efforts to increase teacher efficacy for differentiation. The primary concern of the ART was if there should be accountability required in the implementation of these strategies by the participants, and the findings suggested a similarly conflicted sample. Some teachers shared that they would preferred to have been held accountable to use them, so they would be more likely within their busy schedules to use them. Other teachers though, stated that this would have been
an intrusive measure that they likely would have not appreciated, suggesting that this could have had a negative impact on their efficacy for using the strategies overall.

Teachers appreciated the method of PD that was delivered. Teachers were grateful to have strategies brought to them within the context of a weekly, prescribed program where they could discuss the potential impacts of the strategies with colleagues. They appreciated participating in the strategies themselves, rather than just receiving “theoretical” ideas that they were not sure how to put into practice. When they participated with the strategies themselves, they felt as if they could get a quality perspective on how the strategies would benefit specific students.

Upon internalizing data, I realized as a researcher that my apprehensions of making the teachers feel as if they were doing something extraneous or something that would not benefit them was unfounded. The overwhelming positive feedback enlightened me to the fact that this was a worthwhile venture and that I should not pre-conceive conclusions before conducting a research study. Another surprise from this study that I learned was that my district gleaned various positive consequences from it including experience for teachers in gifted training, FTE accountability for teams doing collaborative gifted planning, as well as giving those teachers strategies they could use in the other classes beyond the ones under study.
CHAPTER 6
ANALYSIS, CONCLUSIONS AND IMPLICATIONS

Differentiation in classrooms has become an essential tool for teachers as the students who enter those classrooms continue to bring more diverse challenges with them. Differentiation has always been viewed as a potential salve for meeting the needs of varying students in the classroom, over simply tracking them into different learning pods. Battersby (2002) stated:

Previously, differentiation was identified as a tool used to separate and rank the pupils, as a means of organizing them. Differentiation is now equated with good practice in teaching which allows for differences within a teaching group rather than leading to the distribution and allocation of pupils to a supposedly homogeneous group which could be taught as a separate unit.

Differentiating has become essential to the successful classroom because even when students are tracked by ability, there can be vastly different needs even within that group. When cast as an onus to a teacher with an untracked classroom, differentiation can seem a prodigious task for teachers, who often do not receive specific training for the practice. “Differentiation does not occur by happenstance; it is a deliberate act teachers consider not only in response to serendipitous opportunities that emerge with students, but primarily a purposeful pre-planning of instruction that addresses the varying needs of students” (Kettler, 2016, p. 16). As a result, this action research study sought to determine if a systematic, in-house professional development program could provide teachers with tangible strategies to differentiate in their classrooms that could ultimately make them more efficacious for their practice overall. This chapter will review
the conclusions derived from the literature examined and the findings of the data to detail conclusions and recommendations that the ART found from this study.

**Analysis and Conclusions**

This study sought to determine if teachers of untracked classrooms participated in weekly professional development sessions specifically related to strategies to help them differentiate in their classrooms could affect the efficacy of those teachers. The conclusions of this study determined by the ART are broken out into the categories of the relationship between differentiation experience and understanding linked to efficacy, and the implications for the ART itself for future practice and implementation. These conclusions were derived from the data compared against the preponderance of literature previously existing on the subject.

**Professional Development on Differentiation and Teacher Efficacy**

Providing teachers with opportunities to learn how to differentiate in their classrooms is essential. It is not necessarily a natural condition for teachers to provide varying opportunities for their students in the same classroom. Fogarty (2016) suggested elements such as “the time consuming nature of the task [differentiating] may be the main reason that teachers often do not attempt to differentiate” (p. 136). Regardless of the specific reasons that keep teachers from differentiating, the responsibility is on the school ultimately to provide opportunities for the teachers to grow in this area. Cash (2017) stated that:
differentiation of curriculum and instruction should not be separate from all other school initiatives; differentiation will require a considerable time investment initially, but in the long run it will actually save you time as a teacher and increase the overall efficiency of your classroom. (p. 10)

**Conclusion 1 - The implementation of a regularly scheduled professional development plan for differentiation strategies can increase teacher efficacy.** During the implementation of this PD plan teachers reported increased efficacy in qualitative survey responses as well as in TSES data (Figures 7 & 8). This conclusion follows research conducted by McAdimis (2000) who stated that implementing a school-wide differentiation program is essential for teachers because they need this support to feel confident in implementing this strategy. More specifically, there is a very strong correlation to this conclusion and the claim by Dixon, F., Yssel, N., McConnell, J., and Hardin, T. (2014) that more professional development hours with differentiation leads to higher teacher efficacy. While this program was not school-wide, it was conducted across two different course teams with consistent results suggesting increased efficacy. There was also a link to the work of Colson, T., Sparks, K., Berridge, G., Frimming, R., and Willis, C. (2017) who found that long-term (one year) professional development in the areas of classroom management, instructional strategies, and student engagement had a higher positive impact on the efficacy of those teachers than did teachers only in a half year program, suggesting that in the case of efficacy, sustained, specific instruction can have a larger impact than more periodic sessions of development. This research was not conducted over a time period that extensive, but responses did suggest that the prolonged nature of repetitive exposure to training was beneficial. Providing teachers with a consistent plan for development with differentiation with their colleagues can increase efficacy. This conclusion is
in line with the theoretical framework of this study in that Bandura’s Social Cognitive Theory stated that increased knowledge and experience leads to increased efficacy (Bandura, 1986). In this study, exposure to new information and an opportunity to use, discuss, and reflect on this information, lead to higher efficacy for teachers to differentiate in their classrooms.

**Conclusion 2** - **Professional development that differentiates the types of strategies to match varied teacher preferences can increase teacher efficacy to use those strategies.** In this study, a variety of research-based strategies were presented to help determine what type of strategies teachers would find the most helpful. The conclusion of the ART in relation to this was that there is no one solution for teachers, so a variety of flexible strategies must be presented to teachers, essentially differentiating the content for them, so that this exposure offers various opportunities for teachers to find the right fit for them. This is similar to the work of Tomlinson (2005) who stated, “Differentiated instruction is dynamic: Teachers monitor the match between learner and learning and make adjustments as warranted” (p. 5). This ability to morph strategies was stated to be important to the teachers. Additionally, this conclusion is in line with the findings of Dunn, K. and Darlington, E. (2016) who stated that teachers prefer to differentiate their classrooms in ways that fit their personal teaching style, and as those are different per individual, equally are the ways in which teachers will differentiate for their students.

Additionally, responses of teachers in this study proved the work of Stephens and Karnes (2016) which stated, “High leverage practices are critical in differentiation, allowing teachers to create extensions and enrichment, or to eliminate content when necessary” (p. 136). In the qualitative data teachers repeatedly stated that if the strategy was not rigid and offered ways to potentially be morphed for their use, they were more likely to use it, as stated by Essie:
I feel that that would make its way into my classroom, because I feel that it's easily accessible for all types of learners and so I feel like that one could make its way into my classroom, that I could have fun with it.

This conclusion parallels the second part of the theoretical framework of this study: Deci and Ryan’s Cognitive Evaluation Theory which stated that an increase in self-determination will enhance intrinsic motivation (Deci & Ryan, 1985). This pairs with the evidence from Conclusion 1 that suggested an increase in efficacy. That increase in efficacy leads to enhanced motivation to use the strategies when given strategies that are adaptable and applicable for the teacher. This implication is important as it offers insight into how schools can leverage this increased efficacy to ensure that teachers will use the information learned in sessions.

**Conclusion 3 - professional development delivered during pre-existing team planning meetings can increase teacher efficacy.** One of the critical decisions by the action research team was to conduct the PD during teams’ common planning periods. This was perceived as a potential risk because teams could see this use of their common planning time as a detriment to the work they already needed to do. This threat parallels the work of Endepohls-Ulpe (2017) who stated that teachers can get worried about the negative consequences to their workload of having to plan multiple lessons for one classroom, and this could be a deterrent for differentiation. On the contrary though, the findings of the qualitative data was overwhelmingly positive for the use of this time as regimented PD.

The work of Latz, Speirs, Neumeister, Adams, and Pierce (2009) suggested that mentoring programs help teachers overcome the strains of differentiating, and these findings agree with statements like this from Moira: to be able to talk about that with a colleague group, I
don't know what, or a PL or professional learning group kind of community was really good for me and enjoyable. The teachers felt as if being with one another was a positive experience.

**Conclusion 4** - having teachers experience the strategies in the PD rather than only learn about them can increase understanding of strategies and increase efficacy to use the **strategies**. After the first couple of sessions fell a bit flat, the ART decided that having the teachers go through the practice of the strategy itself in the session would be more engaging than only sharing what it was. Figure 8 shows a significant increase (almost one full point) in efficacy for instructional strategies, and cited multiple times in the qualitative data was the fact that the teachers fully understood the strategies because they experienced them firsthand. This is congruent with the findings by Voet and De Wever (2017) and Tschannen-Moran and Hoy (2001) who found that it is the belief in a strategy or concept that a teacher has that makes the most impact in whether that teacher will use the strategy or not.

This also backs up the work of Capps and Crawford (2013) who stated that it is imperative that teachers engage in authentic scientific investigation, supporting teachers in how to use the inquiry approach, and supporting the reflection of teachers. This experimentation by the teachers led to positive efficacy in this case. Altintas and Ozdemir (2015) stated in their study of teachers receiving professional development that above all, the strategies proved to be helpful and useful due to process of exposure. In this way, it can be determined that aside from only showing the teachers what the strategies are, if PD can focus on having the teachers participate in the strategies themselves as they are learning them, there can be an increase in efficacy.

**Conclusion 5** - differentiation PD has the potential to enhance the gifted offerings of a school that does not track students. As noted prior, Dunbar High School had made the decision not to track its students into particular separate classrooms, but to have all learners in
the same classrooms in grades 9 and 10. This created a challenge in serving gifted learners, but data from this study suggested an extension in teacher willingness to differentiate for their students, including their gifted students, which resulted in a more enriching environment for those high potential students, but all students as well. This relates to the findings of Winebrenner (2012) who stated, “When students have had access to gifted education, it has significantly improved learning experiences for all students in heterogeneous classes” (p. 103).

Various statements in the qualitative data suggested that teachers were more open to offering different types of learning avenues for their students when exposed to these strategies over a period of time, lending to findings of Tomlinson (2005) “When teachers differentiate instruction, they move away from seeing themselves as keepers and dispensers of knowledge and move toward seeing themselves as organizers of learning opportunities” (p. 16). This is an essential result in an untracked classroom as Fogarty (2016) noted “It is through rigor and challenge that teachers can stave off boredom and foster both motivation and interest” (p. 147). For a school that says they are serving gifted students adequately, but not putting them in a specific gifted class, it can be very difficult to ensure that this is indeed occurring. Based on the results of this study, the knowledge and efficacy for teachers to do so appears to have the potential to increase.

**Action Research**

Because the problem of low efficacy for differentiation existed within the walls of Dunbar High School, and with myself a vested stakeholder of DHS, doing action research in the field with my colleagues as my ART was the most logical, as well as exciting opportunity for this research. My thoughts were that if I could see an impact in my personal organization given
the uniqueness of the untracked context of a high-performing school, then I could offer tangible data for study beyond realm DHS to further the conversation of efficacy research.

**Conclusion 1 - action research exposes the value of in house professionals doing research and initiating change within an organization.** As an insider doing research within my organization, I had apprehensions. Coghlan and Brannick (2014) noted that some of the disadvantages to doing research within an organization are also its advantage, which is the preunderstanding that a researcher from the inside has and the ‘role duality’ that they have which asks them to “cross departmental, functional, or hierarchical lines” (p. 134). These entities provide an advantage due to the context the researcher has, but this context can lead to assumptions or avoidances that a third party researcher would not have.

In this study, the ART began to understand that since I was part of the team under study, the participants were more fully engaged due to the ethos that I had already built with them. This caused the ART to conclude that there were many talented individuals within our organization, who could potentially provide training or conduct similar research as they saw with my study. This created much discussion about the use of human resources as research tools and professional development professionals that had not previously existed.

**Conclusion 2 - action research can be a catalyst for members of the action research team to pursue further action within the organization.** From the various ART meetings that I conducted with my team, there were several examples of ideas that spurned from my study, even before the data had been collected. Ways in which gifted education could be enhanced, teams could be developed, internal resources could be utilized, and even cross departmental resources, such as what I had created with my ART, could be leveraged together to solve inter-organizational issues in ways that had not previously been considered. The environment created
within the study was one of individuals from different departments and even buildings, and this caused further conversations and plans to form that would have otherwise not happened, causing these stakeholders to realize the potential for such meetings.

This suggests that the presence of action research teams can cause an appreciation for research, but also the understanding that the connection of varying stakeholders coming together to solve a specific problem can be valuable.

**Conclusion 3 - action research can provide exposure of potential within the organization for the researcher.** In the months that I have participated in this study, to the months after in which I analyzed and shared my data, the opportunity of conducting this research study provided exposure for me as a professional to various colleagues in ways that I previously had not been. Prior to this study, my primary role was an English teacher, and this is how I was viewed. In that I conducted professional development in my study, I have since become viewed as a leader in instructional strategies and have been asked to conduct professional development in other areas and to other groups as well. I have been asked by members of the district to share my data with stakeholders outside of my original ART, which has provided further exposure for my work and myself as a professional. Since I began this study, I have been asked to conduct other smaller research projects around the school, because school leaders now see that I have the capacity to do this type of work successfully. This conclusion has lead me to believe that other capable researchers doing action research within their own organization could provide visibility of their own skill set and potential to their organization, by conducting said research.

**Reflections on Conceptual Framework**

The conceptual framework (Figure 3) that directed this study stated that in order to potentially enhance efficacy for teachers toward differentiation that a professional development
program would occur during pre-existing team planning time, provide varying research-based strategies to help teachers differentiate, and give them the opportunity to reflect on the potential use or actual use of the strategies in practice. The goal for this framework was based on these factors to increase teacher efficacy for differentiating in the classroom. In applying this framework, quantitative data suggested an increase in efficacy (Figure 8), and qualitative data specifically cited the teambuilding reflective interactions with peers and convenience of using the preexisting team planning time and the variance of flexible strategies as reasons why, suggesting that this conceptual framework has the potential for success.

**Researcher Self Reflection**

Overall, this process was emotionally and professionally trying due to the overlap of its priority with my normal duties at the school. In keeping with Coghlan and Brannick (2014), I found the nature of doing research within one’s own organization created a unique context for myself as the researcher based on predicated notions being a challenge. Additionally, the crossing of hierarchical and organizational lines caused stress on the study and on myself. At multiple points during the study, I worried that I was causing inconvenience on my colleagues, and at one time during the study due to administrative interference, I even wondered if the completion of the study would happen.

That said, once I was able to overcome these challenges and the realization that my colleagues appreciated the study set in, the process became very rewarding, especially as it came to a close, and I began to analyze my data. Upon coding my qualitative data and tabulating my quantitative data, I realized that what I had done had truly made an impact on my organization and created a scenario with great potential for organizations with similar structures and challenges. There was always a fear in the back of my mind that I would get to the end of the
study, and my study would have proven to have only been an exercise in going through motions to get a degree, but when I looked back at the end, I realized that I had made an impact and had completed something that was worthwhile to me, the participants, and to the stakeholders within my organization in the form of my ART.

I feel that ultimately, this study has given me more confidence in what I am capable of as an educational researcher and practitioner, and it has also given my organization more confidence in me in the same ways. This I believe will pay benefits to both myself and my organization in the coming years, as further challenges await DHS and CSD.

Implications

This was a study in a single context with a small sample size, so what can be gleaned from it could potentially be limited. That said, the value of the findings could be of use to any research on efficacy, differentiation, or professional development because of the positive nature of the feedback and the insight gleaned through the action research process.

Recommendations for Practice

Differentiation has become a recognized need in schools today, regardless of context because we now identify so many ways in which students need specific instruction in our diverse schools. Additionally, an impending teacher shortage could be impacted by teacher attrition, which is directly correlated to teachers’ self-efficacy (Sutcher, Darling-Hammond, & Carver-Thomas, 2016). Overall, teachers want to feel like they are supported, and one critical way is through professional development, and the following recommendations could potentially benefit teachers in that regard.
Recommendations for Local Schools

As each local school has its own unique context, how each conducts professional development will likely be determined by a variety of factors. Schools that have a preexisting time for course teams to plan though could utilize this intervention. The DHS environment was particularly suitable due to the prominent need for differentiation strategies because of the lack of tracking and preexisting PD, but a school could use this conceptual framework to create a PD plan for instructional strategies over any topic and find this useful. Differentiation was the primary subject matter for this study, so if a school specifically needed to enhance the repertoire of instructional strategies of teachers for this purpose, this is clearly a blueprint that could be successful. Likewise, though, if a school wanted to focus their PD on other topics for teachers, this framework for setting up in-house PD could be useful.

Based on the results of this study, it would be recommended that the teachers be able to participate with the strategies in a hands-on way, so the facilitator should use the strategy, to present the strategy, so that teachers feel a full understanding and can be in the position of the learner, so they can be empowered to be more likely to use the strategy. Giving an opportunity for the teachers to reflect and discuss the strategy specifically related to their subject matter and upcoming units is recommended. Additionally, providing at least the option to be held accountable for using the strategies would be helpful to some. Some teachers reported that a requirement to implement the strategies within a certain window was stressful, while others lamented that they didn’t specifically feel the need to use them because they weren’t directly requested to, so the option would provide flexibility within this framework.

A final recommendation for schools is to ensure that the strategies chosen are flexible within themselves and varied so that a wider menu of options is presented to teachers. Teachers
appreciate differentiation within their own professional development, rather than the typical one-size-fits-all approach that they are told not to use in their own classrooms.

**Recommendations for School Districts**

A recommendation for schools that would represent a great change for many is that they do not have to track their gifted students in order for these students to be successful. There is another way, and that is to keep all students together to learn from one another and to ensure that teachers consistently are learning how to serve each learner within the classroom. This will keep teachers from having multiple preps to plan for so that they can invest their time ensuring that all learners with one classroom are provided opportunities to meet their potential.

Since consistent professional development for instructional strategies increases the efficacy of teachers (see Figure 8), doing this consistently can have a positive impact on the culture of a school. Teachers are more efficacious when they are learning how to be more effective about their craft, and when teachers are more efficacious, they are likely to have a positive impact on their students. Also, if teachers are more efficacious, then they are more likely to stay in the profession (Sutcher, Darling-Hammond, & Carver-Thomas, 2016). Overall, providing more opportunities in general for teachers to develop their craft will benefit school districts.

Finally, a recommendation for districts is that when they are looking for resources for the development of their teachers, they should look no further than inside the walls of their own schools. This study found that teachers are more likely to be engaged in professional development and to buy in to the concepts being taught if they are coming from a trusted colleague, which in turn are receiving it amongst other trusted colleagues. Rather than invest in outside talent in every instance, districts should look to utilize what human resources are present
that can benefit their peers. This is an inexpensive way to empower teachers and develop them through having them present and teach their peers, and as stated prior, the output will be something teachers are more likely to use as a result.

Also, due to the success of this action research study, it is my recommendation that districts should seek ways in which action research can be conducted within their buildings. No context fits a school better than itself. If a district decides to empower teachers to lead research within their buildings, not only does the data stand to impact the profession overall, but the data will be specific to the district itself, so the data will be the most applicable and rich data a district could ever find.

**Recommendations for Future Research**

As this study only considered one, specific context, it would be interesting to see if a study such as this were conducted on a larger scale, what story would the data tell. The results of the TSES were very statistically significant for Instructional Strategies, but as always with a study as small of a sample size as this one (see Table 4), a researcher would like to know the data if the scale were increased.

Since this study did not specifically factor in student achievement or student perceptions, research that went further and analyzed how student achievement or even student efficacy could be affected by a professional development plan for differentiation strategies would take the findings of studies like this one to a level that could prove most impactful. Ultimately, students are the reason that anything should happen in a school, so a study tying back to students in some way would be beneficial to the profession. Also, since teacher retention is a growing problem, a study that directly analyzed how professional development for instructional strategies affects teacher retention could have a lasting, powerful impact on education as well.
For DHS, the next steps are to test this conceptual framework in other departments in the school to see if similar results can be gained from other departments. Eventually, the district has stated that it would like to see other schools in the district implement this type of PD to impact the efficacy of their teachers and improve the instruction in their classrooms. Also, the data collection of this study has ignited other ideas for potential studies that could impact the district including data related to teacher attendance, to substitute teachers, to the overall climate of the school.

**Summary**

This study brought out a variety of findings, recommendations, and implications to affect DHS, CSD, and the educational community. DHS specifically stands to gain from this study because it was a direct look into the working organism that is DHS. The ART specifically made conclusions and recommendations for practice based on these findings. Overall, this study determined that efficacy can be specifically positively impacted by a consistently delivered professional development plan around instructional strategies (see Figure 8), teacher efficacy is enhanced when receiving PD within trusted course teams, participating with flexible, and varied strategies directly can increase the likelihood that teachers will use the strategies.

Specific conclusions delivered by the ART related to how professional development for differentiation strategies can affect teacher efficacy were:

1. The implementation of a regularly scheduled professional development plan for differentiation strategies can increase teacher efficacy.
2. Professional development that differentiates the types of strategies to match varied teacher preferences can increase teacher efficacy to use those strategies.
3. Professional development delivered during pre-existing team planning meetings can increase teacher efficacy.

4. Having teachers experience the strategies in the PD rather than only learn about them can increase understanding of strategies and increase efficacy to use the strategies.

5. Differentiation PD has the potential to enhance the gifted offerings of a school that does not track students.

The conclusions related to the action research process were:

1. Action research exposes the value of in-house professionals doing research and initiating change within an organization.

2. Action research can be a catalyst for members of the action research team to pursue further action within the organization.

3. Action research can provide exposure of potential within the organization for the researcher.

These conclusions were a product of a passionate educator, attempting to seek clarity into a problem at his school, for the purpose of testing a solution. My hope is that these findings, recommendations, and conclusions can further the conversation of educational efficacy research and have a positive impact on the future of the profession.
REFERENCES


doi:10.1177/0162353214541326


doi:10.1080/00131911.2015.1119101


# Appendix A

## Empirical Findings Analysis Table

<table>
<thead>
<tr>
<th>Author(s), Date</th>
<th>Title</th>
<th>Purpose</th>
<th>Method</th>
<th>Sample</th>
<th>Result</th>
<th>Conclusion</th>
<th>Implications</th>
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<tbody>
<tr>
<td>Altintas, E. &amp; Ozdemir, A. (2015)</td>
<td>Evaluating a Newly Developed Differentiation Approach in Terms of Student Achievement and Teachers' Opinions.</td>
<td>This study aims to evaluate a differentiation approach that was recently developed to teach mathematics to gifted middle school students in terms of its practice by teachers by studying the effect of the approach on achievement among both gifted and non-gifted students.</td>
<td>From mixed research methods, the study used an explanatory design.</td>
<td>It was conducted with 68 gifted and 144 non-gifted students who were in the 5th, 6th and 7th grades and 5 mathematics teachers.</td>
<td>The participating students' achievements increased significantly with the use of the recently developed differentiation approach. The teachers expressed that the activities that were conducted based on the differentiation approach were creative, beneficial, and tailored to the students' levels, and they addressed different intelligences types.</td>
<td>Differentiation led to an improvement of student achievement and teacher efficacy for differentiation.</td>
<td>As this was a study on both middle school students and teachers, this study shows the impact on both groups of subjects. As a positive correlation of differentiation to both groups, gifted and nongifted, this shows the differentiation can have a broad, not just a specific, impact.</td>
</tr>
<tr>
<td>Author(s)</td>
<td>Title</td>
<td>Focus</td>
<td>Methodology</td>
<td>Sample</td>
<td>Findings</td>
<td>Implications</td>
<td></td>
</tr>
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<td>-----------</td>
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<td></td>
</tr>
<tr>
<td>Dixon, F., Yssel, N., McConnell, J., &amp; Hardin, T. (2014)</td>
<td>Differentiated Instruction, Professional Development, and Teacher Efficacy.</td>
<td>This study focused on teacher efficacy as a way to explain teacher willingness to differentiate instruction.</td>
<td>Quantitative study using Likert scales to determine efficacy of teachers.</td>
<td>Five different teachers from differing grade levels from four schools from two very different school districts were studied.</td>
<td>This study found that a greater number of professional development hours in differentiation of instruction was positively associated with both teacher efficacy and the teacher’s sense of efficacy beliefs.</td>
<td>This study demonstrated that teacher efficacy is an important dimension in implementing the process of differentiation regardless of what level or what content area the teacher taught (elementary, middle, or high school). Any studies focusing on teacher efficacy and differentiation can pull from these results and these approaches to inform their own study for similar topics.</td>
<td></td>
</tr>
</tbody>
</table>
| Endepohls-Ulpe, M. (2017) | Acceleration, Enrichment, or Internal Differentiation – Consequences of Measures to Promote Gifted Students Anticipated by German Secondary School Teachers | The presented study examines the consequences – for students as well as for teachers – which teachers from German upper secondary ("Gymnasium") and secondary modern schools (Realschule) anticipate for | Teachers filled in a questionnaire with 4-step Likert-Items on possible outcomes of the four different types of promotion for gifted students. Data analysis was done by 2x2x4 ANOVA with repeated measurement. | 175 teachers (111 Gymnasium teachers, 64 teachers from secondary modern schools) | Results show significant differences with respect to assessed outcomes between the four specified measures. Especially for early placement at university teachers feared negative consequences for students like work overload, social | To counteract teachers’ – mostly non-realistic – apprehensions and their possible negative consequences on the promotion of gifted students, it seems necessary to provide teachers with realistic information on how to counteract their apprehensions and how to differentiate for gifted students. This study outright states that teachers should be imparted with methods to differentiate so that they do not
| Harris, D. (2011) | Curriculum Differentiation and Comprehensive School Reform: Challenges in Providing Educational Opportunity. | This study explores how the “technology of tracking” endures and coexists in standards based education. | Mixed methods with semistructured interviews and classroom observations. | Interview data were collected from six case study middle schools during five site visits that occurred over 3 years. | Despite NCEE’s desire to limit tracking in schools adopting America’s Choice, curriculum differentiation continued to exist in many of its schools. | The reasons why the tracking continued align with the technical, political, and norms of school environments. Despite America’s Choice commitment to limit the use of tracking, many for schools that track students, this is an interesting study for how and why tracking exists and what impact it has on districts, students, and teachers. |
| Kanevsky, L. (2011) | Deferential Differentiation: What Types of Differentiation Do Students Want? | To determine if gifted identified students wanted to learn differently than non-identified students. | While thinking of their favorite school subject, they responded to the 110 items on the Possibilities for Learning survey. | The preferences of 416 students identified as gifted (grades 3-8) for features of differentiated curriculum recommended for gifted students were compared with those of 230 students not identified as gifted. | Compared with non-identified students, more of the students identified as gifted wanted to learn about complex, extracurricular topics and authentic, sophisticated knowledge and interconnection among ideas; to work with others some of the time; and to choose the format of the products of their learning. | Overall, the groups’ preferences differed in degree rather than kind, and reflected cognitive abilities frequently cited as distinguishing characteristics of learners with high ability. | This study determined that gifted identified students do indeed long for a different type of curriculum than non-identified students. This knowledge can directly influence the self-efficacy of teachers wondering if such a strategy is worthwhile. |
| Latz, A., Speirs Neumeister, K., Adams, C., & Pierce, R. (2009) | Peer Coaching to Improve Classroom Differentiation: Perspectives | The present study sought to understand how a peer coach for Qualitative mentor observations and qualitative surveys for the 20 educators from Ball State University’s (BSU) Center for Gifted Pertinent themes pulled from the data were organized into four | Through the development and implementation of additional Crafting a mentoring program must be done deliberately and |
| Dunn, K. & Darlington, E. (2016). | GCSE Geography teachers' experiences of differentiation in the classroom. | The primary aim of this research was to ascertain the views of GCSE Geography teachers, and consider their experiences with differentiation within the classroom, in order to develop teacher resources to suit their needs. | Qualitative data reflecting teachers' views on differentiation and their attitudes towards the use of resources to aid differentiation approaches were gathered at two focus groups, and analysed. | The focus group participants comprised 16 teachers currently teaching OCR GCSE to students of varying ability levels. | As well as differentiation through the use of adapted resources, a wide variety of methods of differentiation were described by the participants, though they were not all necessarily methods which they had used themselves. The methods of differentiation discussed at this study has highlighted that there are many methods of differentiation that Geography teachers can employ in the classroom. These do not necessarily have to relate to the particular resources or written assessment used, but can also relate to pedagogy and oral | A similar setting of tracking being removed and a similar apprehension of teachers to its impact, with differentiation introduced as solution for teachers. | from Project CLUE. | teachers may influence teachers' understandings and abilities to facilitate differentiated lessons for high-ability students. | teachers were evaluated. | Studies and Talent Development (Center) and Indianapolis Public Schools (IPS). | mentoring programs similar to the one used in Project CLUE, more teachers will prosper despite today’s increasing demands on teachers to meet the needs of a diverse group of learners. | vigilantly to ensure success. In order for the mentoring program to be a success, ample time must be given to the process of correspondence, observations, and meetings. |
both focus groups are presented below, under three themes which emerged from the data: (1) differentiation through setting; (2) differentiation through lesson design; and (3) differentiation through classroom practice.

Missett, T., Brunner, M., Callahan, C., Moon, T., & Azano, A. (2014) Exploring Teacher Beliefs and Use of Acceleration, Ability Grouping, and Formative Assessment. This qualitative study sought to explore how teacher expectations about student ability influenced teacher use of accelerative practices, ability grouping, and formative assessment. The researchers used interpretivist methods and techniques for the primary purpose of understanding the experiences and beliefs of the participants and how these beliefs and expectations influenced their use of personalized pacing. A national sample of school districts was solicited from nominations by state directors of gifted education, a list of collaborative school districts associated with the National Research Center on the Gifted and Talented, and other sources. The findings indicate that the availability and use of formative assessments, coupled with high teacher expectations about student ability, support teacher use of best practices in pacing and grouping strategies. The data analysis yielded findings showing that, for both control and experimental groups, teacher beliefs and expectations about student abilities influenced the extent to which they utilized personalized pacing, ability assessment.

The finding that teacher expectations influenced how they implemented strategies for differentiation is very impactful for future studies in seeing that this potential prejudice could influence teachers. Teacher
|   |   | pacing, ability based grouping strategies, and formative assessment. | announcements at regional and national organization professional conferences, and names of districts provided by the developers of the instructional/curricular models included in the CLEAR Curriculum model. | grouping, and formative assessment in their language arts instruction. | efficacy could be directly influenced by something that they may not even realize. |   |   |
Appendix B
Letter of System Approval

Request for Research

Name: Taylor Cross
Date: 12/2/16
College/University: University of Georgia
Project Title: Self-Efficacy of Teacher for Differentiation

Decision from CSD Research Requests Committee

Committee Meeting Date: 12/2/16
Committee Members Present:

Approved or Denied: Approved

[Signature]
Signature of Superintendent

[Date]
Date
Appendix C
Letter of IRB Approval

June 21, 2017

Dear Sheneka Williams:

On 6/21/2017, the IRB reviewed the following submission:

<table>
<thead>
<tr>
<th>Type of Review:</th>
<th>Initial Study</th>
</tr>
</thead>
<tbody>
<tr>
<td>Review Category:</td>
<td>Exempt 1 and 2</td>
</tr>
<tr>
<td>Title of Study:</td>
<td>Studying the implementation of a Differentiation Professional Development Plan for Teachers of Untrapped English Classrooms to Address Teacher Efficacy</td>
</tr>
<tr>
<td>Investigator:</td>
<td>Sheneka Williams</td>
</tr>
<tr>
<td>Student Co-Investigator:</td>
<td>Benjamin Cross</td>
</tr>
<tr>
<td>IRB ID:</td>
<td>STUDY00004509</td>
</tr>
<tr>
<td>Funding:</td>
<td>None</td>
</tr>
<tr>
<td>Documents Reviewed:</td>
<td>Recruitment Material, Consent Document, Site Authorization, Data Collection Instruments</td>
</tr>
</tbody>
</table>

The IRB approved the protocol from 6/21/2017 to 6/20/2022.

In conducting this study, you are required to follow the requirements listed in the Investigator Manual (HRP-103).

Sincerely,

Brooke M. Harwell
University of Georgia
Institutional Review Board Analyst II
Appendix D
Consent to Participate
UNIVERSITY OF GEORGIA
CONSENT FORM
Studying the Implementation of a Differentiation Professional Development Plan for Teachers of Untracked English Classrooms to Address Teacher Efficacy

Researcher’s Statement
I am/We are 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
850 College Station Road
324 River’s Crossing
Athens, GA 30602
706.542.1615

Purpose of the Study
This study is being conducted to see if a systematic, consistent professional development plan on the topic of differentiating in the classroom will affect the self-efficacy of the teachers taking part in the plan in regard for how they differentiate in their classrooms. You have been chosen for this study because you are part of a course team at Decatur High School that does not track its students. This classroom scenario is a challenging yet ideal environment for differentiation; therefore, this is why you have been chosen for this study.

Study Procedures
If you agree to participate, you will be asked to ...

● In this study, each participant will be asked to take part in 10, fifty minute professional development sessions over a 12 week period and to implement the strategies and approaches discussed to the best of his or her ability to fit the needs of students in his or her classroom.

● Each weekly meeting will last no longer than fifty minutes. There will be no other time commitments beyond this single fifty minutes per week, aside from possible selective interviews that would take no longer than 20 minutes.
• Each participant will be asked to complete the Teacher Efficacy Scale (Hoy 1990), and participate in discussion planning during each fifty minute meeting. Some teachers may be chosen for follow up interviews, based on his or her responses in the regular meetings.
• All meeting discussions and personal interviews will be audio recorded.

Risks and discomforts
• The risks associated with this study are minimal. Data from this study could be made available to CSD upon the completion, but pseudonyms are being used to protect your confidentiality.
• Understanding that each participant would be donating fifty minutes of their time each week, it is my goal to maximize this time each week so that there is no additional work or time asked of participants aside from this fifty minutes per week.

Benefits
• The primary benefit of this study would be for participants to improve on an area that is directly assessed on the Teacher Keys Evaluation System. This is an area on which most teachers struggle to get exemplary marks. This study would directly influence the teachers’ efficacy to differentiate.
• As a result of the aforementioned benefits, students of all skill levels may be able to get a more personalized educational experience that fits their skill level and interest.

Incentives for participation
The primary incentive for this study is to have an opportunity for participants to enhance their skills for differentiating in the classroom through experience with their colleagues.

Audio/Video Recording
Audio recording will occur in this study for the purpose of accurately recording the thoughts and opinions of each participant. These responses will be coded and analyzed. Upon the completion of this study and the publication of this study, all recordings will be deleted.

Privacy/Confidentiality
Data will be taken anonymously to protect the privacy of all participants. Pseudonyms will be used for each participant. All data taken for this study will be stored privately and not shared publicly, although the project’s research records may be reviewed by departments at the University of Georgia responsible for regulatory and research oversight.

Researchers may release results of the study to the City Schools of Decatur upon completion, but will not release identifiable results of the study to anyone else 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. Your decision to participate or not will have no bearing on your job status or standing.

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 at the University of Georgia in the department of Educational Administration and Policy. 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.
Appendix E
Participation Recruitment Form

Hello,

As you all know, I am working on my Ed.D. in Educational Leadership at the University of Georgia. As part of this degree, I am required to complete an action research study within my organization. As such, I desire to research the teachers of this 9th and 10th grade English department here at Decatur High School. I would like to research the efficacy that you have toward differentiating in your classroom for your classroom of untracked, therefore extremely diverse, students. This will be a mixed methods study. For the quantitative portion, you will complete the Teacher Efficacy Scale survey before and after the study to determine if there is a statistical difference in your efficacy toward differentiation. For the qualitative portion, I will be collecting observation data from our meetings, as well as select interviews for feedback.

The name of the principal investigator is Dr. Sheneka Williams of the department of Educational Administration and Policy at UGA. Her e-mail is swilliams@uga.edu and her phone number is 706-542-1615.

For this research, I plan to include you as part of a ten week professional development plan around the idea of classroom differentiation, in which I will expose you various concepts and tools on the subject, and you will work together in your teams to implement these strategies and tools in your classrooms; you will come together after each cycle to discuss their impact on your classroom. These sessions will occur during one planning period per week, so 50 minutes of your time each week, for ten weeks.

You have been chosen for this study because you are part of a team that teaches students of all learning groups in one classroom: special education, Title I, gifted, ESOL, and regular education. This is an environment where differentiation is extremely important, and over the last several years, there has been no specific professional development around this topic offered here at DHS, but it has been identified as an area of emphasis. I am studying to determine if exposing you to these strategies and tools and then giving you an opportunity to work together in teams and then utilize them in your classrooms, will impact your efficacy for differentiating in your classrooms.

The benefits for you in this study is that you will have a direct opportunity to learn research-based strategies and tools to help you reach various groups of students in your classrooms, and to work together in your teams to do so, so that you can cohesively work on a very difficult skill that is ultimately part of your TKES evaluation for the state of Georgia.

There are minimal perceived risks or detriments for you in this study. You will be spending around ten total hours over the next few months participating in this study. This is time that you could potentially use for something else, but you will be committing it to working on this area of your work. I will be using pseudonyms rather than your actual names, but this will be published as a public document and will go on file in the CSD office under internal research.

This research will occur each week during our common planning period between the weeks of September 11th and November 27th. You can contact me at taycross@csdecatur.net or 678-446-4483 if you have any questions or concerns.
Appendix F

Teacher Sense of Efficacy Scale

A number of statements about organizations, people, and teaching are presented below. The purpose is to gather information regarding the actual attitudes of educators concerning these statements. There are no correct or incorrect answers. We are interested only in your frank opinions. Your responses will remain confidential.

INSTRUCTIONS: Please indicate your personal opinion about each statement by circling the appropriate response at the right of each statement. KEY: 1=Strongly Agree 2=Moderately Agree 3=Agree slightly more than disagree 4=Disagree slightly more than agree 5=Moderately Disagree 6=Strongly Disagree

1. When a student does better than usually, many times it is because I exert a little extra effort.
2. The hours in my class have little influence on students compared to the influence of their home environment.
3. The amount a student can learn is primarily related to family background.
4. If students aren't disciplined at home, they aren't likely to accept any discipline.
5. I have enough training to deal with almost any learning problem.
6. When a student is having difficulty with an assignment, I am usually able to adjust it to his/her level.
7. When a student gets a better grade than he/she usually gets, it is usually because I found better ways of teaching that student.
8. When I really try, I can get through to most difficult students.
9. A teacher is very limited in what he/she can achieve because a student's home environment is a large influence on his/her achievement.
10. Teachers are not a very powerful influence on student achievement when all factors are considered. 11. When the grades of my students improve, it is usually because I found more effective approaches.
12. If a student masters a new concept quickly, this might be because I knew the necessary steps in teaching that concept.
13. If parents would do more for their children, I could do more.
14. If a student did not remember information I gave in a previous lesson, I would know how to increase his/her retention in the next lesson.
15. The influences of a student’s home experiences can be overcome by good teaching.
16. If a student in my class becomes disruptive and noisy, I feel assured that I know some techniques to redirect him/her quickly.
17. Even a teacher with good teaching abilities may not reach many students.
18. If one of my students couldn't do a class assignment, I would be able to accurately assess whether the assignment was at the correct level of difficulty.
19. If I really try hard, I can get through to even the most difficult or unmotivated students.
20. When it comes right down to it, a teacher really can't do much because most of a student's motivation and
performance depends on his or her home environment.

21. Some students need to be placed in slower groups so they are not subjected to unrealistic expectations.

22. My teacher training program and/or experience has given me the necessary skills to be an effective teacher

Appendix G

Personal Interview Protocol Form

1. How long have you been teaching English?
2. How long have you been teaching English at DHS?
3. How familiar are you with specific strategies to differentiate instruction for various learners in your classroom?
4. How comfortable are you with differentiating instruction in the classroom with the diverse student population that you teach?
5. Does your ability to differentiate in your classroom affect the way that you would personally rate or value yourself as a teacher?
6. Aside from this study, has your organization offered opportunities for professional development in classroom differentiation? If so, when?
7. What specific differentiation strategies that were presented in this study are most likely to find their way into your classroom and why?
8. Which specific strategies will likely not make their way into your classroom and why?
9. What about the way that this study has been conducted has been the most helpful to you as a classroom teacher?
10. What about the way that this study has been conducted could be improved to help you as a classroom teacher?
# Appendix H

## Intended Meeting Schedule

<table>
<thead>
<tr>
<th>Dates (week of)</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>September 11th</td>
<td>Initial Information, Signatures, Quantitative Data</td>
</tr>
<tr>
<td>September 25th</td>
<td>Grouping</td>
</tr>
<tr>
<td>October 2nd</td>
<td>Differentiator</td>
</tr>
<tr>
<td>October 9th</td>
<td>Taba</td>
</tr>
<tr>
<td>October 16th</td>
<td>Think Like a Disciplinarian</td>
</tr>
<tr>
<td>October 23rd</td>
<td>ThinkTrix</td>
</tr>
<tr>
<td>October 30th</td>
<td>Roundtable</td>
</tr>
<tr>
<td>November 6th</td>
<td>Project-based Learning</td>
</tr>
<tr>
<td>November 13th</td>
<td>Assessment</td>
</tr>
<tr>
<td>November 27th</td>
<td>Post Reflection, Final Quantitative Data Collection</td>
</tr>
</tbody>
</table>
## Appendix I

### Actual Meeting Schedule Realized

<table>
<thead>
<tr>
<th>Dates (week of)</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>September 25th</td>
<td>Initial Information, Signatures, Quantitative Data</td>
</tr>
<tr>
<td>October 9th</td>
<td>Grouping/Differentiator</td>
</tr>
<tr>
<td>October 16th</td>
<td>Taba</td>
</tr>
<tr>
<td>October 23rd</td>
<td>Think Like a Disciplinarian</td>
</tr>
<tr>
<td>November 14th</td>
<td>ThinkTrix</td>
</tr>
<tr>
<td>November 27th</td>
<td>Roundtable</td>
</tr>
<tr>
<td>December 4th</td>
<td>Final Quantitative Data Collection</td>
</tr>
<tr>
<td>December 4th-December 11th</td>
<td>Individual Interviews Conducted</td>
</tr>
</tbody>
</table>
## Appendix J
### Timeline of Unexpected Issues in Data Collection

<table>
<thead>
<tr>
<th>Issues</th>
<th>Date(s)</th>
<th>Cause</th>
<th>Impact</th>
<th>Teams Impacted</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hurricane Irma</td>
<td>September 11th</td>
<td>Nature</td>
<td>Entire timeline shift</td>
<td>Both</td>
</tr>
<tr>
<td>Coverage No Show</td>
<td>October 3rd</td>
<td>Coverage Forgot</td>
<td>Study fell farther behind, person that didn’t show was more willing to help</td>
<td>10th only</td>
</tr>
<tr>
<td>School Scheduling</td>
<td>October 23rd</td>
<td>504 Meetings</td>
<td>Allowed participants flexibility at a needed time, but put study farther behind</td>
<td>9th Only</td>
</tr>
<tr>
<td>Personal Cancellation</td>
<td>October 31st</td>
<td>Grading Day for 9th Team</td>
<td>Likely helped rapport between researcher and participants, but put study farther behind</td>
<td>Both</td>
</tr>
<tr>
<td>Administrative Interference</td>
<td>November 1st-</td>
<td>Miscommunication?</td>
<td>Paranoid, backstabbed, study farther behind</td>
<td>Both</td>
</tr>
<tr>
<td>Planning Day Cancelled</td>
<td>November 7th</td>
<td>Instructional Coaches</td>
<td>None because the study was frozen</td>
<td>Both</td>
</tr>
</tbody>
</table>
### Appendix K

**Thinktrix Chart**

<table>
<thead>
<tr>
<th>Visual Cues</th>
<th>Meaning</th>
<th>Types of Thinking</th>
</tr>
</thead>
<tbody>
<tr>
<td>R</td>
<td>Recall</td>
<td>recall, plot design, sequence, detail, and summarize</td>
</tr>
<tr>
<td></td>
<td>Similarity</td>
<td>analogy, ratio, comparison, intersection and common element</td>
</tr>
<tr>
<td></td>
<td>Difference</td>
<td>contrast, comparison, distinction, discrimination, and differentiation</td>
</tr>
<tr>
<td></td>
<td>Cause and</td>
<td>cause, effect/result, motive</td>
</tr>
<tr>
<td></td>
<td>Effect</td>
<td>consequence, inference, prediction and hypothesis</td>
</tr>
<tr>
<td></td>
<td>Idea to</td>
<td>categorization, deduction, substantiation, analogy and support</td>
</tr>
<tr>
<td></td>
<td>Example</td>
<td>induction, conclusion, generalization and finding essence</td>
</tr>
<tr>
<td></td>
<td>Example to</td>
<td>ethical consideration, judgment, rating and weighing evidence</td>
</tr>
<tr>
<td></td>
<td>Idea</td>
<td></td>
</tr>
</tbody>
</table>

**NOTE:** The above seven types of thinking can be applied across all curricular areas. A Social Studies example appears below.

<table>
<thead>
<tr>
<th>Visual Cues/Type of Thinking</th>
<th>Examples of Content Questions for Social Studies</th>
</tr>
</thead>
<tbody>
<tr>
<td>R/Recall</td>
<td>How many stars are on the American Flag?</td>
</tr>
<tr>
<td>Q/S / Similarity</td>
<td>How is the American flag similar to the dollar bill?</td>
</tr>
<tr>
<td>E/E / Difference</td>
<td>How is the American flag different from the dollar bill?</td>
</tr>
<tr>
<td>C/E / Cause and Effect</td>
<td>Why do nations have symbols? When you see the American flag what are you thinking or feeling?</td>
</tr>
<tr>
<td>Ex/Ex / Idea to Example</td>
<td>Name two other American symbols.</td>
</tr>
<tr>
<td>Ex/E / Example to Idea</td>
<td>The American flag and the dollar bill are examples of .... ? (American culture/ American national symbols, etc.)</td>
</tr>
<tr>
<td>E/E / Evaluation</td>
<td>Is the American flag a good symbol? Give three reasons.</td>
</tr>
</tbody>
</table>
Appendix L
Concept Roundtable Worksheet

Character Roundtable                        Name_________________________

Instructions: Answer the introductory questions about your character to help you “get into character.” Then, you must go around the room and find each of the other characters and discuss these questions with that character. The two of you must decide on the effect that your characters have on each other in the play. You must talk to all of the characters, including yourself!

Your character: ___________________________
Define your character traits (what you do, your age, mannerisms, and how you appear to others):

Describe your personality and how it may affect others:

Describe your intentions or purpose so far in the play:

First character you meet: ___________________________
1. Your conflicts with this character:

2. What effect could this conflict(s) ultimately have on you, this other character, and the plot?

3. How could these conflicts potentially be solved?

Second character you meet: ___________________________
1. Your conflicts with this character:

2. What effect could this conflict(s) ultimately have on you, this other character, and the plot?

3. How could these conflicts potentially be solved?
Third character you meet: ______________________
1. Your conflicts with this character:

2. What effect could this conflict(s) ultimately have on you, this other character, and the plot?

3. How could these conflicts potentially be solved?

Fourth character you meet: ______________________
1. Your conflicts with this character:

2. What effect could this conflict(s) ultimately have on you, this other character, and the plot?

3. How could these conflicts potentially be solved?

Fifth character you meet: ______________________
1. Your conflicts with this character:

2. What effect could this conflict(s) ultimately have on you, this other character, and the plot?

3. How could these conflicts potentially be solved?

Sixth character you meet: ______________________
1. Your conflicts with this character:

2. What effect could this conflict(s) ultimately have on you, this other character, and the plot?

3. How could these conflicts potentially be solved?