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The Connection Between Depth and Complexity and Culturally Relevant Teaching

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The Connection between Depth and Complexity and Culturally Relevant Teaching

by

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The project is being submitted in order partial to fulfillment of the requirements for the degree of a Masters in Teaching.

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TABLE OF CONTENTS

CHAPTER ONE.....	3
Introduction.....	3
Personal Background.....	5
A Brief Explanation of Gifted and Talented Students.....	8
A Brief Definition of Culturally Responsive Teaching.....	9
Rationale.....	10
Summary.....	11
CHAPTER TWO.....	13
Literature Review.....	13
Gifted and Talented.....	14
Strides in Gifted and Talented Education for Underrepresented Populations.....	15
Depth and Complexity.....	18
The importance of differentiation for gifted and talented students.....	19
What is Depth and Complexity?.....	20
Multiple Perspectives.....	22
Culturally Relevant Pedagogies.....	22
Culturally Relevant Pedagogy and Gifted Students.....	24
Teachers' Ability to Teach CRT.....	27
Conclusion.....	29
CHAPTER THREE.....	31
Project Description.....	31
Overview of Project.....	31
Intended Audience and Participants.....	32
Challenges I Forsee.....	33
Project Timeline.....	34
Frameworks and Theories.....	35
Depth and Complexity.....	35
Culturally Responsive Teaching.....	36
Assessment.....	37
Summary.....	37
CHAPTER FOUR.....	39
Conclusion.....	39
Reflection.....	40
Revisiting the Literature Review.....	42
Implications.....	42
Limitations.....	43
Future Steps.....	44

Benefit to the Profession.....	44
Summary.....	45
REFERENCES.....	46

CHAPTER ONE

Introduction

Having worked in education for a significant portion of my adult life, I have witnessed many teachers work tirelessly to understand and master a new curriculum only to be told it will be changing for the next school year. When I became a classroom teacher, I spent a lot of time and effort creating lessons for math only to find close to the end of the year that a new curriculum would be implemented the next year. In an era when teachers are making a huge attempt to tailor education so that it is beneficial for every student in the classroom, curriculum changes can make that difficult. However, I found there is hope when it comes to frameworks because they can easily coincide with curriculum so that all students can be supported.

I currently work with students who are identified as gifted and talented (G&T) in a 2nd grade classroom so there is already a lot of work that goes into differentiating and expanding the curriculum which is the responsibility of the teacher. When there is a curriculum change, the differentiating and expansion of the curriculum then must also be changed which does take a substantial amount of time and energy. When it comes to G&T education, it is important to differentiate and there are multiple different ways to do so but with the factor of a curriculum change, it can make this differentiation rushed or not happen at all (Manning, Stanford, & Reeves, 2010). In many schools, there is also the push for culturally responsive teaching so that every student feels that the classroom and their education are geared towards them (Hammond, 2015). With multiple factors being affected when it comes to a curriculum change, it is not surprising that a teacher could feel overwhelmed with the responsibility.

For me personally, I believe the classroom should feel like a community. This means that these curriculum changes could have a possible negative impact on my teaching since I need to be sure every student feels heard and comfortable in the classroom if I am to attain that goal. This belief also caused me to keep learning about gifted education and culturally responsive teaching. I started to learn about different frameworks that could be implemented into a G&T classroom. While reading about the framework I came across the book, *Gifted Guild's Guide to Depth and Complexity, Finding Your Way through the Framework* by Byrd and Gemert (2019), which explained in simple but detailed words about the framework Depth and Complexity (D&C). This book contains a framework that can be very easily implemented into any classroom. While reading this book, I began to notice parallels to Hammond's book *Culturally Responsive Teaching & the Brain, Promoting Authentic Engagement and Rigor Among Culturally and Linguistically Diverse Students* (2015) that explains the importance of Culturally Responsive Teaching (CRT). This got my attention and is the foundation of the research question for this capstone project: *In what ways are the components of both the Depth and Complexity frameworks and culturally relevant pedagogies beneficial for academic growth for gifted individuals, especially those of underrepresented populations (students of color, English language learners, and economically disadvantaged) in order to promote academic growth?* I plan on creating a lesson plan project that uses D&C and then showing how it parallels CRT in order for it to be a starting point for teachers who are new to G&T education in order to best answer the question.

In chapter one, I discuss my personal background and how it drives my research question. I discuss my life through school and into my current life as an elementary

school teacher. While discussing my personal background, I have a continued understanding that I have grown up with certain privileges that are denied to others and will continue to hold that in my mind as I conduct my research. I also provide a rationale for the need for this study. When it comes to G&T education there is a large disparity gap and my goal for this project is to provide a starting point for new educators teaching G&T students from all backgrounds in the hopes to better close this gap. Next, I plan on giving a quick definition of D&C and CRT and provide much more detail in chapter 2. Finally, I summarize the chapter and explain the next steps.

Personal Background

I grew up with my biological mother, father and sister. My parents were lucky and found an extremely affordable home in a very good neighborhood. In the early years of my life, my father stayed at home and my mother worked. My earliest memories involve feeling loved and supported but feeling I did not have the same things as my peers. I did not have many material possessions compared to others my age but I had the privilege of going to Ireland every year or two. I remember hearing my parents fighting, sometimes I heard things about money. Despite this, I never felt like I was poor because my family knew how to find things to do for free and were able to budget to get me certain comforts. I always felt comfortable. However, when I started school I found myself feeling that I was different from everyone in my class. I was made fun of for having hand-me-down clothes even though I was the oldest. Some people thought it was strange I did not have any video games or know television shows on cable. I started dreading going to school, but was lucky I had a great drive to succeed when it came to education.

My life completely changed when my parents bought their own business. We moved into the upper middle class, got a bigger house, changed schools but it did come with the downside of not seeing my parents together very often. I understood that one of them had to be at the store as I got older, but when I was younger, I was angry at times that I did not get to have them with me. This made it especially hard because we had the privilege to go to Ireland every year, which is where my parents are originally from, however, I barely ever got to have them together. Being a child of immigrants was difficult at times because we did things and said things differently than others my age. Still, I noticed that I had an easier time “fitting in” than other friends of mine who were not of the same race as me and had a different skin tone.

When it came to my school, I also found myself getting bored a lot. This mixed with my ADHD impulsive nature, I would usually end up in trouble. Being seen a certain way caused me problems at times. For example, when I was in third grade I wrote a true story of finding an injured cat and going around my neighborhood collecting money in order to pay vet bills to save it. At parent-teacher conferences, my mother was told that I was very good at making up stories and had to work on creating true stories. My mother finally understood what I was saying about my teacher being against me. After hearing this, I wanted to give up and no longer liked school. The only highlight of my day was being pulled out for math for acceleration. My mother decided she wanted me to have a challenge and heard of a new charter school opening up whose goal was to be academically challenging.

I started at Nova Classical Academy in fourth grade. I began to enjoy school. I was getting challenged, reading books and doing math at the level I needed. I also

experienced failure in school for the first time which made me upset but it also made me excited in a way to not have the right answer. When it came to homework, I was unable to get help from my parents. Almost every other student in my class (it was a small class of 18 students) either had a parent who stayed home or parents with very flexible jobs so when projects came due others were always so stunning. I would arrive with my project that was done entirely by me and feel completely defeated. It was not until years later that I realized that the reason for their projects looking so nice was because their parents helped. I would usually get a lower grade in the class and it was always for the presentation category. It was the understanding of the teachers that parents would be able to help, something I was told later as an adult by one of my previous teachers.

I left Nova after eighth grade and went to another charter school. I did not get challenged there and when I refused the chance to do post secondary enrollment options (PSEO), I asked to move to public education so I could at least do all advanced placement (AP) and international baccalaureate (IB) classes. I was finally on medication for attention deficit hyperactivity disorder (ADHD) and found it easier to voice and advocate for myself. After high school, I went to the University of Minnesota -Morris majoring in mathematical education. After taking an education course, I was given the impression that teaching may not be the path for me by a professor so I switched to art history and statistics because I felt defeated and I enjoyed those classes.

After years of feeling completely lost and going from job to job, not lasting long in any of them, I finally found something that clicked. I went back to elementary school and worked as a teaching assistant. I fell in love with elementary students helping those who were struggling and pulling a few students out who needed a challenge. I advocated

that I was pulling a student out, that they needed a buddy so that they were not the only ones being pulled out by me because I felt like an outcast when that happened. I decided during my first year to go back to school and get a masters of education. I found Hamline and their Masters of Teaching program to be the best for me. After completing student teaching, I got a job at Capitol Hill Magnet, the very school my mother was nervous to send me to. Working with students who are identified as gifted and talented has been very rewarding to me and I want to see every student I work with thrive. However, I know that in order to do so I need to know the background of each of my students and know what they can accomplish to their best ability. I also will be an advocate for those who might appear to have all the help in the world at home but might not. While speaking of my experience, I found that I lacked the education of what gifted and talented meant.

A Brief Explanation of Gifted and Talented Students

The Minnesota Department of Education defines gifted children as:

Gifted and talented children and youth are those students with outstanding abilities, identified at preschool, elementary, and secondary levels. The potential of gifted students requires differentiated and challenging educational programs or services beyond those provided in the general school program. Students capable of high performance include those with demonstrated achievement or potential ability in one or more of these areas: general intellectual, specific academic subjects, creativity, leadership, and visual performing arts. (Department of Education, 2024, Gifted Education, section)

I define this here because there is a misconception that gifted children are gifted in all areas of school which is not the case. You can be gifted in one subject area, have a

strength of leadership or be incredibly creative. When I work with students I am working with students across the board in academic areas, some low but some extremely high. This means we must differentiate quite a bit and at times, differentiate for a single person. This can help with equity in its own right but it also makes it hard to create a sense of community and makes sure everyone feels like they are a complete part of the classroom. This is why it is important to understand what CRT is.

A Brief Definition of Culturally Responsive Teaching

Hammond (2015) (p. 15) defined culturally responsive teaching as:

An educator's ability to recognize students' cultural displays of learning and meaning making and respond positively and constructively with teaching moves that use cultural knowledge as a scaffold to connect what the student knows to new concepts and content in order to promote effective information processing. All the while, the educator understands the importance of being in a relationship and having a social-emotional connection to the student in order to create a safe space for learning. (p. 15)

I believe it is important to define this here because the goal of culturally responsive teaching is not just for students of color but for every student who walks through the school door. It is a way to teach students of all backgrounds so that they can become the best version of themselves. Every single student is like a fingerprint, completely different from one another. No one person has the exact same life as another. It is important to state this definition because it drives the rationale for this capstone project.

Rationale

After working for a year with gifted children and attempting to spend as much time as possible learning what I could about gifted education, I realized that it was incredibly overwhelming. I work for the Saint Paul Public School district and they are advocating for more culturally responsive teaching. I found this difficult when I was also trying to learn about gifted education, something that I felt was lacking in my teacher education program. On my journey to learn all I could about gifted education, it was recommended to me to read about the concepts of Depth and Complexity by Ian Byrd and Lisa Van Gemert (2019). This was an easy read and it was easy to understand. It explained the framework Depth and Complexity and thought it matched with my teaching philosophy of making a classroom a community really well. From my current understanding and perspective, I believe it could be easily implemented into anyone's teaching style.

When I began the chapter on multiple perspectives, suddenly I found myself thinking about another book I had read by Zaretta Hammond (2015) about culturally relevant teaching.. This is where it clicked that this was a possible way to connect gifted education and culturally responsive teaching. CRT has been linked with retaining students of color which is important in gifted education since it has lacked diversity. As the diversity grows it is my belief that CRT becomes increasingly important but it is also important to continue to focus on gifted education at the same time. This caused me stress discovering this and I got lucky that I happened to read these two books.

When I was looking for gifted resources, I noticed not many focused on race or culture. Since CRT is becoming more widely used in school, I believe it is important to

have a starting point for teachers to use in order to teach towards G&T education while also being culturally responsive. A classroom should be a place of learning for all so it is important that all students feel welcome and appreciated in the classroom. This capstone project aims to have a starting point for teachers to have a resource to teach all students in their classroom.

Summary

In this chapter, I spoke about my life as a gifted learner and how it was believed that I had a lot of help at home based on my economic status and what my parents did for work. However, that was not the case and it caused me to score worse on certain assignments. This caused me to struggle in school. I also described my story of being strayed away from education only to be brought back to it after working in a school. I spoke of how my life shaped me as a teacher since I can be an advocate for those children who might be perceived a certain way based on economic status. It is what has made me realize just how important it is to focus on individual students when it comes to their learning to best understand what might drive them to get to their full potential. I also explain that there is a need for a framework that focuses on culturally responsive teaching and gifted students for teachers who are just starting their path in gifted education. I believe Depth and Complexity can be a stepping stone to best combine both G&T and CRT together. When it comes to gifted and talented individuals it is important to remember that it does not mean that the students are smart in every subject but have specific strengths that make it so they need differentiated instruction. I also addressed the culturally responsive teaching is for all students and focuses on the individual and their personal experiences. For this capstone I will be addressing the question: *In what ways*

are the components of both the Depth and Complexity frameworks and culturally relevant pedagogies beneficial for academic growth for gifted individuals, especially those of underrepresented populations (students of color, English language learners, and economically disadvantaged)?

In chapter two, I explain the literature behind gifted education and culturally relevant teaching. This includes going into more depth about G&T students and how they think. An explanation of D&C and its importance for G&T students with a focus on the icon, multiple perspectives. It goes into more detail about CRT and the need for it in gifted education. Chapter three explains the capstone project, then chapter 4 is a reflection of the project.

CHAPTER TWO

Literature Review

Gifted educators and scholars have made great strides to increase the enrollment of underrepresented populations (students of color, English language learners, and economically disadvantaged) and it is slowly improving (Lockhart & Mun, 2020). This literature review will show there has been an increase in the enrollment of gifted and talented students from these underrepresented populations, however, there has not been a focus on how to best educate these students. There is a need for a project that answers the question: *In what ways are the components of both the Depth and Complexity frameworks and culturally relevant pedagogies beneficial for academic growth for gifted individuals, especially those of underrepresented populations (students of color, English language learners, and economically disadvantaged)?* This is important because teachers new to gifted education need strategies to teach gifted and talented students from underrepresented populations in order to retain them and gain diversity in gifted education.

This chapter reviews the literature on gifted and talented students and programs, depth and complexity, culturally relevant pedagogies, and equity. First, it gives background on what makes a student identified as gifted and speak about the strides made to welcome students from underrepresented populations which is important for this capstone project since that is the population the project is focused on. Next, the literature review gives an overview of the gifted and talented framework Depth and Complexity with some specific interest in the multiple perspectives icon which is one of the frameworks that will be used for this capstone project. Third, it will focus on the

literature related to culturally relevant pedagogies and how it benefits students who are gifted and talented which is the other part the capstone project is focusing on. Finally, it will link the literature together and how it relates to equity and the need for equity throughout gifted and talented education which is the goal of D&C and CRT so important to show for this capstone project.. This will show the need for a project that shows the benefit of using depth and complexity with how it relates culturally relevant teaching for students from underrepresented groups so that new teachers to G&T can help these students thrive.

Gifted and Talented

This section will provide a brief explanation of who gifted and talented are, how they are identified, how they think, and the strides being made for underrepresented populations. The National Association for Gifted Children (NAGC) defines giftedness as “students with gifts and talents (who) perform at higher levels compared to others of the same age, experience, and environment in one or more domains” (NAGC, 2023). The Minnesota Department of Education (MDE) lists these domains as higher in: general intellect, specific academic subjects, creativity, leadership, and visual/performing arts (MDE, 2020). While it is important to know what makes a student gifted, it is also important to understand the social and emotional signs of giftedness to better understand them as individuals. Dakhallallah and Ahmad (2022, p. 11) created a list of the social and emotional characteristics of gifted individual and they are as follows: respect and appreciation of the other’s ideas, the ability to solve social problems, having a great interest in ideal values (ex. justice and truth), have high levels of moral maturity, have an extreme sensitivity to what is going on around them, have more emotional stability, they

have strong motivation, the ability to think critically and manage discussions, they have strong autonomy, they show leadership abilities and are able to influence others, they are able to form strong relationships with those in different generations, and they have high perception of social relations. The reason I bring attention to this is because Dahhlallah and Ahmad (2022) compiled this list where it fits for almost all students who are identified as gifted regardless of background which would include those from underrepresented populations. However, it is important to remember not everyone fits in a box, and it is good to note not every gifted student will have all of these characteristics.

We live in a world where stereotypes can often cloud our judgment of others. Weyns, Preckel, and Verschueren (2021) explored preservice teachers' prosecution of gifted and talented students. They noted that gifted and talented students are often stereotyped negatively by teachers before they have had the chance to work with gifted students. Once preservice teachers worked with gifted and talented students, it was concluded that those stereotypes were false and the opposite was often true (Weyns, Preckel & Verschueren, 2021). Carol Carman (2011) explored stereotypes and the effects it can have on gifted students. She concluded that educational institutions and universities should include more training for incoming teachers on gifted education to reduce stereotyping when it comes to gifted learners. Her belief is that it would help alleviate the problem of underrepresentation in gifted programs (Carman, 2011, p. 806).

Strides in Gifted and Talented Education for Underrepresented Populations

Research has focused on the diversity gap in gifted education. Ecker-Lyster and Niileksela (2017) showed using data from the Office for Civil Rights that 6.2% of public school children are identified into a gifted program but placement rates varied based on

race: 9.98% Asian/Pacific Islander, 7.75% non-Hispanic white, 4.86% American Indian/Alaskan, 3.57% Hispanic, and 3.04% Black. More recently, Lockhart and Mun (2020) showed data from the United States Census Bureau from 2018 that the enrollment of K-12 education included 25% Hispanic, 15% Black, and 9% Asian but showed gifted and talented programs still did not reflect that diversity. This section is going to explore the literature connected to the strides being made to enroll and retain gifted students from underrepresented populations. Carman (2011, p. 804) stated that 85% of preservice teachers think of a caucasian person when they picture a gifted student which then can cause biased recommendations when it comes to recommending students to be evaluated for gifted education.

There have been many arguments about why this disparity exists. Card and Giuliano (2016) argued that the disparity of underrepresented groups exists due to the standard process of identification of giftedness which is based on parent and teacher referrals. They advocate for the use of a universal screen process which should be implemented by second grade. The results of their study showed a 174% increase for students of disadvantaged backgrounds being identified as gifted. When it came to race they concluded that there was a 118% increase for Hispanic students being identified as gifted and an increase of 74% for black students (Card & Giuliano, 2016, p.13683). The conclusion Card and Giuliano (2016) reached was there should be “less weight on subjective assessments” (Card & Giuliano, 2016, p. 13683) and more intercultural training for teachers would help attain the goal of decreasing this disparity. Ecker-Lyster and Niileksela (2017) also looked into the teacher nomination and referral programs and

concluded that it is not good for underrepresented students because they do not take cultural and background experiences into account.

There are, however, so many more models that could be beneficial to the recruitment of underrepresented populations. Ecker-Lyster and Niileksela (2017) looked at more models for labeling gifted and talented students that would best help to recruit those from underrepresented populations. They looked at multiple studies that focused on the use of non verbal tests and found mixed results. Some argued that since non verbal tests focus more on fluid reasoning, they are seen as more culturally sensitive. However, other studies showed the opposite and that non verbal tests may not be beneficial for minorities. Ecker-Lyster and Niileksela (2017) stated that rating scales and rubrics are showing positive results when it comes to the identification of underrepresented gifted students.

As stated above Lockhart and Mun (2020) said that diversity in US schools is growing but diversity in gifted programs is not reflecting that. Their study focused on the relationship between students' families, the community, and the school and how it can improve the retention and enrollment of underrepresented students in gifted programs. They concluded that providing community connections and having a positive relationship between schools and families can be beneficial for the identification and retention of underrepresented students. Ecker-Lyster and Niileksela (2017) agreed with Lockhart and Mun and went further to examine retaining students of underrepresented groups once they are in a gifted program.

Feelings can also have a huge impact when it comes to the retention of gifted and talented students from underrepresented populations. Ecker-Lyster and Niileksela (2017)

focused on two strategies when it came to retaining students from underrepresented groups. They found that to retain minority students in gifted and talented programs and make them feel academically successful, they must have a belief in themselves, personal characteristics, supportive adults, family support and interactions with other high achieving peers. Ecker-Lyster and Niileksela (2017) gave two different solutions to achieve this and that is through multicultural education and mentoring. When it comes to multicultural education it was found that learning is enhanced when students are able to incorporate their culture and everyday experiences so more education on culturally relevant teaching has to be given to teachers in order to achieve this (Ecker-Lyster & Niileksela, 2017). They also showed research showing that students from underrepresented groups can find more academic success in gifted programs through mentoring. Both of these have the goal of retaining minority students already enrolled in a gifted program.

After looking at the literature related to gifted and talented students, it is clear that there is a need for gifted teaching that can help to retain students from underrepresented populations. Culturally relevant pedagogies are being advocated for to better help the academic success of minority students and have been seen to help retain those students. The gifted framework, depth and complexity relates to culturally relevant teaching and therefore can aid to retain students from underrepresented populations in gifted educational programs.

Depth and Complexity

In this section, the literature about the framework depth and complexity will be discussed. This framework can easily be implemented into any teaching style and takes

minimal time since not all the icons are necessary. It is a very pick-what-best-suits-you sort of framework which can make it easier for teachers that are new to education. This capstone project is meant for teachers new to gifted education to have a starting point to be more culturally responsive for gifted students where depth and complexity can aid with that goal. This section will talk about the importance of differentiated instruction for gifted students, define the depth and complexity framework, and then do a focused exploration into the multiple perspectives icon of depth and complexity.

The importance of differentiation for gifted and talented students

Differentiation is always on the minds of teachers in general and it becomes even more important when it comes to gifted students. Looking at the literature, this is evident. Manning, Stanford, and Reeves (2010) explained that differentiation strategies for gifted students include: content acceleration, curriculum compacting, variety, reorganization, flexible pacing, and more advanced or complex abstractions/materials. Since there are many different ways to differentiate, a general education classroom teacher may struggle to differentiate when there are many other factors in a classroom. This can cause many teachers to not focus on the gifted students which can be detrimental. Manning, Stanford and Reeves explain that a gifted student who has felt underachieved may become unmotivated, never work through something if it takes too long and give up, or feel that their giftedness is a lie. All of this can result in a loss of potential for the student and academic failure (Manning, Stanford & Reeves, 2010).

Academic failure is something that no teacher or person wants for another so it is important to examine literature that explains the importance of challenge. Kaplan (2023) explained that a critical feature of differentiation for gifted students lies with the

importance “to develop an awareness of what is important today and what is possible to know in the future” (Kaplan, 2023, p. 225). This is important because students have to understand that learning does not end with a lesson but rather a start that can be expanded on later (Kaplan, 2023). Kaplan (2022) argued that gifted students must be able to challenge themselves and be able to differentiate for themselves. She stated that teacher directed differentiation can make a student passive rather than using their set of skills and experience to be an active learner so it is important for a teacher to guide gifted students to differentiate for themselves.

However, arguments for the opposite also exist, meaning it is also important to understand the student you are working with. Manning, Stanford, and Reeves (2010) argued that it is important for the teacher to help differentiate for the students. They want to break the stereotype that gifted students are able to differentiate completely by themselves when they first walk into the classroom. There is an importance of providing for different learning styles when it comes to gifted students so it is necessary to get to know the students in more depth and set activities at different levels of complexity (Manning, Stanford, & Reeves, 2010).

What is Depth and Complexity?

One way to differentiate in a classroom for gifted students is using the Depth and Complexity questioning framework which was created by Gould and Kaplan. Byrd and Van Gemert (2019) explained that “the depth and complexity framework is a set of tools that allow teachers to differentiate for any grade level or content area in a way that is straightforward to implement. It is composed of 11 elements represented by a set of icons or pictures, along with several other components that teachers use to raise the level of

thinking in the classroom...it is primarily a differentiation tool” (pp. 3-4). The goal is to use the different elements (details, big idea, language of the discipline, rules, patterns, unanswered questions, trends, ethics, change over time, across disciplines, and multiple perspectives) to help narrow the focus of an assignment for students. Change over time, multiple perspectives, and across disciplines are seen as the depth elements because it allows for students to discover something they don’t already know about the topic they are working on (Byrd & Van Gemert, 2019). The other elements are a part of complexity which focuses on enhancing the meaning behind an idea by looking at relationships with other ideas, connecting the work to other concepts, and creating a more interdisciplinary approach (Byrd & Van Gemert, 2019).

One of the benefits of the Depth and Complexity frameworks is that it works for all grade levels and content areas and if there is ever a change in curriculum or standards change, it is easy to carry over (Byrd & Van Gemert, 2019). There is also the fact that there are visual clues (icons) of what element the students should be focusing on to help focus a gifted student’s brain. Byrd and Van Gemert (2019) explained the importance of introducing the icons slowly since, it isn’t just introducing pictures but the framework to help students learn. Another benefit is that it can help connect across the disciplines which can be very beneficial for elementary educators. When it comes to elementary educators it is not the requirement to use all eleven icons for young learners but the ones that make sense for your students (Byrd & Van Gemert, 2010). The icon that Byrd and Van Gemert (2019) argued is the most lacking in the world today is multiple perspectives which adds a layer of complexity to a topic and allows a broader view of a topic.

Multiple Perspectives

The icons for depth and complexity offer many options of differentiation but the icon of multiple perspectives is how it truly relates to culturally relevant teaching. Byrd and Van Gemert (2019) described multiple perspectives as “the element that asks students to consider how another person or thing would think about a topic” (p. 156). One’s perspective can influence our interpretation of events, actions, and facts which is where thinking across multiple perspectives can be beneficial. Outside influences can also factor into our perspectives including our roles and responsibilities. Byrd and Van Gemert (2019) argued that without multiple perspectives the main idea of a topic can become weaker which is why multiple perspectives are so important.

While most think of multiple perspectives as looking at the different points of view of other people, Byrd and Van Gemert (2019) argued that for gifted individuals, it is important to include the perspective of inanimate objects. An example given is thinking of the playground equipment and how they might feel at recess. While this is an important element of depth and complexity, there is also an importance on combining different elements together. For multiple perspectives, ethics is an easy one to add on in order to look at the pros and cons of multiple perspectives. This allows students to really look in depth and compare and contrast opposite views of a topic (Byrd & Van Gemert, 2010).

Culturally Relevant Pedagogies

The main point of culturally relevant pedagogies is to consider the culture of a student in every lesson.

Culture, it turns out, is the way that every brain makes sense of the world. That is

why everyone, regardless of race or ethnicity, has a culture. Think of culture as software for the brain's hardware. The brain uses cultural information to turn everyday happenings into meaningful events. If we want to help dependent learners do higher order thinking and problem solving, then we have to access their brain's cognitive structures to deliver culturally responsive instruction."

(Hammond, 2015)

Hammond pointed out that culture revolves around everyday experiences which are important to state. In a classroom setting, the culture changes every year due to the experiences that students have gone through. This is the base of culturally relevant teaching, meeting students where they are and designing the curriculum work around that.

In the United States, there are strong disparities when it comes to access and race which can lead students of color to lose out on access, achievement and their overall well being in public schools (Alim & Paris, 2017). Culturally relevant/sustaining pedagogies work to foster and sustain linguist, literate, and cultural pluralism as a part of the school say to create positive school outcomes for students socially. There is a sense that most look at themselves "through the eyes of others" (Alim & Paris, 2017, p. 2) so it is important to use resources and pedagogies that are not attached to closing the achievement gap but rather that focus on how to best teach students from underrepresented populations. Alim and Paris (2017) explained that it is important to not have whiteness at the center and look towards the individual when it comes to literacy. The goal should not be to try to get students of color speaking and writing like middle class white folks. An important note that Alim and Paris (2017) brought up is "that CPS

can join in such justice work at a time when we must be ever more explicit about critiquing the oppressive systems that limit...life experiences and center our cultural communities in teaching and learning” (p. 13).

The United States has always welcomed those from other countries. Lee and Walsh (2017) stated that schools have failed to have migrant students be equal members of society, not just in school but in the outside world as well. They stated that “English language learners score lower on standardized tests, graduate at lower rates, and are pushed out at higher rates than their English speaking peers (Lee & Walsh, 2017, p. 191). Lee and Walsh (2017) argued that it is important to have culturally sustaining pedagogies that will help students excel and gain more knowledge and experience so they do not land in low-level services jobs. Culturally relevant pedagogy that builds on the experiences of students give those students a stronger sense of belonging, create confidence in classwork, build achievement for underrepresented groups, and foster cultural pluralism for English learners (Lee & Walsh, 2017).

Culturally Relevant Pedagogy and Gifted Students

The discussion has already been made that the United States is becoming increasingly diverse. Around 2010, Arne Duncan, the United States Secretary of Education at the time declared “education to be the civil rights issue of our generation” (as cited in Green, 2010, p.31). African American children make up 16% of public school students in the United state, however, black students only make up 8.4% of those enrolled in gifted programs (Frye & Vogt, 2010).

There are other factors that can cause this diversity gap. A factor that hurts low-income students is gentrification where those students get displaced (Garces-Bacsal,

Alhosani, Elhoweris & Tupas, 2023). This can make it increasingly difficult for students identified as gifted in that category to receive proper gifted programming. Jung, Barnett, Gross & McCormick (2011) found that it is extremely important for gifted students to feel accepted by their peers in order to have academic success. Many times students from underrepresented populations get what is known as a forced choice dilemma where the student feels they must choose between having friends and having high academic achievement. (Jung, Barnett, Gross & McCormick, 2011). There are many times when a student will leave gifted education when there is not a population of people that look like them. (Frye & Vogt, 2010). There have been studies that have found black youth who are identified as gifted have more emotional and psychological problems than those not identified, with fears of being called out for “acting white” (Frye & Vogt, 2010). Green (2010) argued that the underrepresentation of students of color in gifted education is because of past gifted legislation that has created separate but unequal educational circumstances. As stated above, another reason for underrepresentation is because focus is on the achievement gap so students of color who are gifted may be neglected and underserved (Green, 2010). This is why it is important to have tools to best educate students who are identified as gifted from underrepresented populations.

When it comes to education, there is more of a push to talk about feelings and how to handle them which is why it is important to explore this literature. Garces-Bacsal, Alhosani, Elhoweris and Tupas (2023) argued that the use of social emotional learning (SEL) and culturally relevant teaching are needed in order to confront uncomfortable feelings when it comes to issues such as inequality, injustice, poverty, and exclusion. These topics are important to talk about because the use of books that cover SEL topics

(which they supply a list of) helps those students “feel less invisible, their experiences are validated, and allow young gifted readers to serve as witnesses to deeply moving narratives that would inspire as a positive agents of change in the world” (Garces-Bacsal, Alhosani, Elhoweris & Tupas, 2023, p. 32). This is important to note because Garces-Bacsal, Alhosani, Elhoweris and Tupas (2023) discovered research that showed some white teachers avoid multicultural literature because they feel “targeted and criticized” by what white ancestors did in the past.

There is a need for CRT in all classrooms. Green (2010) argued that culturally responsive teaching is necessary to educate young, gifted and black students in K-12 education and beyond. Leadership is an important quality in gifted education so there should be more emphasis on leadership training in gifted programs as it is seen to improve the retention of black youth in gifted programs (Green, 2010). Educational programs that instruct pre-services teachers must make sure those teachers leave with cultural competence - “the ability to use the cultural characteristics, experiences, and perspectives of students who are ethnically diverse as conduits for teaching them more effectively” (Fry & Vogt, 2010, p. 12). This can be hard since teachers cannot learn culturally responsive pedagogy in the same way they do information or teaching strategies. Pre-service teachers must be trained to understand that there is a disparity so they are better able to identify black students as gifted without any bias so those students can receive the support and mentorship they need (Frye & Vogt, 2010).

It is not only important for students of color but white students also need to be educated in diverse populations. Ford and Whiting (2008) took a different approach and looked to teaching students in gifted programs “to be more comfortable with, aware of,

and respectful of cultural diversity” (p. 109) so that diverse students will feel welcome when they enter a gifted program. Ford and Whiting (2008) gave four different levels on how to grow culturally: contribution level (focus on the contributions of diverse groups) then the additive level (multicultural concepts, themes, issues and perspectives are added into the curriculum but controversial people and themes are often avoided), third the transformation level (creating a space where all content areas have multicultural concepts and taught about all viewpoints), and finally the social action level (students are problem finders and solvers and able to put there knowledge to enact social justice change).

Teachers' Ability to Teach CRT

When it comes to being a new teacher in gifted and talented education, it is hard to understand why students can be identified as gifted. All people are different but there are similarities that gifted students may share. Ford and Trotman (2001, p. 235) developed a list of the characteristics that make an exemplary teacher for Black students:

1. Develops interpersonal relationships with students.
2. Feels partly responsible for students’ successes and failures.
3. Holds the belief that it is the teacher’s responsibility to make sure students learn and want to learn.
4. Is familiar with and uses multicultural theories, concepts, and materials.
5. Serves as an advocate and makes the necessary changes to help diverse students feel a sense of membership in the classroom/school.
6. Holds beliefs that affirm the dignity and worth of culturally, ethnically, and linguistically diverse students.
7. Wants to see minority students succeed in school and other social settings.

8. Believes that students from different cultures have strengths to be acknowledged and addressed in school.
9. Believes that the whole child must be addressed in the school setting.
10. Expresses high expectations regardless of the students' racial or cultural background.
11. Adopts a tough-love policy- sets standards, expects students to meet them, helps students meet standards. (Ford and Trotman 2001, p. 235)

This list is important for all teachers to have this list laid out to give the best education for students of color and have a deeper understanding. Ford and Trotman (2001, p. 236) also developed a list of the characteristics that make an effective teacher of gifted diverse students (see Figure 1).

Figure 1. Effective Traits for Teachers of Gifted Learners

Effective Traits for Teachers of Gifted Learners		
Gifted Education Learners	Multicultural Education Teachers	Gifted Multicultural Education Teachers
Know the needs of gifted students.	Know the needs of diverse students.	Know the need of diverse and gifted students.
High skills in individualized education.	Skills that focus on the cultural differences in learning styles, cognitive ability, and behavior.	Uses multicultural resources, materials, and questioning techniques to increase higher level thinking.
Have the ability to recognize a gifted learner.	Understanding the strength and weakness of diverse learners.	Are able to use the strengths of diverse learners who are gifted.
Create a safe space where gifted learners feel challenged and are able to explore their uniqueness.	Create a safe space where diverse learners feel challenged and are able to explore their uniqueness.	Create a safe space where gifted diverse learners feel challenged and are able to explore their uniqueness.

Ford and Trotman (2001, p. 236)

It is important to see these characteristics so that teachers have something to fall back on to understand if they are to do what they can to best help students from underrepresented populations. Green (2010) stated “we must move towards a curriculum that is culturally responsive because all of our students serve to be educated equitably.” (p. 32). There is a need to have a curriculum or guide in gifted education that can best retain students of color, after reviewing culturally relevant pedagogy. The literature related to depth and complexity has the goal to look at each individual student which relates to CRT. The depth and complexity framework can be beneficial towards the goal of recruiting and retaining students from underrepresented populations in gifted education.

Conclusion

The lack of diversity in gifted education has long been a topic of discussion. Much is being done to help and correctly identify students of color, of low socioeconomic status, and english language learners as gifted. However, more needs to be done in order to retain these underrepresented students in the programs. There is a call for more culturally relevant teaching practices to best encourage this retention but there has been nothing specific created that relates culturally relevant pedagogies with giftedness. The depth and complexity framework for gifted students works on looking at students as individuals and makes students look at contents from multiple perspectives. Much of the research focused on a small population of students so it is hard to know if it all relates to students overall and if it does relate to students from everywhere around the world. There are parallels between culturally relevant pedagogy and depth and complexity. There is a need for a capstone project that looks to explore these parallels so it can be a starting

point for culturally relevant teaching that is geared towards gifted students. Chapter three will discuss the details of the lesson plan project and chapter four will reflect on the project's creation.

CHAPTER THREE

Project Description

This project seeks to answer the question: *In what ways are the components of both the Depth and Complexity frameworks and culturally relevant pedagogies beneficial for academic growth for gifted individuals, especially those of underrepresented populations (students of color, English language learners, and economically disadvantaged)?* My project involves using the Saint Paul Public School district provided curriculum and implementing the use of depth and complexity for gifted learners in a 2nd grade classroom. Lesson plans will use the ready for rigor framework (ignite, chunk, chew and review) for the base in order to show the culturally relevant teaching. The focus will be on seven of the eleven icons: big idea, details, multiple perspectives, patterns, language of the discipline, unanswered questions, and rules questioning methods. Approximately 20 lesson plans were created that span over multiple subject areas and cover multiple different 2nd grade Minnesota state standards. The lessons cover financial literacy, the mathematical concept of money, and literacy. All lesson plans will hold components of culturally relevant teaching as well.

Overview of Project

The project includes nineteen lesson plans with the main objective of understanding the work that goes into creating a good truck business and being able to share their own opinions. The template used for this project used the culturally relevant framework ready for rigor using the technique of ignite, chunk, chew, and review. Throughout a number of lessons there will be different question stems using depth and complexity with their icons present.

The first five lesson plans focus on creating the exterior of the food truck, creating a name and logo. Lessons six through ten involve creating a menu for the food truck with a math extension lesson to understand how to discover the price to make a single item on the students' menu. Lesson eleven and twelve have students completing the look of their food truck and creating an advertisement for the truck. Lesson thirteen has students having a gallery walk to take notes on food trucks that interest them. Lesson fourteen through eighteen is on opinion writing and finishes with students completing a review of another peer's food truck. The final lesson (lesson 19) has a discussion and paragraph writing about what they learned from others while creating their food trucks.

The goal of the project is to understand how easily depth and complexity questioning fits into the culturally relevant teaching template. The student's goal is to create their own food truck business in the lesson plans with the end product of a three dimensional paper replica of their food truck along with a written menu with six items on it to sell and a review of a peer's food truck.

For the lessons a slideshow with all the necessary videos, and items needed to use for the project is attached in the materials section. The links for worksheets and handouts are in the slide deck. The slide show is able to be used along with the lesson plans. The slide show has basic formatting so that it can be easily manipulated to the teaching style of others.

Intended Audience and Participants

I am creating this project for teachers that teach gifted and talented students in general. More specifically, I want it to be for teachers that are new to teaching in Minnesota and be ready for a classroom of diverse learners. Gifted and talented

programming/teaching is an area that is not touched on much in educational programs. When I went looking for a job, I landed in a school that was gifted and talented. Most of what I knew about gifted and talented programs came from my own research and experience. Once in the job, I found a need for education for the gifted and talented. In Minnesota, most teaching programs have specific instruction focused on culturally responsive teaching. Again there is nothing that focuses on how to use it in a setting where there are students gifted and talented. As stated in chapter two there is a need for culturally responsive teaching in school for gifted and talented learners. This can improve the disparity in gifted and talented programs and well as retention for underrepresented populations in those programs. My goal with this project is to have a starting point for teachers new to gifted education to use in order to be culturally responsive while also focusing on the gifted and talented side of their brains.

Those participating in the project will be the students in my 2023-2024 classroom. There are twenty students all of whom have been identified as gifted and talented by doing the CogAT exam or by portfolio in the SPPS school district. In the classroom there are three students of color, one student that is an English Language Learner and five students that would classify as economically disadvantaged. While the surveys will be important for all, a focus will be given on these eight students to be sure they feel the same engagement using the depth and complexity framework as those that are classified outside of the underrepresented populations stated above..

Challenges I Forsee

I am focusing on 2nd grade Minnesota standards which might not be able to be carried forward to other districts outside of Minnesota. However, my intended audience is

focused on Minnesota teachers working with gifted and talented students. In order to implement the lesson plans, teachers would also have to familiarize themselves with the depth and complexity framework so that they can prepare if they are changing the lesson plan to fit their students. When sharing I will have to remember to give the teachers the name of the books I am using and other resources I have found beneficial. I am creating this project without implementation which means I will not know the kinks or holes right away. I plan to reflect back and change the lesson plans if need be once implementation takes place. While creating these lesson plans, they were partially implemented during the 2023 - 2024 in my own 2nd grade classroom which then led to changes being made. It should also be of note that the exact way the lesson plans are laid out work for the students I worked with, it may not work with the exact timing for other classrooms.

Project Timeline

For this capstone project, it is important to reference the time that it took for this project to be completed. The project took approximately 2 months to complete while doing some of the lesson plans partially in the classroom. The plan started by brainstorming what the end result of the lesson plan should be. The final decision was to have a created food truck with a digital menu that students could interact with in different ways in the middle. At first, the project was going to follow the Saint Paul Public Schools social studies curriculum, however was changed before the planning period was done. The lesson plans followed looking at the 2011 Minnesota 2nd grade standards and benchmarks needed for social studies for the final product.

Once there was a basic guide of how the lessons plans would progress over approximately 3 weeks quick lesson plans using a created template from the ready for

rigor framework. Once those lesson plans were finished, they were refined adding key points and materials needed for each lesson. When the lesson plans were finalized, over another week and a half, a basic slide deck was created that would go along with the lesson plans. Finally, a number of basic worksheets were compiled over four days to finish off the lessons.

Frameworks and Theories

The focus on this project is on depth and complexity and its relation to culturally responsive teaching. There is such a huge importance put on being culturally relevant in schools these days and I agree that it is important. When starting off as a new teacher teaching gifted and talented students, I discovered it hard to focus on both being culturally responsive while also differentiating and understanding my gifted students. When I was given the option to be educated and start using depth and complexity, I fully believe I found a way to incorporate both. This is only a starting point which I hope to share with other teachers that seek to help gifted and talented students.

Depth and Complexity

In order to implement Depth and Complexity into my classroom, I will be heavily using the book *Gifted guild's guide to depth and complexity, finding your way through the framework* by Ian Byrd and Lisa Van Gemert. There is also a website linked with this book where I was able to purchase materials that will have the icons posted around my classroom. It also comes with a guide with how to best implement each icon. For second grade, I found it best to focus on seven out of the eleven icons: big idea, details, multiple perspectives, language of the discipline, rules, patterns, and unanswered questions, with some use of across the discipline question stems. There is an understanding that students

have already been introduced to these icons already and they are not being introduced in the lesson plans themselves. Students were first introduced to big ideas and details at the beginning of the 2023 school year in order to write a personal narrative story. Students gave specific details into something that happened to them in their life. Multiple perspectives were introduced using recess as an example. Students first thought about what their day at recess looked like, then they had to think of it from the perspective of their friend, lastly they had to think of it from the perspective of the playground equipment. Rules and Patterns were introduced during teaching about the importance of rituals and routines and how to make a classroom a community. Students are asked in my classroom to rephrase their statements in order to use more language of the discipline.

Culturally Responsive Teaching

In order to have a strict guide in order to compare depth and complexity to culturally relevant teaching, I decided to use a single book for the comparison while using my knowledge from other sources. The book I will be using is *Culturally responsive teaching & the brain, promoting authentic engagement and rigor among culturally and linguistically diverse students* by Zaretta Hammond (2015). My reasoning behind selecting this book was because it focuses on how students think and discusses high level thinking. This is also the book that inspired this capstone project after reading about depth and complexity.

Hammond (2015) stated “Culture, it turns out, is the way that every brain makes sense of the world. That is why everyone, regardless of race or ethnicity, has a culture. Think of culture as software for the brain’s hardware. The brain uses cultural information to turn everyday happenings into meaningful events. If we want to help dependent

learners do higher order thinking and problem solving, then we have to access their brain's cognitive structures to deliver culturally responsive instruction.” When I read this quote for the first time, I finally understood everything culturally responsive education was trying to do. Reading some information made me worried it was another form to close the gap between white students and students of color. Instead I finally understood it as a resource for all students regardless of their background to grow and thrive to their full potential.

Assessment

There is an assessment that goes along with every lesson to see if there is understanding of the objective of that day. There are also many times when there is classroom monitoring to check for understanding. My project aims to show that using Depth and Complexity and Culturally Relevant teaching can create academic growth for students who come from underrepresented populations in gifted education. The assessment will show if there is significant growth for those students.

Summary

Chapter Three explains how I plan to answer the question: *In what ways are the components of both the Depth and Complexity frameworks and culturally relevant pedagogies beneficial for academic growth for gifted individuals, especially those of underrepresented populations (students of color, English language learners, and economically disadvantaged)?* The lesson plans I create over the course of a number of weeks will show the similarities between culturally relevant teaching strategies and depth and complexity.. The goal of having a starting point for new teachers to best help and guide students who are gifted and talented to reaching their full potential while also

sticking to being understanding to students' backgrounds. Chapter four reflects on the capstone project process.

CHAPTER FOUR

Conclusion

This capstone project consisted of nineteen lesson plans that used the combination of Culturally Relevant Teaching and Depth and Complexity. The goal for the project was to have an example for teachers new to gifted education to implement depth and complexity while also using culturally relevant teaching. This project aimed to answer the question: *In what ways are the components of both the Depth and Complexity frameworks and culturally relevant pedagogies beneficial for academic growth for gifted individuals, especially those of underrepresented populations (students of color, English language learners, and economically disadvantaged)?*

Students of color, English language learners, and economically disadvantaged have been historically underrepresented in gifted education programs (McDaniel, 2002). Discovering a gifted framework that can improve academic achievement for those in underrepresented populations might improve that disparity. However, there is not much time spent in teacher educational programs for gifted education. This makes it difficult for educators to then know what resources can help students in their classroom. That is where the depth and complexity framework and culturally relevant teaching can help. There are many resources that help to introduce the icons of depth and complexity, however it is hard to find a way to completely implement it, especially in an elementary school setting. This project hopes to show how to put Depth and Complexity (Byrd & Van Gemert, 2019) into lesson plans for teachers that are new to gifted education in an elementary setting.

Chapter 4 is a reflection on what I as an educator learned during this capstone project. I revisit the literature review, calling attention to the resources that most helped guide my project. Then, I look at the implications and limitations of the capstone project. Finally, I discuss future projects and the benefits the project has on the teaching profession.

Reflection

I am an educator working in a school where every student in my classroom is identified as gifted and talented. Knowing so many of these incredible individuals, they were on my mind as I completed this project. They are the people who pushed me and gave me constant reminders of why I am creating the project. At the beginning of this process, I felt I had an okay understanding of depth and complexity. As I continued to research and create the project, I realized that there is so much more to it. It can be a reference in order to engage a part of a students brain, it can also be a guide for a teacher to create questions stems, and so much more. I feel I have grown as a learner and educator and this process has helped me to also look at myself and check and reflect on my teaching more.

As A Learner...

I have created lesson plans for units multiple times, however I have never done them as thoroughly and organized as I did for this project. It showed me the true value of being organized from start to finish. I have always had an end goal and a basic steps that I wanted to take when it comes to a lesson but this showed me a strong value to have it completely planned out. I had the benefit of being able to use these lesson plans to some

extent in my own classroom. They were not done in the exact way since the timing did not work out but I now have a plan for future years.

Having a unit plan so organized is extremely beneficial for a teacher who is new to the profession. In the district I work in, there is huge importance put on being culturally relevant and creating these lessons strengthened that skill. I am also a huge supporter of culturally responsive teaching and feel through this project, I have grown both my knowledge and implementation in the classroom.

The biggest takeaway I have as a learner is educating myself on gifted individuals. I learned that I myself had some bias and an unclear picture of what can identify a student as gifted. I learned that there is an abundance of research that connects both culturally relevant teaching and depth and complexity. I also learned so much about the ready for rigor framework and the four phases needed to help a student learn more in depth. I found myself then completely understanding that depth and complexity is ultimately a thinking tool.

As a Researcher...

This project has caused a complete transformation in me as a researcher. I was overwhelmed with the amount of information out there that pertained to my topics of research. Usually when I am overwhelmed in research, I tend to back off. With there being a deadline, I suddenly discovered different ways to narrow down searches and find more relevant information. I also found the importance of picking topics that you are passionate about. It was no longer overwhelming or stressful to read about depth and complexity, gifted education, or culturally relevant teaching, instead, it was a joy to learn and try to understand the abundance of information.

As a Writer...

The largest impact this capstone project has had on me has been as a writer. I have always been terrified of academic writing, feeling as though I was never meant to write anything academic. Now, I want to research more and write about things I am passionate about. One important lesson I learned is that a small change can completely guide research and academic writing. I have always been able to think about big ideas that I want to write about, however, when I was then asked to put it in a research question form, I wouldn't know where to start. I now know as a writer, the best thing to do is to talk through your ideas with someone else and the question you want to answer is already there. At the beginning of creating this project, I felt there was no direction. I had my research question: *In what ways are the components of both the Depth and Complexity frameworks and culturally relevant pedagogies beneficial for gifted individuals, especially those of underrepresented populations (students of color, English language learners, and economically disadvantaged)?* I found creating the project and writing Chapter 3 impossible. Then I made one change to the question: *In what ways are the components of both the Depth and Complexity frameworks and culturally relevant pedagogies beneficial **for academic growth** for gifted individuals, especially those of underrepresented populations (students of color, English language learners, and economically disadvantaged)?* My writing was suddenly transformed and I was able to better write my ideas and formulate my lesson plans. I now feel that I am capable of creating strong academic work that I am happy and proud to share with others.

Revisiting the Literature Review

The growth that I made as a learner, researcher and writer would not have been possible if it were not for the amazing literature on gifted and talented education and culturally relevant teaching. Much of what drove my capstone project and paper came from looking at literature on the topic. The literature review drove my passion and provided great insight to best provide ideas for my project. As I have stated two sources of literature guided me in creating the lesson plans: *Gifted Guild's Guide to Depth and Complexity, Finding Your Way through the Framework* by Byrd and Gemert (2019) and *Culturally Responsive Teaching & the Brain, Promoting Authentic Engagement and Rigor Among Culturally and Linguistically Diverse Students* by Zaretta Hammond (2015).

These are the books that led me on the path to creating this project when I noticed so many parallels between the verbiage and the importance of understanding students. However, while conducting the literature review, I found reasons why this project needed to be complete. Frye and Vogt (2010) found that 16% of children in public schools are black but only 8.4% of children in gifted programs are black. While reading these statistics, I was not surprised. In education, there seems to always be disparities everywhere. It is my belief that gifted education should be equitable and if 16% of students in public schools are Black then 16% of students in gifted programs should be Black.

There has been much research done which looks at why this is the case. One of the reasons for this is because gentrification can displace students making it difficult for them to receive gifted services (Garces-Bacsal, Alhosani, Elhoweris & Tupas, 2023).

Jung, Barnett, Gross and McCormick (2011) also found that students choose to not join gifted programs because they feel they will have to choose between academic success and friendships. Retention is a huge concern in gifted education when students from underrepresented populations do not interact and see other students like them and for students of color there is a belief that joining gifted programs could get them called out for “acting white” (Frye & Vogt, 2010). All of these reasons were understandable to me but caused me great emotional pain. It also drove me to want to help teachers understand the need to use culturally relevant practices along with gifted focused education.

The research has shown a great deal of effort in changing practices so students from underrepresented populations have a more fair chance of being identified as gifted. There is much research that shows that culturally relevant teaching can help retain students from those underrepresented populations. That is why my project uses culturally relevant teaching. More effort needs to be taken to ensure that students from underrepresented populations are retained in gifted programming. This is what drives my passion and the topic of my capstone project.

Implications

The literature has shown that there is a positive outcome in academic achievement for underrepresented populations when using culturally relevant teaching strategies. When it comes to gifted education there is still strong disparity and trouble with retention of students from underrepresented populations to stay in gifted programming. In order to implement this project into a classroom setting, there is a need for teachers to take time to understand both culturally relevant teaching and depth and complexity.

In most Minnesota school districts there are policies in place that have some professional developments to learn and understand culturally relevant teaching. Using the method that I used for the lesson plans (ignite, chunk, chew review) takes practice and is best to use when students are used to that method of instruction for transitioning and best implementation. There is extra time that a teacher needs to devote to understanding students and their lives to best guide students to their final product of creating their own food truck.

The lesson plans also require teachers to have already implemented depth and complexity into their classrooms. There are many resources out in the field that give different ways to introduce the different depth and complexity icons. However, it is important to note that it will be up to the teacher to seek this out and work. I have had some training about what depth and complexity is but much research needed to be done by me in order to implement depth and complexity into my classroom. Understanding using the sentence frames takes lots of practice and in order for it to be naturally put into a classroom.

Overall, in order to implement this into a classroom takes a lot of time and dedication by the teacher to understand both culturally relevant teaching and depth and complexity. Most districts provide professional development for culturally relevant teaching but a teacher usually has to go out to find professional development in depth and complexity. It is up to the teacher to implement both frameworks into the classroom which takes time and practice to make it natural. With the requirements of a teacher, it may make it difficult to implement this capstone project.

Limitations

With all projects, there are limitations. This project is for a single unit and requires at a minimum nineteen days to implement which could be a concern for teachers. There is also the limitation that this project uses the Minnesota state standards meaning it may not cover all standards in another state. It is also using standards collected in 2024, which means that the project may need to be changed depending on Minnesota state standards changing. There is also the possibility that policy change and school policies may make using depth and complexity and culturally relevant teaching difficult. Looking ahead, there might need to be changes made to help this be implemented in future years.

Future Steps

Creating this project has made me excited for the future. The first thing I will do with this project is to speak with my colleagues about how I am implementing depth and complexity into my second grade classroom. I also am going to implement the project next school year 2024-2025 to find any major fixes I feel need to be made. I will then make those corrections and share it on a teacher site such as teachers pay teachers in order to be an example of using depth and complexity in the classroom while also remaining culturally relevant. I will continue to look back on the project and make changes when needed whether it be due to changes in policy or if there is more tweak.

I will continue my research on depth and complexity and its connection to culturally relevant teaching. Both of these frameworks have completely influenced how I teach and I want to be able to share this more. While I may not work in a classroom full of gifted students forever, I do feel both of these can be used for all in order to promote higher level thinking and learning for all students.

Benefit to the Profession

The world is becoming increasingly diverse. My goal for the project is to have a resource for teachers new to gifted education that has an example of how to implement the framework depth and complexity in a lower elementary school classroom. The amount of hours I dedicated to understanding the framework and how I can implement it into a classroom was extensive. I am a learner that learns best from looking at examples so this is there for teachers who learn best by example. The biggest benefit to the profession is the hope this can be a resource to guide teachers to see academic growth in students who are underrepresented in gifted and talented programs.

In Conclusion

This chapter has been looking back and reflecting on the start of this whole paper and the definition given for culturally relevant teaching and depth and complexity. I find it important to end with giving a short summary of the definition of what started the whole project. Culturally relevant teaching, or more specifically the ready for rigor framework provides appropriate challenge in order to stimulate brain growth to increase intellectual capacity and can teach students cognitive routines using the brain's natural learning systems (Hammond, 2015). The depth and complexity thinking tools allow a teacher to raise the thinking level of all students easily and effectively (Byrd & Van Gemert, 2019). These definitions show that these two can easily be intertwined with one another as my project also shows.

Summary

Chapter four reflected on my capstone project which answered the question: *In what ways are the components of both the Depth and Complexity frameworks and*

culturally relevant pedagogies beneficial for academic growth for gifted individuals, especially those of underrepresented populations (students of color, English language learners, and economically disadvantaged)? This chapter revisited the literature review and the major learning and influences that guided the capstone project. I discussed the implications and limitations of the project and how those will help to drive my future work in the field. Finally, I concluded by explaining there is a benefit to the profession of education for both teachers and students. My hope is that this project can be a small step to help to retain and also decrease the disparity of representation of students from underrepresented populations in gifted education.

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