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Teachers' Perceptions of Differentiated Instruction for Gifted Students in the Middle School General Classroom

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Abstract

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EdS, Walden University, 2018

MA, University of North Carolina, 2018

BS, Pennsylvania State University, 1991

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

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Abstract

The research problem this study addressed was that general education teachers are struggling to meet the needs of gifted students with differentiated instruction at the middle school level. The purpose of this basic qualitative study was to investigate middle school teachers' perceptions of differentiating instruction for gifted learners and any challenges or barriers the teachers may experience. Tomlinson's theory of differentiation was the conceptual framework for this study. The research questions addressed teachers' understanding of giftedness, preparedness to differentiate instruction for gifted students, strategies used for differentiating instruction for gifted students, and perceived barriers or challenges to differentiating instruction for gifted students. Data were collected through semistructured interviews and sentence completion with eight middle school teachers. Key thematic findings from the coding analysis included the participants' reports of understanding gifted learners' needs, varying levels of preparedness to differentiate, limited resources and strategies to differentiate, and the necessity for professional support to differentiate for gifted learners. These results informed the research questions by identifying the participants' understanding of characteristics of gifted learners and the specific needs a gifted learner might have. Most participants described their preparedness to differentiate as inadequate with little to no coursework during preservice training. The participants employed differentiation strategies based on the resources and experiences they have. Lastly, the participants reported a lack of materials, time, and professional development as barriers to implementing differentiation. Social change may be promoted by increasing teachers' knowledge and use of differentiation as a strategy to improve the educational experiences of gifted learners at the middle school level.

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Dedication

I dedicate this dissertation to my mother, Laura. I would not have embarked on this doctoral journey if I did not have her unwavering support and encouragement. In addition, I would like to dedicate this dissertation to all the educators who go beyond what is expected of them to provide the best possible working and learning environment.

Acknowledgments

I want to acknowledge the support I received throughout this learning journey from my committee chair, Dr. Richard Penny. Dr. Penny pushed when I needed to be pushed to achieve this significant professional and personal accomplishment.

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Chapter 1: Introduction to the Study

Gifted education has long been a trending topic of discussion among educators. There are countless definitions of the term gifted, varying evaluations for identifying gifted students, and numerous practices for serving gifted learners (Callahan et al., 2017; Dare & Nowicki, 2019; Johnsen & Kaul, 2019; McGrath, 2019; Russell, 2018; VanTassel-Baska et al., 2020). Of the various strategies teachers can use to serve gifted students, differentiation is considered best for meeting their diverse needs (Tomlinson, 2005). VanTassel-Baska et al. (2020) proposed that differentiation practices are a priority when addressing the needs of gifted students; however, differentiation strategies are not being implemented in classrooms and schools at a level that would positively affect gifted students. VanTassel-Baska et al. found that only 46% of classrooms observed accommodated individual student differences. Tomlinson et al. (2015) suggested teachers have a limited understanding of what it means to differentiate instruction and challenges such as lack of planning and instructional time that impede differentiation implementation.

Although differentiation is considered a best practice to address the diversity of a group of learners, many teachers use a one-size-fits-all approach with minimal differentiated curriculum for gifted learners (Callahan et al., 2017; Tomlinson, 2015a; VanTassel-Baska et al., 2020). In short, gifted learners can only grow academically when challenged; therefore, teachers must use differentiation practices to address gifted learners' diverse entry points to ensure academic growth (Tomlinson, 2005). The current study may provide educators and educational institutions with insight into developing

strategies to increase teachers' knowledge and use of differentiation in general education classrooms. The study may also provide positive social change for the educational experiences of gifted learners by providing the learners with opportunities for academic growth and challenge.

In Chapter 1, I review the background of the study, describe the problem statement, and describe the purpose of the study. The conceptual framework, nature of the study, research questions, and definitions are also discussed. The chapter concludes with a discussion of the study's assumptions, scope and delimitations, limitations, and significance.

Background

Giftedness has been defined using many different terms with little agreement by experts (McBee & Makel, 2019; Russell, 2018). There is little agreement on how to determine giftedness, but there is also a lack of consensus on how to identify gifted learners (Callahan et al., 2017). However, most educators and educational institutions agree that gifted learners need to be served for students to make academic growth and to be challenged (Dare & Nowicki, 2019; McGrath, 2019). Standard methods of serving gifted students include grouping, push in or pull out by the resource teacher, enrichment classes, compacting, and acceleration (Callahan et al., 2017; Dimitriadis, 2016; Johnsen et al., 2020; Johnsen & Kaul, 2019; Pereira et al., 2021; Riley, 2016).

Above all, according to Tomlinson (2015b), the best method for serving gifted learners is by using differentiation. With differentiation, teachers should provide ample opportunities for students to learn as deeply as possible according to the students'

readiness, interest, and learning profile, and this often occurs through content, process, and product (Bogen et al., 2019; Dack, 2019a; Handa, 2019; Horak & Galluzzo, 2017; Johnsen et al., 2020; Rowen & Townend, 2016; Tomlinson, 2015b). The goal of differentiation is for educators to provide instruction in response to students' differing needs (Tomlinson, 2015a). Teachers must provide opportunities for academic growth, and this requires quality instruction (Tomlinson, 2015a).

Teachers and learners have had successes as a result of implementing differentiation (Johnsen & Kaul, 2019). Students frequently experience a sense of ownership over their work when they can make decisions about how they are going to learn (Frankling et al., 2017; Horak & Galluzzo, 2017; Mammadov et al., 2018). There is a positive link to self-efficacy when teachers use the differentiated instructional approach (Goddard & Kim, 2018). Although differentiation is often considered a best practice for meeting the needs of diverse learners, including gifted students, many times teachers face challenges when implementing differentiated instruction (Callahan et al., 2017). Educators frequently lack a clear understanding of what differentiation is and how to employ it effectively in their teaching (Bogen et al., 2019; Brigandi et al., 2018; Dack, 2018; Johnsen & Kaul, 2019; Rowen & Townend, 2016; Russell, 2018; Spoon et al., 2020; Turner & Solis, 2017). Teachers also struggle with a lack of resources and time (Brigandi et al., 2018; Cross et al., 2018; DiCicco et al., 2016; Johnsen et al., 2020; Johnsen & Kaul, 2019; Mofield, 2020; Russell, 2018; Turner & Solis, 2017).

The current study addressed the gap in practice concerning general education teachers' perceptions of differentiated instruction for gifted learners at the middle school

level. To better serve gifted learners, teachers should understand giftedness, preparedness to differentiate instruction for gifted students, strategies for differentiating instruction for gifted students, and an understanding of perceived barriers or challenges to differentiating instruction for gifted students. This study was necessary to understand better the barriers teachers face so that schools and educational institutions can provide adequate support for teachers. General education teachers may deliver good differentiation instruction providing gifted learners with the same opportunities for academic growth as general education students.

Problem Statement

The social problem this study addressed was that general education teachers are struggling to adequately meet the needs of gifted students with differentiated instruction at the middle school level. According to the National Association for Gifted Children (n.d.), educators working with gifted students must understand the needs and characteristics of the gifted learner. The initial evidence that supported the problem was that many general education teachers lack a complete understanding of serving gifted learners in a general education class, are not comfortable developing practical lessons, or need professional development (PD). Conversely, specialized teachers who work within programs specifically designed for gifted students provide advanced educational opportunities, college and career preparation, acceleration, enrichment, and grouping (VanTassel-Baska et al., 2020).

Additional evidence that general middle school teachers struggle to serve gifted learners with differentiated instruction was that many teachers use a one-size-fits-all

approach (Callahan et al., 2017; Tomlinson, 2015a; VanTassel-Baska et al., 2020). To develop practical lessons to address the needs of gifted learners, educators should use flexibility and interdisciplinary content leading to innovative levels of understanding (Dare & Nowicki, 2019; Horak & Galluzzo, 2017). To accomplish this goal, teachers need to understand evidence-based strategies suited for gifted students (Callahan et al., 2017; Dare & Nowicki, 2019; Horak & Galluzzo, 2017; Rowen & Townend, 2016).

A further piece of evidence that supported the problem addressed in this study was identified by Callahan et al. (2017), who found that only about 11% of schools provided gifted students with differentiation in general education classes. Gifted learners need appropriate challenge levels to keep them motivated and engaged in learning tasks (Callahan et al., 2017; Johnsen & Kaul, 2019; Mammadov et al., 2018). However, most teachers are not provided with the necessary resources to offer this type of practical instruction for gifted learners (Callahan et al., 2017; Johnsen & Kaul, 2019). Even when teachers are cognizant of best practices, few teachers implement appropriate strategies regularly (Johnsen & Kaul, 2019).

The problem this study addressed was that general education teachers are struggling to adequately meet the needs of gifted students with differentiated instruction at the middle school level. There was minimal research that addressed middle school teachers' perceptions concerning differentiation for gifted learners (Frankling et al., 2017; Ireland et al., 2020). This study addressed a gap in practice by understanding general education teachers' perceptions for implementing differentiated instruction to serve gifted learners at the middle school level.

Purpose of the Study

The purpose of this basic qualitative study was to investigate general education teachers' perceptions of differentiating instruction for gifted learners and any challenges or barriers the teachers may experience at the middle school level. Many educators lack adequate PD and the confidence to differentiate lessons (Brigandi et al., 2018; Dack, 2018; Dimitriadis, 2016; Johnsen & Kaul, 2019; Russell, 2018; Turner & Solis, 2017). Overall, teachers use differentiation in the regular curriculum only to a limited degree (VanTassel-Baska et al., 2020). Understanding the barriers teachers face is critical for school leaders to provide the support teachers need to overcome perceived challenges.

Research Questions

The social problem this study addressed was that general education teachers are struggling to adequately meet the needs of gifted students with differentiated instruction at the middle school level. The purpose of this basic qualitative study was to investigate general education teachers' perceptions of differentiating instruction for gifted learners and any challenges or barriers the teachers may experience at the middle school level. In this study, I investigated the teachers' preparedness to differentiate, the strategies used to differentiate, and the perceived barriers or challenges to differentiation by answering the following research questions:

1. What are the general education teachers' understanding of giftedness and the gifted students' needs at the middle school level?

2. How do general education teachers describe their preparedness to differentiate instruction for gifted students at the middle school level?

3. How do general education teachers describe their strategies for differentiating instruction for gifted students at the middle school level?

4. What do general education teachers perceive as barriers or challenges to differentiating instruction for gifted students at the middle school level?

Conceptual Framework

Tomlinson's (2015b) theory of differentiation was the conceptual framework for this study. Tomlinson stated that differentiation is a method of teaching in which teachers in differentiated classrooms are prepared to engage students in instruction according to their varying needs. Students must be engaged through different approaches to learning, a range of interests, and varying levels of complexity, goals which teachers achieve by modifying instruction according to students' readiness and interest through the content, process, and products (Tomlinson, 2015b). According to Tomlinson, there is not a one-size-fits-all teaching style. The use of differentiation with gifted learners is a way to ensure that students are provided with learning opportunities because differentiation is a responsive method of instruction (McGrath, 2019; VanTassel-Baska et al., 2020).

According to the literature review provided in Chapter 2, gifted learners do not always receive differentiated instruction providing the students with opportunities for academic growth. Tomlinson's (2015b) conceptual framework provided the components necessary for effective differentiated instruction. To understand the needs of teachers, I compared the components to the teachers' practices, and perceptions revealed during the research process, which helped me understand the needs of teachers. Tomlinson's framework supported this study because gaining a deeper understanding of teachers'

perceptions of the challenges and barriers they face was important to understand their pedagogical needs.

I implemented a qualitative approach to better understand the challenges that teachers perceive as barriers to differentiated instruction for gifted learners at the study site. Qualitative researchers aim to understand individuals or groups in their natural settings and to reflect on the meaning the individuals or groups make from their experiences (Glesne, 2011). Participants' teaching practices and experiences were investigated to learn how teachers prepare to engage students in instruction according to their varying needs. I used the analysis from the participants' responses to answer the research questions to better understand the participants' perceptions. The objective of the data analysis process was to explore the meaning the individuals make from their experiences and stay true to their perceptions.

Nature of the Study

I implemented a basic qualitative approach to understand the participants' perceptions of differentiating instruction for gifted learners and any challenges or barriers teachers may experience. The purpose of qualitative research is to understand individuals or groups in their natural settings and to reflect on the meaning the individuals or groups make from their experiences (Ravitch & Carl, 2016). Qualitative research approaches are used when information is pursued about opinions, attitudes, and beliefs (Hammarberg et al., 2016; Merriam & Tisdell, 2016). A researcher uses a basic qualitative design to answer questions about perceptions, most often from the participant's point of view (Merriam & Tisdell, 2016). The phenomenon of the current study was the experiences of

general education teachers when differentiating instruction for gifted learners at the middle school level. A qualitative design was appropriate for identifying general education teachers' perceptions when differentiating instruction in a middle school level (see Merriam & Tisdell, 2016). The goal of qualitative research is to understand individuals in their natural settings and to reflect on the meaning the individuals make from their experiences; therefore, using a basic qualitative approach provided insight into the participants' perceptions (see Ravitch & Carl, 2016).

There are many different methods used to collect data in basic qualitative research. For the purpose of the current study, I used semistructured interviews to uncover multiple perspectives. Interviews are a qualitative research data collection method to understand how people perceive their world and lives and make meaning of their experiences (Brinkman & Kvale, 2018). I conducted the semistructured interviews via Zoom to collect data about the participants' perceptions. I used a semistructured interview protocol and sentence completion to focus individuals' responses (see Barton, 2015). General education teachers who provide instruction in academic content areas and elective courses were appropriate for this study because their teaching assignments require them to work with heterogeneous groups of students, including gifted learners. I used Microsoft Excel and Microsoft Word to organize and sort data by highlighting texts, selecting codes, and retrieving coded information. I completed data analysis using in vivo and pattern coding strategies to develop and identify themes.

Definitions

Definitions of terms are included in this section to ensure a common understanding of key concepts. The definitions represent the application of the terms within the current study. Some of the terms are central ideas from the literature review.

Acceleration: A strategy in which students progress through school faster than other students of the same age (Dare & Nowicki, 2019; Handa, 2019). Although there is strong support for using acceleration to meet the needs of gifted learners, acceleration is often underused (Handa, 2019). Acceleration is usually in the form of content-based acceleration or grade-based acceleration (Dare & Nowicki, 2019).

Differentiation (or differentiated instruction): A research-based practice that provides multiple avenues for maximizing student learning (Tomlinson, 2015b, 2017). Differentiation strategies can include learning contracts, tiered assignments, flexible pacing and grouping, and learning centers (Tomlinson et al., 2015). The goal of using the differentiation model is to provide equity of access to all learners despite the diversity of the classroom population (Tomlinson, 2015a).

Enrichment: Instruction that promotes higher-order thinking, creativity, and exploratory activities (Kim, 2016). Enrichment methods usually provide richer and more varied content in addition to the standard curriculum taught in the general classroom to offer gifted learners opportunities to develop their gifts and talents (Brigandi et al., 2018).

General education classroom: A classroom in which the curriculum is based on a set of education standards established by a state for a specific grade (Ballard & Dymond), 2017). In general education classes, cluster grouping, pull out or push in by the resource

teacher, or enrichment are most often used to serve gifted learners (Callahan et al., 2017; Johnsen et al., 2020; Johnsen & Kaul, 2019; Riley, 2016).

Gifted student (or giftedness): A student who exhibits high achievement or leadership capabilities and requires additional academic services not ordinarily provided (Callahan et al., 2017). Most school districts use some combination of standardized and achievement tests in conjunction with other rating systems to screen students for giftedness (Callahan et al., 2017).

Individualized (or personalized) instruction: The process in which students maintain ownership of their learning by partnering with teachers to suit the students' interests, skills, and readiness (Netcoh, 2017).

Assumptions

There were three assumptions in the current study. The first assumption was that all participants would respond willingly and honestly to the interview questions and sentence completion activity. Willingness and honesty were important in establishing validity for this study. The second assumption was that the participants would respond to the interview questions based on their perceptions and experiences. The last assumption was that participants' responses would provide insight into their perceptions of implementing differentiated instruction for gifted learners. These assumptions were necessary for the context of this study to ensure validity.

Scope and Delimitations

The scope of this study included the perceptions and experiences of middle school teachers and the challenges they may face when implementing differentiated instruction

for gifted learners. This study was delimited to general education teachers who provide instruction in academic content areas and elective courses. These participants were appropriate for this study because their teaching assignments require them to work with heterogeneous students, including gifted learners. General education teachers were chosen for this study rather than special education or gifted education teachers because general education teachers do not generally receive training to address student diversity with differentiation methods (see Brigandi et al., 2019; Frankling et al., 2017). Only teachers who have gifted students enrolled in their classes were invited to participate in this study. This information was self-reported by prospective participants during the recruitment process.

Transferability is a measure of the extent to which this qualitative study can be applied to other contexts (see Merriam, 2009). I included thorough notes and detailed descriptions of the collected data so that other researchers could make comparisons to different contexts based on the information provided. This transferability strategy would allow researchers to transfer facets of the study, including the design and findings, instead of replicating the entire research (see Creswell, 2012).

Limitations

There were several limitations to this study. This study was limited to eight participants based on their experiences; therefore, the data may not represent a larger population. However, to address this limitation, I made efforts to include participants who represented a diverse population of middle school teachers. Additionally, because

the participants were recruited through purposive sampling, the sample size needed to be large enough to achieve saturation (Merriam & Tisdell, 2016).

Another limitation was that a basic qualitative study's data collection and analysis could be time-consuming (Merriam & Grenier, 2019). I ensured that enough time was set aside to collect and analyze the data to address this limitation. Teachers may have been reluctant to participate due to the time needed to conduct the interview. I provided potential participants with an estimate of the time required to conduct the interview so that they would know whether they could commit to participating in the study. I also provided each participant with a $25 gift card from Amazon as an incentive.

The last limitation was potential bias on the part of the researcher. To remain aware of my biases and obtain reflexivity, I maintained a self-reflection journal during the research process. By using the self-reflection journal, I regularly assessed my biases and subjectivity. I documented my thoughts, questions, ideas, and struggles during the various stages of research. In addition, I used the journal to record possible follow-up, or clarification questions for future participants as patterns in responses emerged. By paying careful attention to my assumptions, assumptions about the participants, and my role as the researcher, I obtained valid research (see Ravitch & Carl, 2016).

Significance

Middle school teachers are struggling to adequately meet the needs of gifted students with differentiated instruction in general education classes. The current study addressed a gap in practice by focusing on general education teachers' perceptions of differentiating instruction for gifted learners and the challenges the teachers face at the

middle school level. Gifted students need opportunities to develop creative and critical thinking skills (Spoon et al., 2020; Swanson et al., 2020). Callahan et al. (2017) stated there are limited numbers of teachers who use the National Association for Gifted Children (n.d.) standards to meet the unique needs of gifted learners. Also, many educators lack a comprehensive understanding of how to differentiate lessons, are not comfortable giving up control to structure differentiated lessons, or need PD (Bogen et al., 2019; Brigandi et al., 2018; Dack, 2018; Johnsen & Kaul, 2019; Rowen & Townend, 2016; Russell, 2018; Spoon et al., 2020; Turner & Solis, 2017). Brennan (2019) stated that teachers create an environment to meet all students' learning needs when differentiated instruction is implemented. However, many teachers lack the knowledge, expertise, or resources to differentiate their instruction (Brigandi et al., 2018; Dimitriadis, 2016; Russell, 2018; Turner & Solis, 2017).

Through this research, I intended to understand the perceptions of middle school teachers regarding differentiation challenges for gifted learners. It was essential to understand what the teachers' needs are and what kind of support they may need so that they can be provided with the necessary tools to be effective educators of gifted students. This study provided data about teachers' understanding of giftedness to meet gifted learners' needs and teachers' preparedness to differentiate. Additionally, the study supplied data about the types of differentiation practices teachers currently implement and the challenges teachers perceive as barriers to differentiation. The results of this study may provide educational leaders with insights into teachers' perceived challenges for differentiating instruction. These insights may inform school leaders' steps to provide

appropriate and adequate support for teachers to differentiate instruction for gifted learners. The findings from this study may promote social change by addressing equity for all learners and by providing gifted students with the same opportunity for academic growth and challenge as other diverse populations of learners.

Summary

In Chapter 1, I identified the problem as being that general education teachers are struggling to adequately meet the needs of gifted students with differentiated instruction at the middle school level. The problem was supported by several pieces of evidence, including the assertion that general education teachers lack a complete understanding of how to serve gifted learners in a general education class, are not comfortable developing effective lessons, or need PD (Brigandi et al., 2018; VanTassel-Baska et al., 2020). Many teachers use a one-size-fits-all approach, and only about 11% of schools provide gifted students with differentiation in general education classes (Callahan et al., 2017; Dack, 2018; Dimitriadis, 2016; Johnsen & Kaul, 2019; Russell, 2018; Tomlinson, 2015a; Turner & Solis, 2017).

I described the basic qualitative approach I used to collect data from teachers using semistructured interviews and a sentence completion activity. I explained how I analyzed the data using in vivo and pattern coding strategies to develop and identify themes. The study was essential to educational leaders by providing insights into teachers' perceived challenges for differentiating instruction. These may inform the steps that school leaders need to take to provide support for teachers to differentiate instruction effectively. The findings from this study can promote social change by addressing equity

for all learners by providing gifted students with the same opportunity for academic growth and challenge as other populations of learners.

      In Chapter 2, I describe the strategies used to review literature relevant to the problem statement. The description includes the library databases and search terms used. I also provide a more detailed description of the conceptual framework, Tomlinson's (2015b) theory of differentiation. I define the tenets of the conceptual framework and how they relate to the problem.

Chapter 2: Literature Review

The social problem this study addressed was that general education teachers are struggling to adequately meet the needs of gifted students with differentiated instruction at the middle school level. The purpose of this basic qualitative study was to investigate middle school teachers' perceptions of differentiating instruction for gifted learners and any challenges or barriers the teachers may experience. Many general education teachers lack a complete understanding of how to serve gifted learners, are not comfortable to prepare lessons for gifted learners, or need PD (Brigandi et al., 2018; Dack, 2018; Johnsen & Kaul, 2019; Russell, 2018; Turner & Solis, 2017). The literature indicated that experts consider differentiation the best method to address learner diversity, specifically to serve gifted learners (Callahan et al., 2017; Tomlinson, 2015a; VanTassel-Baska et al., 2020). Only about 11% of schools provide gifted students with differentiation in general education classes (Callahan et al., 2017). Gifted learners need appropriate levels of challenge to keep them motivated and engaged in learning tasks, and teachers need to have a working knowledge of evidence-based strategies suited for gifted students (Callahan et al., 2017; Dare & Nowicki, 2019; Horak & Galluzzo, 2017; Johnsen & Kaul, 2019; Mammadov et al., 2018; Rowen & Townend, 2016).

This section outlines the professional literature related to differentiated instruction for gifted learners. To answer the research questions, I investigated teachers' understanding of giftedness and differentiation, the strategies typically used for implementation of differentiation, and teachers' perceptions related to barriers to implementing differentiation. The literature review consists of nine topics that provide

context for the broader problem associated with the problem addressed in this study (a) definition and identification of gifted learners; (b) serving gifted learners; (c) concepts of differentiation; (d) strategies for implementing differentiation; (e) barriers and challenges associated with differentiation; (f) successes and student achievement accredited to differentiation; (g) teacher preparedness and preservice; (h) PD, and (i) the perceptions of teachers, administrators, and gifted learners.

Literature Search Strategy

In this review of literature, I sought information about differentiated instruction for gifted learners and the perceived challenges of teachers. I collected information via electronic databases through the Walden library, Google Scholar, and books from my professional library. The databases searched were Education Source, Educational Resources Information Center (ERIC), EBSCOhost, SAGE journals, Taylor and Francis Online, and Science Direct. I searched for peer-reviewed articles published between 2016 and 2021.I used the reference lists from relevant articles for additional resources to broaden my search. The following keywords were used to gather information about my topic: *differentiation*, *differentiated learning*, *gifted*, *identification*, *teacher perspectives*, *opinions and attitudes*, *individualized instruction and learning*, *implementation*, *achievement*, *barriers or challenges*, *PD or learning*, and *learning differences and variance*. When my search no longer produced additional relevant information, I determined that I had reached saturation for my literature review.

Conceptual Framework

Tomlinson's (2015b) theory of differentiation was the conceptual framework central to the current study. Tomlinson stated that differentiation is a method of teaching in which teachers provide opportunities for each student to learn as deeply as possible and receive the best possible instruction. Teachers in differentiated classrooms are prepared to engage students in instruction according to their varying needs as learners (Tomlinson, 2015b). Tomlinson also stated that students must be engaged through different approaches to learning, a range of interests, and varying levels of complexity. The teacher modifies instruction according to students' readiness and interest and the content, process, and products (Tomlinson, 2015b). To best support gifted learners, teachers must be flexible with time, use a range of instructional strategies, and consider students as partners (Handa, 2019). There is no one-size-fits-all teaching style in the differentiated classroom (Tomlinson, 2015b). The use of differentiation with gifted learners is a way to ensure that students are provided with advanced academic opportunities because differentiation is a responsive method of instruction (McGrath, 2019; VanTassel-Baska et al., 2020).

At its core, differentiating instruction means that students have options for learning information, synthesizing ideas, and expressing what they have learned (Handa, 2019). Content, process, and product are ways teachers can differentiate instruction according to students' readiness, interest, and learning profile (Tomlinson, 2017). By using this learner-centered approach with gifted students, teachers can ensure the needs of the students are being addressed (Handa, 2019; Williams et al., 2016). Learning is

enhanced because individual differences are acknowledged, and students have personal control and choice over their learning experiences (Handa, 2019; Williams et al., 2016). As teachers differentiate instruction for their gifted learners, they know the students' strengths and needs (Goddard & Kim, 2018). The teaching is intentional and responsive. For gifted learners, teachers must provide opportunities for academic growth, which requires quality instruction (Tomlinson, 2015a). Not only does it make sense for teachers to differentiate instruction for gifted learners, but also teachers grow in their ability to assess students (Tomlinson, 2017). Teachers also can provide a variety of ways to develop methods for students to express their understandings (Tomlinson, 2017). By developing differentiated lessons, the teacher plans instruction with the students in mind maximizing their learning capacity and experiences. Teachers need to consider teaching the students first and the content second (Tomlinson, 2017).

Previous researchers have used and applied Tomlinson's theory of differentiation to provide strategies to best serve diverse populations of students (Handa, 2019; Sharp et al., 2018; Williams et al., 2016). Goddard and Kim (2018) used Tomlinson's theory to describe how teachers can identify students' strengths and weaknesses to develop responsive lessons. Dack (2019b) applied the theory to suggest scaffolding methods to support student learning. In addition, Frankling et al. (2017) supported the concepts of educational equity with the tenets of Tomlinson's theory. Like previous researchers, I applied Tomlinson's theory to the findings from this study as the lens by which to investigate and understand participants' experiences and perceptions of differentiating instruction for gifted learners and any challenges or barriers the teachers may experience.

As a result, I gained insight into what middle school teachers believe they needed to effectively implement differentiation for gifted learners.

Literature Review

Definition and Identification of Giftedness

According to the review of current literature, there was little agreement by educational experts on the definition of giftedness (McBee & Makel, 2019; Russell, 2018). Many states used the No Child Left Behind legislation to define giftedness as those learners who demonstrate a capability for high achievement in intellectual, creative, academic, or leadership capacity (Callahan et al., 2017). Giftedness has also been defined as academically gifted, social leadership motivation, performing or visual arts talented, and creatively gifted; however, the most used word is intellectually gifted (Callahan et al., 2017; Riley, 2016; Rowen & Townend, 2016). Teachers also had varied descriptions of gifted learners. In one study, participants described gifted learners as students who have specific skills, natural abilities, native intelligence, and problem-solving skills (Russell, 2018). Like the lack of a universal definition for giftedness, there was a lack of consensus in the field regarding how to identify gifted learners (Callahan et al., 2017). Most school districts use some combination of achievement tests, teacher ratings or recommendations, parent nominations, grades, and work portfolios to screen students for giftedness (Callahan et al., 2017; Gubbins et al., 2021; Ireland et al., 2020; McBee & Makel, 2019). The schools who identify students strictly by achievement tests can misidentify students who then have difficulty performing in gifted-tailored classes (Dimitriadis, 2016). Although most schools serve gifted students who have exhibited

achievement, there are other schools that serve students who have exhibited potential for giftedness (Pereira et al., 2019).

Serving Gifted Learners

In 2020, there were 3.3 million identified gifted students in the United States (Haymon & Wilson, 2020). There are many ways to serve gifted learners, and schools must provide opportunities for the students to be challenged and develop their talents (Dare & Nowicki, 2019; McGrath, 2019). However, many gifted students do not receive adequate instruction to meet their needs (Haymon & Wilson, 2020). To address this problem, some states have begun to require schools to perform a self-evaluation of gifted programs for accountability and to determine the programs' effectiveness (Hodges et al., 2021). To be considered an effective program, students must have opportunities to develop creative and critical thinking skills (Spoon et al., 2020; Swanson et al., 2020). For example, methods such as cluster grouping, resource teacher push-in, and enrichment classes are most often employed to provide occasions for gifted learners to improve their thinking skills (Callahan et al., 2017; Johnsen et al., 2020; Johnsen & Kaul, 2019; Pereira et al., 2019; Riley, 2016). Additionally, the practices of curriculum compacting, grade skipping, advanced placement courses, and acceleration can also be used to serve gifted students and are often considered the most effective ways of increasing achievement (Dare & Nowicki, 2019; Johnsen et al., 2020; Johnsen & Kaul, 2019). When considering implementing acceleration for a gifted student, teachers should assess readiness and motivation to make an appropriate determination (Dare & Nowicki, 2019). Above all,

students should be served in an ongoing manner that best meets their needs (Gubbins et al., 2021).

By developing a high-quality curriculum for gifted learners, teachers should provide lessons consisting of interdisciplinary content, complex concepts, flexibility, and authentic products (Dare & Nowicki, 2019; Dole et al., 2016; Hodges et al., 2021; Horak & Galluzzo, 2017). To achieve this outcome, teachers need to have deep knowledge of evidence-based strategies and techniques suited for gifted learners (Callahan et al., 2017; Dare & Nowicki, 2019; Horak & Galluzzo, 2017; Rowen & Townend, 2016). Gifted learners need appropriate challenge levels to keep them motivated and engaged in learning tasks (Callahan et al., 2017; Johnsen & Kaul, 2019). Mammadov et al. (2018) posited that when gifted learners have autonomy in making academic decisions based on their interests and personal choices, the students are more likely to be motivated. Allowing students some freedom leads to increased student achievement and motivation (Haymon & Wilson, 2020; Waldrip et al., 2016; Williams et al., 2016). However, most teachers are not provided with the necessary resources to adequately serve gifted learners (Callahan et al., 2017; Hodges et al., 2021; Johnsen & Kaul, 2019). Even when teachers are aware of best practices or are provided with resources for gifted learners, few teachers implement appropriate strategies for gifted learners regularly (Johnsen & Kaul, 2019).

Other than using appropriate strategies to serve gifted learners in academic areas, teachers should recognize and address the unique social and emotional needs of gifted learners (Brigandi et al., 2018; DeMink-Carthew & Netcoh, 2019; Mammadov et al., 2018; Riley, 2016; Szymanski et al., 2018; Watts, 2020). For example, some gifted

learners can be embarrassed when struggling with content and need the teacher's assistance because finding content difficult is not the norm for an adept learner (Watts, 2020). In one study, students expressed concerns about being called nerds, experiencing jealousy from regular education students, and feeling stereotyped (Kitsantas et al., 2017). On the other hand, gifted students often feel more accepted when grouped homogeneously with their peers (Brigandi et al., 2018).

Concepts of Differentiation

Based on my literature review, educational experts had different concepts of what differentiation means. However, most agreed that differentiation is a learner-centered approach in which content and instruction are adapted to meet students' diverse educational needs with an adjustment in the level, depth, and pacing of curriculum and interventions to maximize student success (Bogen et al., 2019; Dack, 2019a; Handa, 2019; Horak & Galluzzo, 2017; Johnsen et al., 2020; Rowen & Townend, 2016). Dack (2019a) suggested that differentiation should be thought of as a fluid philosophy grounded in tools that meet the needs of a diverse student body. In other words, differentiation is a way to accommodate a wide range of students who have different learning and scaffolding needs while providing students with the opportunities to maximize and develop their talents (Dack, 2019b; Handa, 2019). The purpose of differentiated instruction is for all students to have equitable access to educational opportunities that meet their needs (Frankling et al., 2017). Some experts have conceptualized two versions of differentiation. Designed differentiation refers to how the teacher proactively prepares the lessons with multiple tiers, and interactional

differentiation is done at the moment as students interact with tasks (Puzio et al., 2020).

Differentiation should not be considered a strategy only for students with special needs

but as a response to the diversity of the needs of all students (Sharp et al., 2018). As

teachers become familiar with students' abilities, needs, motivations, and interests, they

can develop instruction around those elements (Goddard & Kim, 2018).

Differentiated instruction is often considered an effective strategy to cater to

learner diversity (Frankling et al., 2017; Maeng, 2017; Swanson et al., 2020). Therefore,

differentiation is considered a best practice for addressing gifted learners' individual

differences and needs (Handa, 2019). When teachers make deliberate choices about

instructional materials and approaches based on students' achievements, progress, and

academic needs, students can connect to the things they already value, and there is the

potential to increase student engagement and achievement (Maeng, 2017; Puzio et al.,

2020; Turner & Solis, 2017). One tool developed by Tomlinson widely used to plan

differentiation is the equalizer, which helps teachers adjust their teaching in different

ways to begin the differentiation process (Pereira et al., 2021). Teachers can use the

equalizer as a tool to visualize ways to scaffold assignments so that all students can meet

the same learning objectives while addressing individual needs (Pereira et al., 2021). The

equalizer provides nine continuums for the difficulty level of lesson content, process, and

product to be adjusted according to student needs (Pereira et al., 2021). Teachers need to

customize the delivery, materials, and assignments for learners to meet them at their level

of knowledge and capabilities (Frankling et al., 2017). However, Dack (2018) noted that

teachers sometimes abandon differentiation practices for other strategies that are less labor-intensive to implement or plan.

There is a learner-centered approach and a student-centered approach to differentiation. Handa (2019) focused on distinguishing between implementing a learner-centered approach rather than a student-centered one. A learner-centered approach is instruction enhanced by the student's experiences rather than being directed by what the teacher perceives as important (Dole et al., 2016). Equally important is collaboration as a partnership between the learner and teacher as they make decisions together regarding instruction (Handa, 2019).

Although differentiation is considered a best practice for gifted learners, planning for instruction requires a great deal of time, effort, and dedication to implement across lessons, units, and content areas (Goddard & Kim, 2018; Turner & Solis, 2017). As teachers work together to embed differentiation strategies into planning and teaching practices, high quality differentiation will improve learning processes and outcomes (Frankling et al., 2017). Teachers' attitudes about their students' abilities are critical indicators of how well teaching practices match and meet learners' needs (Szymanski et al., 2018).

Strategies for Implementing Differentiation

Differentiated instruction is teaching with the learners' needs, interests, and readiness at the forefront of the planning process. Most teachers differentiate by the process; however, differentiation also occurs by varying content, product, and learning environment (Turner & Solis, 2017). There are many learner-centered strategies to

increase gifted students' achievement (Handa, 2019). When educators use differentiated methods for gifted learners; students are more likely to be motivated to learn (Duren et al., 2021; Mammadov et al., 2018; Watts, 2020). Differentiation is most effective when implemented throughout an entire school and supported by administrators (Bogen et al., 2019).

Students often prefer having autonomy to decide what, how, and when to learn; therefore, having the opportunity for choice or different learning methods is generally the ideal option of differentiation as perceived by students (Netcoh, 2017). Teachers who differentiate using choice can create a classroom that is inclusive for all learners, not just those who are gifted (Brennan, 2019). The use of choice or interest options for gifted learners is a strategy that is strongly supported by expert educators (Brigandi et al., 2019; Mammadov et al., 2018; Szymanski et al., 2018). To offer students options, teachers can provide choice boards or learning menus that allow varying learning activities to address student interests, learning preferences, and stages of readiness (Brennan, 2019). Another way to provide choice for students is through learning stations or centers, which can provide opportunities for increased student engagement and knowledge development (Turner & Solis, 2017). Project- or problem-based learning requiring students to integrate new ideas to solve a problem or answer a question is another strategy that teachers can use to encourage students to make connections to their interests (DeMink-Carthew & Olofson, 2020; Dole et al., 2016; Mammadov et al., 2018). Problem-based learning begins with a problem for students to solve, whereas project-based learning has an end project in mind (Dole et al., 2016). Project-based learning can be personalized to increase

motivation and engagement and teach students to be expert learners (DeMink-Carthew & Olofson, 2020). Both project- and problem-based learning are approaches that develop improved teacher-student relationships as the environment becomes more learner-centered (Dole et al., 2016).

As with any new task implemented in a classroom, teachers must model for students how to make choices that best suit their learning needs (Brennan, 2019). By doing so, teachers provide personally meaningful instruction to the students (Williams et al., 2016). What learners deem as significant can be prompted by both the teacher and the student as the students learn how to self-regulate their goals and performance (Waldrip et al., 2016). Despite choice being an essential process of differentiation, giving students opportunities to make choices about their learning can be challenging (DeMink-Carthew & Netcoh, 2019; Duren et al., 2021). These challenges can include power struggles between the teacher and learner (DeMink-Carthew & Netcoh, 2019). In addition, giving students choices can create an increase in rigor not enjoyed by the student (DeMink-Carthew & Netcoh, 2019). Sometimes students prefer more passive learning modes, rather than challenging modes (DeMink-Carthew & Netcoh, 2019).

Using technology to differentiate is another strategy often used by teachers. Digital tools such as one-to-one devices and online programs support differentiation (Arnesen et al., 2019; Bingham et al., 2018; Duren et al., 2021; Haymon & Wilson, 2020; Park & Datnow, 2017). For example, teachers may use technology for differentiated formative assessment to develop lessons according to students' individual needs and assessment (Maeng, 2017; Park & Datnow, 2017). Although technology is a common

way to differentiate instruction, technology can come with some challenges (Bingham et al., 2018; Duren et al., 2021). Differentiating with technology, using methods such as blended learning or a flipped classroom, can mean teachers have to teach in new ways, manage additional courses and use unfamiliar tools (Azukas, 2019; Bingham et al., 2018; Gelgoot et al., 2020). Blended learning is an umbrella for online and in-person learning (Arnesen et al., 2019). Flipped classrooms occur when students encounter information before class by watching recorded lessons at home (Gelgoot et al., 2020). Then during class, teachers directly support students by guiding rather than lecturing, which permits more one-on-one interaction (Gelgoot et al., 2020).

A practical strategy for teachers to use with gifted students is acceleration, wherein students spend less time on basic skills to focus only on new content (Dare & Nowicki, 2019; Handa, 2019; Szymanski et al., 2018). Acceleration can take on the form of grade or subject skipping and early entrance to kindergarten; however, not all educators believe that acceleration is the best route for gifted learners (Cross et al., 2018). As mentioned, digital tools are one method that can be used for students to accelerate their learning, working at their own pace (Park & Datnow, 2017).

Grouping is another option for differentiated instruction and is often flexible based on the students' academic needs (Dack & Triplett, 2020; Handa, 2019; Park & Datnow, 2017; Pereira et al., 2019; Riley, 2016). Grouping can be small group, whole group, or even individual students, and is sometimes based on students' interests and strengths and their needs (Goddard & Kim, 2018). However, flexible grouping is most successful when instruction is intentionally tailored to the learners' needs (Johnsen &

Kaul, 2019; Park & Datnow, 2017). Grouping can be an effective differentiation strategy, especially for gifted students, and is often the most common method in which gifted learners are served (Brigandi et al., 2019; Callahan et al., 2017; Gubbins et al., 2021). Lastly, gifted students working in homogeneous groups like working together because their like-minded peers enrich their educational experiences (Brigandi et al., 2018).

Assessment is an essential strategy for differentiated instruction. Ongoing formative assessment should be part of the process that informs differentiated instruction (Sharp et al., 2018). By implementing regular, continuous assessment, teachers can provide students with appropriate materials and lessons which appeal to their interests and readiness levels (Brink & Bartz, 2017; Frankling et al., 2017; Johnsen & Kaul, 2019; Sharp et al., 2018). The teachers' goal of using assessment is to obtain regular data about learners' abilities, interests, and opinions and to adjust content, process, or product to maintain student progress (Frankling et al., 2017). Johnsen and Kaul (2019) suggested that assessment for gifted students should be above-level to help the teacher identify any gaps in knowledge. Although assessment is an integral part of the differentiation process, many teachers do not use assessment results to drive instruction (Brink & Bartz, 2017).

Barriers and Challenges Associated With Differentiation

The many barriers and challenges teachers face when implementing differentiated instruction in their classrooms have been revealed in the research. For example, Callahan et al. (2017) found there are limited numbers of teachers who use the National Association for Gifted Children (n.d.) standards to meet the unique needs of gifted learners. In one survey, 83% of teachers stated that differentiation was challenging to

implement (Puzio et al., 2020). Many educators simply lack an understanding of how to differentiate lessons, the confidence to give up control to structure differentiated lessons, or the training from professional development (Bingham et al., 2018; Bogen et al., 2019; Brigandi et al., 2018; Dack, 2018; Holland et al., 2018; Johnsen & Kaul, 2019; Rowen & Townend, 2016; Russell, 2018; Spoon et al., 2020; Turner & Solis, 2017). In addition, teachers' beliefs and attitudes, specifically having a fixed mindset, can negatively affect the level of differentiation occurring in a teacher's class (Bingham et al., 2018; Frankling et al., 2017). Lastly, school principals may not expect teachers to use interventions or strategies to differentiate; therefore, teachers are poorly informed or prepared to do so (Johnsen et al., 2020). There needs to be a clear understanding between administration and teachers about how teachers are expected to differentiate (Cross et al., 2018; Handa, 2019).

A significant barrier for teachers is the lack of appropriate learning materials and resources (DiCicco et al., 2016; Johnsen et al., 2020; Johnsen & Kaul, 2019; Turner & Solis, 2017). Many teachers struggle with the differentiation approach, especially when mandated but not supported with the necessary resources (Frankling et al., 2017). In a study completed by Callahan et al. (2017), 25.4 % of elementary school teachers and 36.2% of middle school teachers reported that neither materials nor resources guided instruction for gifted learners. Often, if teachers have access to resources or materials for gifted learners, the resources are not consistently differentiated by choice or student interest (Brigandi et al., 2019). Not only are resources and materials in short supply, but also specialists who help teachers work with their gifted learners (Cross et al., 2018).

The lack of time for planning and implementing differentiation strategies has been an ongoing challenge for teachers (Brigandi et al., 2018; Cross et al., 2018; Johnsen & Kaul, 2019; Mofield, 2020; Russell, 2018). Having large class sizes has been a challenge for teachers of gifted learners (Turner & Solis, 2017). Heavy workloads prevent many teachers from differentiating instruction (Russell, 2018). Some school districts require teachers to teach by a standard curriculum or program goals, which limits their ability to differentiate their lessons (Johnsen & Kaul, 2019; McGrath, 2019). For example, teachers stated that practices such as flexible grouping, above-level work, complex curriculum, and products matched to interests and abilities were not supported by the district's curriculum (Johnsen & Kaul, 2019). Lastly, the demands of standardized testing can make differentiation a challenge for teachers (DiCicco et al., 2016; Dole et al., 2016; Spoon et al., 2020).

Successes and Student Achievement Accredited to Differentiation

Educators and researchers have reported successes when implementing differentiated instruction (Johnsen & Kaul, 2019; Puzio et al., 2020). For example, gifted students enjoy working with their like-minded peers and often feel that their peers support and encourage success (Brigandi et al., 2018). Student autonomy is evident as students self-regulate and work as partners with their teachers to determine the best way for learning to occur (Frankling et al., 2017; Mammadov et al., 2018). Allowing gifted students to make decisions and choices about their learning provides for a positive environment. Students, often outperform those students who are not taught with

differentiated instruction (DeMink-Carthew & Netcoh, 2019; Horak & Galluzzo, 2017; Williams et al., 2016).

The more teachers implement differentiation strategies, the more student-driven they become, developing a sense of ownership and a willingness to adapt their approaches to teaching (Frankling et al., 2017). For example, when teachers are provided the time to collaborate with a focus on differentiation strategies, there is an increase in ownership and differentiation implementation (Brennan, 2019; Goddard & Kim, 2018). In addition, the teachers broaden their differentiation approaches to include those shared by their peers (Brennan, 2019; Goddard & Kim, 2018). When gifted education teachers collaborate with regular education teachers, growth in student learning and teachers' competencies in differentiation is developed (Mofield, 2020). Teachers manage their time better when using a differentiated instruction approach and indicate a positive link to teaching efficacy (Goddard & Kim, 2018). As a result, some school districts have begun to build in structured time in their schedules specifically for differentiated instruction and planning PD (Azukas, 2019; Handa, 2019; Park & Datnow, 2017).

Teacher Preparedness and Preservice

As mentioned earlier, one barrier to the implementation of differentiated instruction is teachers' lack of knowledge or experience. Preservice teachers often do not fully understand differentiation or the coursework to support implementation within their instruction (Dack, 2018; Pereira et al., 2019, 2021; Rowen & Townend, 2016; Spoon et al., 2020; Szymanski et al., 2018). Nor do preservice teachers commonly complete any required gifted coursework (Pereira et al., 2019). Teachers described their preparedness

to work with gifted learners and their parents as low (Bogen et al., 2019; Rowen &

Townend, 2016). In general, teachers receive minimal instruction or practice

differentiating instruction for gifted learners during their preservice experiences (Peters &

Jolly, 2018). Potential teachers often leave their universities unable to provide responsive

differentiated instruction (Dack, 2019a). However, when preservice teachers are provided

with experiences to prepare them, the new educators are more confident and optimistic

(Arnesen et al., 2019).

The lack of attention during preservice teaching programs about meeting the

needs of gifted learners is of great concern (Dimitriadis, 2016; Peters & Jolly, 2018). If

preservice teachers receive training through coursework, they will build a knowledge

base about differentiation and how to use specific strategies (Bogen et al., 2019; Dack,

2018, 2019a, 2019b). It is essential for preservice teachers to fully internalize the

appropriation of differentiation as a best practice (Dack, 2019a; Dack & Triplett, 2020).

In other words, preservice teachers must understand how differentiation works and the

importance of teaching using differentiation strategies (Bingham et al., 2018; Dack,

2019b; Szymanski et al., 2018).

Professional Development

Research indicated many problems about PD for differentiation. PD can be

defined as activities that support teachers in learning about pedagogy to improve

instructional strategies (Holland et al., 2018). Handa (2019) and Spoon et al. (2020) noted

that PD should be a priority for educators to ensure they have the necessary skills to cater

to the needs of the diversity of learners. Teachers reported that the amount of time of the

PD itself was an issue; teachers need more time, not just a single hour or day (Brigandi et al., 2019; Frankling et al., 2017; Horak & Galluzzo, 2017; Rowen & Townend, 2016; Spoon et al., 2020). For instance, some teachers reported fewer than 5 hours of PD focused on gifted learners (Callahan et al., 2017). Teachers must be engaged in active learning strategies for PD to be successful (Bogen et al., 2019). PD must be delivered in a manner that teachers can make sense of differentiation in how it relates to their unique teaching environment and practices (Sharp et al., 2018; Skyhar, 2021). For example, planning professional learning on practical topics such as instructional strategies to implement differentiation is crucial for teachers to directly apply new knowledge to their teaching (Macias, 2017; Owens et al., 2018; Skyhar, 2021; Zhang et al., 2020). Building on the educators' various perspectives and experiences to develop a collective understanding is an essential practice for effective PD (Kimbrel, 2018; Ryan et al., 2017).

There is no question that increased PD leads to improved differentiation practices (Bogen et al., 2019; Peters & Jolly, 2018). The literature review revealed an abundance of best practices for effective PD. Most teachers indicate that PD should be content- and grade-specific and personalized to teachers' needs promoting professional growth (Appova & Arbaugh, 2018; Heck et al., 2019; Kelly et al., 2019; Kimbrel, 2018; Owens et al., 2018; Ryan et al., 2017; Sharp et al., 2018; Zhang et al., 2020). In particular, teachers stated that having the opportunity for cross-curricular sharing was especially helpful when implementing differentiation (Frankling et al., 2017; Goddard & Kim, 2018). There is also a need to unpack the PD concepts and collaborate with colleagues to

put differentiation strategies in place (Azukas, 2019; Brigandi et al., 2019; Frankling et al., 2017).

For PD to be successful, teachers need ongoing support (Azukas, 2019; Brigandi et al., 2019; Mammadov et al., 2018; Rowen & Townend, 2016). For example, instructional coaches and mentors can model lessons on how to implement differentiation approaches (Brink & Bartz, 2017; Handa, 2019; Park & Datnow, 2017). New teachers are overwhelmed with the challenges of teaching and often align their teaching methods with local expectations rather than maintaining their conceptions of good teaching (Dack & Triplett, 2020). Peters and Jolly (2018) suggested that educators with several years of teaching experience were more likely to use differentiation strategies than those educators with less experience; therefore, matching less experienced teachers with veteran teachers for mentoring is another way to support teachers.

Teachers who participate in an ongoing professional learning community have opportunities to develop differentiation strategies by sharing and critiquing practices (Brennan, 2019; Copur-Gencturk et al., 2019; Frankling et al., 2017; Skyhar, 2021). In most cases, administrators recognize the need to set aside resources and time for educators to collaborate in professional learning communities, which can lead to increased effectiveness, commitment, and student learning (Handa, 2019; Johnsen & Kaul, 2019; Mammadov et al., 2018). Frankling et al. (2017) state teachers reported a shift in thinking about differentiation less as an individualized instruction strategy and more as a best practice for its underlying principles.

Although there are many forms of delivering PD, Heck et al. (2019) stated there was little difference in gains achieved when comparing different types of PD. For educators to have a practical professional learning experience, the format is not necessarily important, but rather the organization of information (Owens et al., 2018). Above all, the models should use the constructivist approach by treating teachers as active learners, and the PD should be sustained, contextual, and collaborative, using a bottom-up structure allowing teachers to be the trainers in a face-to-face setting (Kelly et al., 2019; Macias, 2017; Owens et al., 2018). Authentic professional learning should transpire through a continuous process of inquiry, engagement, and practice, enabling teachers to become better educators, motivating teachers to willingly participate in the PD (Appova & Arbaugh, 2018; Ryan et al., 2017).

PD must focus on learning outcomes for the students (Macias, 2017). For example, focuses on curriculum or pedagogy are appropriate professional learning topics for promoting and supporting student learning (Brink & Bartz, 2017; Ryan et al., 2017; Sharp et al., 2018). Significantly, Copur-Gencturk et al. (2019) suggested that teachers' gains in pedagogical content knowledge are a greater predictor of student achievement than teachers' subject matter knowledge. Most teachers report student learning as a central motivator to professional learning (Appova & Arbaugh, 2018). Therefore, PD should be connected to teachers' goals to positively affect their students' learning (Heck et al., 2019; Owens et al., 2018).

Perceptions of Teachers, Administrators, and Gifted Learners

When it comes to differentiation, the perceptions of stakeholders are quite varied. According to Mofield (2020), many teachers think that gifted students' needs are not being met in the general education classroom. In another example, gifted education teachers feel that general education teachers do not want nor need differentiation support (Turner & Solis, 2017). However, most teachers agree that there is a need for differentiation, specifically student choice and flexibility (Russell, 2018). The use of choice is a deliberate instructional strategy that supports students' engagement (DeMink-Carthew & Olofson, 2020; Ireland et al., 2020; Williams et al., 2016). Teachers believed that differentiation increased students' desire to learn, their motivation, and achievement (Frankling et al., 2017; Mammadov et al., 2018; Pereira et al., 2019; Waldrip et al., 2016). In contrast, some teachers' perceptions of differentiation implementation are that it is impractical, unreasonable, or ineffective (Turner & Solis, 2017).

There is often a discrepancy between teachers' and administrators' perceptions of differentiated instruction. In most cases, administrators believed that teachers have the necessary access to and support from resource teachers (Cross et al., 2018). However, some research indicates that contrary to what their principals believe, the teachers do not believe they have enough support to differentiate instruction (Cross et al., 2018). When reporting the implementation of differentiation strategies, there were significantly fewer reports made by principals than made by teachers (Handa, 2019). The strategies include higher-order thinking opportunities, concept-based learning, and real-life problem solving (Handa, 2019; Ireland et al., 2020).

Most students perceive differentiated instruction positively (Arnesen et al., 2019; Brigandi et al., 2018). Students appreciate having opportunities to choose what and how they learn (Dare & Nowicki, 2019; DeMink-Carthew & Olofson, 2020; Horak & Galluzzo, 2017; Netcoh, 2017). Students often used the words freedom and free when describing what they liked about projects in which they had options for learning (DeMink-Carthew & Olofson, 2020). In additional, student participation frequently increased (Haymon & Wilson, 2020). Both gifted learners and non-gifted learners supported acceleration as a strategy for providing equity in differentiating instruction for gifted learners (Dare & Nowicki, 2019). Some students believe they were not being challenged or were bored by instruction that was not catered to meet their learning needs (Dare & Nowicki, 2019; Ireland et al., 2020; McGrath, 2019). Watts (2020) found gifted learners sometimes face behavioral challenges when differentiated instruction is not provided. Students often are corrected for perceived misbehavior as they wait for other students to finish work or partnered with less capable students (Watts, 2020).

Summary and Conclusions

In summary, the literature review for this study addressed nine topics. The nine topics for this qualitative study are (a) definition and identification of gifted learners; (b) serving gifted learners; (c) concepts of differentiation; (d) strategies for implementing differentiation; (e) barriers and challenges associated with differentiation; (f) successes and student achievement accredited to differentiation; (g) teacher preparedness and preservice; (h) PD; and (i) the perceptions of teachers, administrators, and gifted learners. The review of the research revealed a lack of agreement among educational experts in

how to define giftedness or identify a gifted learner. On the other hand, most experts in the field agree that serving gifted learners demands a high-quality curriculum, which requires teachers to have an authoritative understanding of strategies suited for gifted students.

Although the review of the research indicates many different views of the concept of differentiation, most of the literature described differentiation as a method in which instruction is adapted to cater to learner diversity. Differentiation strategies are shown to increase student achievement, motivate learners, and provide a positive learning environment (e.g., Brennan, 2019; Copur-Gencturk et al., 2019; Maeng, 2017; Park & Datnow, 2017). However, there are challenges such as lack of time and resources, which teachers perceive as barriers to differentiation (Brigandi et al., 2018; Cross et al., 2018; Johnsen & Kaul, 2019; Mofield, 2020; Russell, 2018; Turner & Solis, 2017). Nevertheless, teachers believe that differentiation has positive effects on students' performance and autonomy, as well as the teachers' self-efficacy (Brigandi et al., 2018; Frankling et al., 2017; Johnsen & Kaul, 2019; Mammadov et al., 2018). According to the review of the research, ongoing, quality PD and support is one way in which teachers can have success with differentiation (Brigandi et al., 2019; Copur-Gencturk et al., 2019; Frankling et al., 2017; Horak & Galluzzo, 2017; Mammadov et al., 2018). Bingham et al. (2018) reported that this is especially true when teachers are expected to use technology to provide personalized instruction. In addition, there is a need for clear expectations between teachers and administrators (Cross et al., 2018; Handa, 2019).

The best method for serving gifted learners is by differentiation, but implementation can come with challenges. Brennan (2019) stated that teachers create an environment to meet all students' learning needs when differentiated instruction is implemented. However, many teachers lack the knowledge, expertise, or resources to differentiate their instruction (Brigandi et al., 2018; Russell, 2018; Turner & Solis, 2017). Consequently, investigating the teachers' perceptions is needed to better understand the barriers teachers face so that schools and districts can provide adequate support for teachers to achieve adequate differentiation strategies providing gifted learners with the same opportunities for academic growth as regular education students.

As a result of this study, I intended to understand middle school teachers' perceptions regarding differentiation challenges for gifted learners. It was important to understand the teachers' needs and what kind of support they may require so that the teachers can be provided with the necessary tools to be effective educators of gifted students. This study provides data about the level of teachers' understanding of giftedness and gifted learners' needs, preparedness to differentiate, the differentiation practices teachers currently implement, and the challenges teachers perceive as barriers to differentiation. In the literature review, I discovered articles that address the gap in the practice of implementing differentiated instruction to serve gifted learners, which provides the need for further investigation as to what teachers perceive as barriers to differentiated instruction. According to the research, teachers face challenges such as lack of time, materials, resources, expertise, and training. Yet, most teachers believe that differentiation is a valuable teaching strategy needed to address the needs of all learners.

In Chapter 3 of this qualitative study, I describe how the methodology, research design, and approach can be justified for the research. I provide a description of the criteria for choosing participants and the methods of establishing researcher-participant relationships. In addition, the ways by which data were collected to understand teachers' perceptions were reviewed. Lastly, I explain the choices I made for coding, and I describe how I ensured accuracy and credibility.

Chapter 3: Research Method

The purpose of this basic qualitative study was to investigate general education teachers' perceptions of differentiating instruction for gifted learners and any challenges or barriers the teachers may experience at the middle school level. In this chapter, I describe the research method for the study, including the details of the research design and its rationale and my role as the researcher. I describe the methodology used, and the ethical procedures followed.

Research Design and Rationale

In this study, I investigated the teachers' preparedness to differentiate, the strategies used to differentiate, and the perceived barriers or challenges to differentiation by answering the following research questions:

1. What are the general education teachers' understanding of giftedness and the gifted students' needs at the middle school level?

2. How do general education teachers describe their preparedness to differentiate instruction for gifted students at the middle school level?

3. How do general education teachers describe their strategies for differentiating instruction for gifted students at the middle school level?

4. What do general education teachers perceive as barriers or challenges to differentiating instruction for gifted students at the middle school level?

I implemented a basic qualitative approach to better understand the challenges that teachers perceive as barriers to differentiated instruction for gifted learners at the middle school level. Qualitative research aims to understand individuals or groups in

their natural settings and reflect on the meaning the individuals or groups make from their experiences (Glesne, 2011). The justification of a qualitative research design for the current study was based on the need to understand participants' experiences. Using a basic qualitative approach, I provided information on how individuals interpreted their experiences and the strategies and techniques they used (see Merriam, 2009). Merriam and Tisdell (2016) described basic qualitative research as the manner in which individuals construct knowledge as they make meaning of their experiences. A basic qualitative approach focuses on understanding how individuals make sense of their worlds and experiences (Kahlke, 2014). In the current study, using this approach provided insight about barriers the teachers perceived as challenges to differentiating for gifted learners through an investigation of the teachers' experiences. The research findings were based on the participants' perceptions of their experiences when differentiating instruction for gifted learners.

Other qualitative approaches such as case study, ethnography, biography, narrative research, and grounded theory did not suit the purpose of this study. Although case study involves studying real-life events, the findings may not have been extended from this study to another case (see Dooley, 2002). The methodology and research questions were not structured for immersion in a culture; therefore, ethnography was not an appropriate approach choice. Like basic qualitative research, narrative research provides information about individuals' experiences; however, narrative research focuses on only one or two individuals (see Creswell, 2012). Lastly, the purpose of this study was not to develop a new theory; therefore, grounded theory was eliminated as a suitable

choice (see Corbin & Strauss, 2008). A basic qualitative approach allowed me to deliver

information on how participants perceive their experiences and the strategies and

techniques they use (see Merriam, 2009).

Role of the Researcher

My role in this study was to design the study, which included collecting and

analyzing data and presenting the findings. I gathered qualitative data from

semistructured interviews and a sentence completion activity. According to Ravitch and

Carl (2016), positionality refers to the researcher's role and relationship to the context of

the study. Because of the importance of positionality, I was conscious of my experiences,

beliefs, and principles during the research process. My role was that of a learner, and I

was careful to keep my personal feelings and thoughts in check during the study.

There was a possibility of a personal or professional relationship with the

prospective participants. I may have had some interactions with fellow Walden students

recruited through the Walden participant pool from previous classes. I was acquainted

with the participant engaged through snowball recruitment. There were no supervisory or

instructor relationships despite previous prior knowledge of some participants because I

have not held these positions in my educational or professional experiences.

My experience as a gifted education teacher includes teaching academic classes at

a gifted magnet school and teaching elective courses tailored for gifted learners. I also

have administered tests and gathered data to determine the students' eligibility for gifted

services. I have an undergraduate degree in kindergarten and elementary education and

graduate degrees in reading education and curriculum, instruction, and assessment. My

knowledge and experience in working in these capacities provided me with insight into understanding the importance of serving gifted students in a meaningful, effective manner and prompted my interest in developing this study.

I recognized that some biases may have formed through my experiences working with gifted learners; however, I made a conscious effort to disregard my experiences and to examine and understand the perspectives of the participants thoroughly. I maintained a reflection journal to assess my bias and subjectivity during the study (see Ravitch & Carl, 2016). In the journal, I wrote reflections about previous experiences and how they might have influenced my approach to the research. I minimized wording bias by transcribing participants' words verbatim. I also conducted an external audit when interpreting the data. The external auditors were doctorate-level peers who understood the data analysis process. The purpose of the external audit was for the auditors to examine the data and determine the validity of my initial interpretations (see Ravitch & Carl, 2016). I asked three of my doctorate-level peers to provide suggestions or ideas that I might consider as I interpreted the data.

Methodology

Participant Selection

I used purposeful sampling to select participants for the study (see Creswell, 2012). Purposeful sampling provided context-rich accounts of the participants based on their experiences and allowed for intentional selection of teachers who met the criteria for participation (see Merriam & Tisdell, 2016). My selection criteria for the purposeful sampling were general education teachers who provided instruction in academic content

areas and elective courses at the middle school level because their teaching assignments require them to work with heterogenous groups of students, including gifted learners. Only teachers who had gifted students enrolled in their classes were invited to participate in this study. I ascertained this information from the participants. Because certified special education and gifted education teachers are trained to address student diversity with differentiation, these teachers were excluded from this study (see Brigandi et al., 2019; Frankling et al., 2017). Purposeful sampling also permitted me to choose participants who could provide the information needed to answer the research questions.

I recruited eight participants to take part in sentence completion and individual interviews. Once I completed the eighth interview, no new data emerged; therefore, saturation was achieved (see Groenewald, 2004). Saturation likely occurred due to the similarity of the participants because most participants were of similar age and had similar teaching assignments (see Guest et al., 2006). The eight participants provided sufficient data to answer the research questions.

To identify, contact, and recruit participants, I posted a message in the Walden University participant pool and social media (see Appendix A). The message in the participant pool asked for participants who met the criteria to respond via email. I then sent interested participants an email that included the informed consent form and the requirements for participation. The criteria were listed on the consent form, and I confirmed the requirements with individuals. Once I received consent from potential participants, I began setting up times and days to conduct interviews via Zoom. As part of my researcher's notes, I documented the correspondence between myself and potential

participants on an Excel spreadsheet. The correspondence included the date of my initial email, the date of consent, the time and date of the interview, and the date I sent the Amazon gift card.

Instrumentation

The instrumentation for data collection consisted of the interview protocol (see Appendix B) and sentence completion stems (see Appendix C). Using two data collection instruments, I established sufficiency to answer the research questions. The recorded interviews took place remotely via Zoom due to COVID-19 social distancing practices. By using Zoom to conduct interviews, I audio recorded the participants' responses. In addition, I collected backup recordings using my cell phone and the Rev application. The Rev application transcribed the interview recordings.

I developed the interview protocol and sentence completion stems to organize the interview and follow a unique conversational path with each participant (see Ravitch & Carl, 2016). After developing the instrument, I asked an expert panel consisting of my doctoral committee to review the instrument and provide me with feedback to align the interview questions with the research questions. The final protocol consisted of nine questions (see Appendix B). I conducted one mock interview, which was not included in the final study. The interview protocol provided a way for participants to voice their opinions, perceptions, and experiences about differentiating instruction for gifted learners (see Glesne, 2011). The interview questions addressed teachers' understanding of giftedness, preparedness to differentiate, strategies teachers currently use, and perceived

barriers or challenges. Table 1 demonstrates the alignment of the research questions to the interview questions.

Table 1

Alignment of Research Questions to Interview Questions

Research question	Interview question
RQ1: What is the general education middle school teachers' understanding of giftedness and the gifted students' needs?	1. How would you describe a gifted learner? 2. What does differentiated instruction mean to you?
RQ2: How do general education middle school teachers at the study site describe their preparedness to differentiate instruction for gifted students?	3. How would you describe your preparedness for differentiating for gifted learners in a regular education classroom? 4. What kind of training (preservice or professional development) have you experienced in regard to differentiation? 5. What kinds of differentiation strategies did you learn during training?
RQ3: How do general education middle school teachers at the study site describe their strategies for differentiating instruction for gifted students?	6. How do you plan for differentiated instruction for gifted learners? 7. What kind of materials, resources, or technology do you use to differentiate instruction?
RQ4: What do general education middle school teachers at the study site perceive as barriers or challenges to differentiating instruction for gifted students?	8. What do you perceive as barriers or challenges to differentiating for gifted learners? 9. What kind of support would you like to receive to implement differentiation strategies for gifted learners?

It was important to schedule convenient and safe interviews amid COVID-19 social distancing practices for the participants. I began the interview by introducing myself and then chatted with the participant to tell me a bit about themselves. This

process helped put the participant at ease and allowed them to ask any questions before I asked for permission to record the session. At this time, I reiterated the purpose of the interview, requested permission to record, and began conducting the interview.

Once the nine interview questions were asked, I explained the elicitation technique of using sentence stems and again asked the participants if they had any questions. The four sentence stems were used to reveal the participants' root beliefs about their experiences (see Barton, 2015; Woike, 2007). The last step in the process was to transcribe the interviews to begin coding immediately.

By asking the sentence completion stems after the initial interview questions, I obtained participants' responses based on their root beliefs and perceptions of their experiences (see Barton, 2015; Woike, 2007). The research questions were used to develop the stem questions. The alignment of the research questions to the sentence stems can be found in Table 2.

Table 2

Alignment of Research Questions to Sentence Stems

Research question	Sentence stem
RQ1: What is the general education middle school teachers' understanding of giftedness and the gifted students' needs?	1. I would describe giftedness and gifted students' needs as…
RQ2: How do general education middle school teachers at the study site describe their preparedness to differentiate instruction for gifted students?	2. I would describe my preparedness to differentiate instruction for gifted students as…
RQ3: How do general education middle school teachers at the study site describe their strategies for differentiating instruction for gifted students?	3. I would describe my strategies for differentiating instruction for gifted students as…
RQ4: What do general education middle school teachers at the study site perceive as barriers or challenges to differentiating instruction for gifted students?	4. A barrier or challenge to differentiating instruction for gifted students is…

Procedures for Recruitment, Participation, and Data Collection

Most of the participants for this study came from the Walden University participant pool and social media sites. I used snowball recruiting to gain access to additional potential participants to secure enough participants. Once I confirmed that the potential participants met the required criteria, I emailed everyone. The participants were provided informed consent in the email to which they replied, "I consent." I then scheduled the interview with the participant.

Using the interview protocol and sentence stem activity, I collected data from eight participants in interviews lasting approximately 30 to 40 minutes. The participants' interview sessions were audio-recorded with Zoom and the Rev application. The Rev application also transcribed interview sessions. Following the interviews, I sent the

individuals a follow-up email thanking them for their participation. Finally, I held

member checking interviews with a subgroup of three participants after the interview to

share my interpretations and gather any additional feedback.

Data Analysis Plan

In this section, I provide a detailed explanation of the process by which data were

collected and analyzed systematically to maintain fidelity to the participants and their

experiences. Researchers use data analysis as a part of the process to make sense out of

the data by systematically engaging with the data, searching for patterns (see Merriam &

Tisdell, 2016). I began data analysis as soon as the first interview had been conducted

(see Glesne, 2011). Once an interview was complete, I compared the audio recording to

the transcripts to ensure accuracy. Then, I numbered the lines in the transcript and

highlighted each interview and probing questions for easy reference. Once this was

complete, I used precoding by highlighting and bolding parts of the data worthy of note.

Next, I prepared an Excel sheet to transfer the data from each interview to begin coding. I

recorded the first cycle of coding and quick memos on the Excel sheet. Once this was

complete, I transferred all the data to a second Excel sheet. On the second Excel sheet,

data were organized by interview question. At this point, I completed the second cycle of

coding, adding any further observations to the short memos section. I also began

categorizing codes. To start an analysis of the participants' responses, I used a Word

document to paste all codes that emerged and had been documented on the Excel

spreadsheet. I began to look for trends, patterns, and differences by highlighting and

grouping codes. I then used the code groupings to develop categories and themes to answer the research questions.

Data Organization

It was of utmost importance for me to organize the data I collected logically and systematically. By having a plan for data management, I engaged in precoding, used the transcripts for analysis, kept the data organized on Word and Excel documents, and maneuvered through the data to become familiar with them (see Merriam, 2009). In addition, by organizing the data immediately after each interview, I reduced the amount of data I was examining at any given time, and I could check in with peers and my advisors as any other issues arose. All materials related to each interview were stored either in my locked desk or in folders on my password-protected home computer. These records identified the participants by number rather than by name.

Once I received the transcriptions from Rev, I compared the transcript to the Zoom recording for accuracy and adjusted as needed. To maintain fidelity to the participants' experiences, I compared the transcription to the audio recording to make any necessary corrections (see Merriam, 2009). I then copied data directly from the cleaned-up version of the transcription and pasted the data into the Excel and Word documents to further maintain fidelity. Lastly, I used Excel and Word documents to examine the data for trends, patterns, and frequencies.

Coding Procedures

Before beginning the process of coding, I completed precoding after each interview was conducted. Precoding was the first step by which I engaged with my data

to become familiar with it and generate possible codes (see Merriam, 2009). I

documented initial observations, significant participant responses, and notions for further

contemplation by precoding. The process I used involved bolding and highlighting text,

writing observations and questions in my self-reflection journal, and noting any specific

terms that emerged from the participants' responses on the transcripts.

Coding is the second step in the analysis process. It is used to label pieces of data

so that researchers can assign meaning to the data, eventually revealing patterns, trends,

and themes (Ravitch & Carl, 2016; Saldana, 2016). I employed both in vivo and pattern

coding. In vivo coding is an inductive approach by which I used direct quotes of the

participants' responses, allowing me to maintain fidelity (see Merriam, 2009). In contrast,

pattern coding helped me discern similarities, differences, and frequencies (see Saldana,

2016). As part of the process, I reviewed the data sets multiple times while completing

interviews. This allowed me to develop new codes, eliminate some codes, and change

other codes. This process also allowed me to become very familiar with the data. To

organize the data during coding, I highlighted pieces of data to identify patterns and

trends.

Once the coding process began, I formulated definitions for each code consisting

of a few words to define the code. Applying the cyclical approach to coding, I reviewed

the data after each coding round to ensure consistency among code definitions. This also

allowed me to identify any discrepancy in the data. Using my self-reflection journal, I

methodically reflected on what I was learning from the data, any similarities, differences,

or frequencies in the data, codes being developed and revised, and any questions I might

have. Equally important was the use of Microsoft Excel and Microsoft Word to organize

and sort data by highlighting and bolding texts, selecting codes, recording memos, and

looking for patterns. Because the study's goal was to answer the research questions, I

searched for relationships and connections between the participants' responses to identify

key concepts that would emerge as themes (Glesne, 2011; Merriam & Tisdell, 2016).

Themes

As I grouped, combined, and deleted codes, themes emerged from the data. By

engaging with the data as part of the ongoing analytical process, I discovered

relationships and trends between codes. I looked for similarities, differences, and

frequencies in the data. I developed categories and then themes to aggregate codes and to

reflect patterns in the data. Once the categories and themes had been established, I

recoded and reorganized the data as needed using the themes and again determined what

might be missing and what data did not seem to fit in. Finally, I began to consider how

the themes fit into the bigger picture of my understanding of the data, and the relationship

between the themes and the research questions and conceptual framework.

Procedure for Addressing Discrepant Cases

Discrepant cases counter the emerging patterns and themes within the data

(Ravitch & Carl, 2016). If during an interview, a participant's response did not appear to

fit into emerging patterns, I noted this for further consideration, and then by constantly

reviewing and comparing data looking for patterns and trends, I was quickly able to

identify if the response could be considered a discrepant case (see Flick, 2018). If

discrepant cases appeared in the data, I noted in my self-reflection journal to consider

why the discrepancies may have occurred and discussed the case in my research findings. The analysis and interpretation of the data were reinforced by considering every piece of data, including those that appeared to be discrepant (see Merriam, 2009).

Trustworthiness

Trustworthiness is a reflection of the extent to which qualitative researchers' findings are true to the participants' experiences (Ravitch & Carl, 2016). One method I used to ensure validity and establish credibility was member checking (see Merriam, 2009). I used member checking with three participants to discuss preliminary findings and obtain feedback from the participants. I shared some codes captured under each theme and possible recommendations for further research. I audio recorded the follow-up interviews and incorporated the data into my analysis. To establish intra-coder reliability, I used the same coding process with each data set.

Researchers use triangulation to ensure enough data to provide quality and depth of information to answer the research questions (Merriam & Tisdell, 2016). Because the purpose of triangulation is to provide sufficient, valid data, I used two data collection methods to confirm my interpretations of the data and to answer the research questions (see Glesne, 2011). I collected data from the participants' responses to the interview questions and sentence completion stems. Another source of data for triangulation were the results of the member checking interviews. To triangulate these data, I compared the results from all three sources.

Being aware of bias and validity is critical for any research study. Validity refers to the methods researchers use to ensure rigor in that the findings are faithful to the

participants' experiences (Glesne, 2011). The self-reflection journal is an ongoing system in which the researcher reflects about the research process and develops ideas for changes in practice (Merriam, 2009; Ravitch & Carl, 2016). I used the journal to obtain reflexivity while self-reflecting, track any changes in methodology, and record any questions I might have had. During the research process. I also used the self-reflection journal to help me remain conscious of my bias and subjectivity during the research process. By staying aware of any bias, the trustworthiness of the research process was strengthened.

Lastly, transferability of this study was addressed by providing detailed descriptions of the data and findings so that the data could be compared and applied to other settings (see Merriam, 2009). Precise interconnected detailed descriptions of the data will allow the reader to transfer information to different settings. I provided the details of the data using rich and specific descriptions. These could provide support for another study.

Ethical Procedures

Merriam and Grenier (2019) acknowledged that the researcher is responsible for addressing ethical issues in the researcher-participant relationship and protecting the individuals' rights in the study. To ensure the study included and followed ethical procedures, I sought approval of this study and adhered to the ethical requirements according to the Walden University Institutional Review Board (IRB). The IRB is responsible for ensuring that all Walden University research observes with the university's ethical standards. Before a study can be initiated, the IRB's ethics review and approval are required to protect the rights and welfare of those participating in the study.

I did not complete any research until I received the required approval from Walden University's IRB. The approval number for this study from Walden University was 02-01-21-0675439 and it expired on January 31, 2022.

I emailed a letter of invitation and consent to individuals once potential participants responded to the message in the Walden University participant pool or from social media. The email described the procedures for data collection, confidentiality protection, and time required for the interview. Participants replied, "I consent," to indicate their willingness to participate in the study.

I followed the ethical research standards set by Walden University's IRB. I ensured the welfare of the participants by maintaining confidentiality, informed consent, and protection from harm (see Oliver, 2010). As the researcher, I took all necessary steps to protect the participants' rights.

I ensured confidentiality was in place to protect the participants' rights. As individuals agreed to participate, I informed the participants that their identity would not be shared with anyone. In addition, I assigned the individual a code eliminating all identifying information so that data collection was confidential. All coded data were kept secure in either my locked desk or on my password-protected computer and will remain secure for 5 years, after which I will destroy them.

Informed consent is used to convey details about the study, such as the purpose, the time involved, potential risks or benefits, and how results will be disseminated. Informed consent protects participants' rights by indicating what to expect if the individuals choose to participate in the study. By using informed consent, the researcher

promotes a positive relationship with the potential participants (Ravitch & Carl, 2016). I

provided informed consent in an email I sent to the potential participants once they

expressed interest in participating in the study. The informed consent included the

purpose of the study, the timeline, the interview protocol, the risks and benefits of

participation, and the participants' rights. I also requested permission to audio record the

interviews conducted via Zoom. Lastly, I ensured that participants understood that the

study was strictly voluntary, and the participants could choose to withdraw at any time.

The participants had multiple opportunities to ask questions. The potential participants

were able to make an informed decision about whether they wanted to participate in the

study. As individuals responded "I consent" to the recruitment email, I stored the emails

in a labeled folder indicating their participation.

I took several precautions to make sure the study participants were protected from

harm. I followed Walden University's IRB standards, obtained informed consent

safeguard the participants' rights and welfare, and maintained participant confidentiality.

In addition, I conducted all interviews via Zoom to maintain social distancing practices

for the participants' comfort and safety during COVID.

Summary

In Chapter 3, I include an overview of the methodology for this study, beginning

with the basic qualitative research design and rationale. I describe my role as a researcher

and how I managed potential bias. This chapter also included the processes for participant

selection, instrumentation, and procedures for recruitment and data collection. Lastly, in

Chapter 3, I discuss the plan for data analysis and trustworthiness. Chapter 4 describes

the data collected and a detailed account of the data analysis.

Chapter 4: Results

The purpose of this basic qualitative study was to investigate general education teachers' perceptions of differentiating instruction for gifted learners and any challenges or barriers the teachers may experience at the middle school level. Using Tomlinson's (2015b) theory of differentiated instruction as a framework, I investigated the teachers' preparedness to differentiate, the strategies used to differentiate, and the perceived barriers or challenges to differentiation by answering the following research questions:

1. What are the general education teachers' understanding of giftedness and the gifted students' needs at the middle school level?

2. How do general education teachers describe their preparedness to differentiate instruction for gifted students at the middle school level?

3. How do general education teachers describe their strategies for differentiating instruction for gifted students at the middle school level?

4. What do general education teachers perceive as barriers or challenges to differentiating instruction for gifted students at the middle school level?

In Chapter 4, I describe how I developed the codes, categories, and themes. I also explain the process I used to move inductively from codes to categories to themes. I address each research question and present data to support my findings. Lastly, I describe the implementation of strategies I used to ensure trustworthiness.

Setting

I invited middle school teachers who had gifted students enrolled in their classes via Facebook, Linked In, the Walden University participant pool, and snowball

recruitment to participate in the study. Because of COVID-19 and the social distancing

protocols during the late spring and early summer of 2021, I conducted the interviews

virtually using Zoom. The sample consisted of eight middle school teachers who had

gifted students enrolled in their classes. I confirmed the enrollment of gifted students in

the participants' classes before beginning each interview. Six participants were teachers

with academic courses such as English language arts or math. Two of the teachers taught

elective classes, physical education and video production. I did not collect any additional

demographic information.

Data Collection

The goal of qualitative research is to understand individuals in their natural

settings and to reflect on the meaning the individuals make from their experiences

(Glesne, 2011). Data were collected through semistructured interviews and sentence

completion stems. Purposeful sampling was used as the participants were intentionally

selected to participate in the study (see Creswell, 2012). General education teachers who

provide instruction in academic content areas and elective courses at the middle school

level were appropriate as participants for this study because their teaching assignments

require them to work with heterogenous groups of students, including gifted learners. A

total of eight participants was sufficient to reach saturation because no new data were

emerging from the participants' responses (see Groenewald, 2004). The sample size and

use of two data collection methods provided enough data to answer the research

questions.

I used both Zoom and the Rev application to record the interviews, and then I employed the Rev application to transcribe the interviews. Once the transcriptions were available, I saved them as Word documents. I took notes during the interview regarding anything notable such as an individual's body language or reaction. I also wrote questions for myself to consider.

Each participant chose the day and time convenient to participate in the interview. Interviews took place between June 19, 2021, and July 2, 2021. Before the interview, I emailed the participants the consent form, which included the purpose of the interview, the expected length of the interview, and a notification of potential risks. All participants consented via email before the interview with the statement "I consent." I met virtually with each participant once to conduct the interview and present the sentence stems, but later met a second time with three participants for member checking. I used member checking as a method to increase the accuracy, credibility, and validity of the data collected during the study (see Merriam & Tisdell, 2016). The follow-up discussions were conducted between August 17, 2021 and August 24, 2021. The duration of each interview was approximately 30 minutes.

All interview audio recordings and transcriptions were saved securely on my password-protected home computer. The data collected will be stored for 5 years, after which the data will be destroyed. I maintained participant confidentiality by identifying participants as Participant 1, Participant 2, and so on. No identifying information of participants was included in the study.

Data Analysis

As soon as the first interview was completed, I began analyzing the data. I regularly reviewed the data and as themes and patterns began to develop. I studied the emergence of patterns to develop categories and themes to analyze the data. I used a three-step process to analyze the data (a) Step 1 comprised the organization and preparation of the data; (b) Step 2 involved thematic analysis in which in vivo and pattern coding were used; and (c) Step 3 encompassed the search for and identification of emergent themes.

Step 1: Organization and Preparation of Data

In the first step of the data analysis process, I organized and prepared the data. To achieve this, I collected the Zoom audio recording, Rev application transcription, and notes taken during the interview in a file labeled for each participant in my password-protected computer. I labeled each file as Participant 1, Participant 2, and so on. As each interview was completed, I followed the same process of checking the transcript with the audio recording to ensure accuracy. I reread the data several times. I concluded precoding by highlighting and bolding words and phrases that appeared significant or notable. I then transferred each participant's responses into an Excel spreadsheet to organize responses by participant and interview question.

Step 2: Thematic Analysis of Data

To begin the thematic analysis of the data, I applied in vivo coding. By employing in vivo coding, I maintained fidelity to the participants' responses (see Merriam, 2009). I used the participants' words to compile a list of codes derived from commonalities in

participants' responses. I reviewed each transcript line by line to identify significant words or phrases while recording my thoughts and reactions on the Excel spreadsheet in a memo column. I used a cyclical approach to coding, reviewing, and rereading previous interview responses after each new interview was completed to reduce the data and identify additional codes. In cases where the data did not seem to fit, I set those data aside for further reflection.

A total of 44 codes emerged from in vivo coding. I determined each code according to individual participants' responses. For example, the code *easy mastery of content* emerged from the participants' responses when asked to describe a gifted learner. Participant 1 stated that gifted learners were "able to understand concepts quickly and easily." Participant 3 responded that they were able to "retain the information quicker and ready to move on faster." Participant 4 stated that students were "able to dive right in with whatever the content is, whatever the information is, and be able to have an approach." A second example of how a code emerged from the data was when participants responded to the question that described what differentiated instruction meant to them. I developed the code *individualized learning* based on Participant 1's response, "individual needs of the learner in mind;" Participant 2's response, "Meet every student where they're at;" Participant 6's response, "Capture all students, and you should use different reading materials for each and every student;" and Participant 8's response, "individualized instruction based on whatever their needs are."

In addition to in vivo coding, I began to build categories by examining patterns to discern similarities, differences, and frequencies (see Saldana, 2016). Using a color-

coding system, sticky notes, and large sheets of chart paper, I generated categories from

the grouped data. I collapsed categories that were similar or overlapping and made new

categories as needed. When data did not fit into a category, I created an additional

category as needed. Lastly, I compared and organized the categories to reveal

connections between the data and the research questions. A total of 12 categories

emerged from pattern coding and I recorded them on the Excel sheet. One example of a

category that developed from the data was *materials and resources*. This category was

created from the codes *unengaging provided materials*, *no textbooks or limited resources*,

and *inconsistent materials*. Another example of a category that emerged is *challenges to*

differentiate, which emerged from the codes *comfort levels of teachers*, *standardized*

testing and accountability, and *different levels of learners*.

Step 3: Search for and Identification of Emergent Themes

After I completed pattern coding, I studied the categories to identify relationships

among the data, which I then condensed into four themes that addressed the research

questions. I compared the four themes to Tomlinson's theory of differentiation and

related literature to ensure alignment. The themes reflected insights revealed from

participants' responses about their perceptions of differentiated instruction. For example,

Theme 4 was: Teachers require professional support to differentiate instruction for gifted

learners. I developed Theme 4 based on the categories of *challenges to differentiate*, *need*

for effective PD, *teachers' attitudes*, and *administrative/staff support*. The four themes

were (a) Teachers understand gifted learners' needs; (b) there are varying levels of

preparedness to differentiate instruction for gifted learners; (c) teachers have limited

resources and strategies for differentiating instruction for gifted learners, and (d) teachers

require professional support to differentiate instruction for gifted learners. Table 3

demonstrates the progression of codes to categories to themes and the alignment to the

research questions.

Table 3

Alignment of Codes to Research Questions

Code	Category	Theme	Research question
Code 1: Independence Code 2: Quick workers Code 3: Critical thinkers and thinking skills Code 4: Easy mastery of content	Category 1: Characteristics of gifted learners	Theme 1: Teachers understand gifted learners' needs	RQ1: What are the general education teachers' understanding of giftedness and the gifted students' needs at the middle school level?
Code 5: Need to be challenged Code 6: Real-world connections and applications	Category 2: Gifted learners' needs		
Code 7: Preparedness levels Code 8: Different teachers, different needs Code 9: Lack of coursework	Category 3: Teachers' preparedness	Theme 2: There are varying levels of preparedness to differentiate instruction for gifted learners	RQ2: How do general education teachers describe their preparedness to differentiate instruction for gifted students at the middle school level?
Code 10: Training on the job Code 11: Teacher created plans and materials	Category 4: Teachers' evolution		
Code 12: Need for clear explanation and understanding of DI Code 13: Empowerment for students	Category 5: Definitions of differentiation		
Code 14: Individualized learning	Category 5: Definitions of	Theme 2: There are	RQ2: How do general education

Code	Category	Theme	Research question
	differentiation	varying levels of preparedness to differentiate instruction for gifted learners	teachers describe their preparedness to differentiate instruction for gifted students at the middle school level?
Code 15: Minimal planning Code 16: A lot of work Code 17: Vertical alignment Code 18: Creative spin for gifted Code 19: Enrichment and exploration	Category 6: Planning		
Code 20: Gifted as peer helpers Code 21: Student engagement Code 22: Assessment and monitoring Code 23: Supports Tomlinson Code 24: Problem- and project-based learning Code 25: Learned via PD Code 26: Grouping	Category 7: Methods and strategies teachers use	Theme 3: Teachers have limited resources and strategies for differentiating instruction for gifted learners	RQ3: How do general education teachers describe their strategies for differentiating instruction for gifted students at the middle school level?
Code 27: Unengaging provided materials Code 28: No textbooks or limited resources Code 29: Inconsistent materials	Category 8: Materials and resources		
Code 30: Comfort levels of teachers Code 31: Focus on student achievement and curriculum goals Code 32: Standardized testing and accountability Code 33: Different levels of	Category 9: Challenges to differentiate	Theme 4: Teachers require professional support to differentiate instruction for gifted learners	RQ4: What do general education teachers perceive as barriers or challenges to differentiating instruction for gifted students at

Code	Category	Theme	Research question
learners			the middle school level?
Code 34: Limited PD for gifted Code 35: Time to digest Code 36: Modeling for teachers Code 37: Unrealistic expectations Code 38: Quality	Category 10: Need for effective PD		RQ4: What do general education teachers perceive as barriers or challenges to differentiating instruction for gifted students at the middle school level?
Code 39: Perceptions of teachers Code 40: Request for help and support Code 41: Need for parental involvement	Category 11: Teachers' attitudes		
Code 42: Resource personnel Code 43: Lack of support Code 44: Staff collaboration and support	Category 12: Administrative and staff support		

Discrepant Cases

While reviewing the data for analysis, I discovered that one of the participants' experiences did not follow similar data patterns. I examined these data for evidence of discrepancy (see Merriam, 2009). One of the interview questions elicited data from Participant 6 that were not consistent with data from other participants' responses. Because these data did not fit the patterns that had emerged, the discrepant data were discussed in the narrative so that readers could assess the data and draw conclusions based on the evidence presented (see Schwandt, 2015).

Results

To present the results from this study, the narrative that follows is framed by the research questions. Each of the four research questions is addressed by one theme developed from the data. A summary of the data is presented with quotes from the participants, narratives to explore the emerging themes, and tables to review the findings.

Research Question 1

The first research question addressed the general education teachers' understanding of giftedness and the gifted students' needs at the middle school level. Using the interview protocol and elicitation technique, I obtained information about general education teachers' understanding of giftedness and the gifted learner's needs at the middle school level. I grouped six codes from the data to create two categories from which the first theme was developed. The categories that apply to this research question were characteristics of gifted learners and gifted learners' needs. The two categories were grouped to develop Theme 1 (Teachers understand gifted learners' needs). The following section describes how patterns emerged from the data and the evidence to support the patterns.

Under Theme 1, the characteristics of gifted learners were grouped along with gifted learners' needs. Theme 1 brought together information about how teachers described gifted learners and the specific needs a gifted learner might have. All participants had their working definition of what characteristics a gifted student might have and how the gifted learner should best be served. Patterns emerged as many participants described gifted learners as independent, fast workers, critical thinkers, and

quick learners. The data suggested that each participant developed a definition of giftedness and the needs of gifted learners over time and through their own experiences working with gifted students. Most participants' experiences were similar in that they believed that gifted learners learned faster than most students; the gifted learners often had a great deal of background information and there was a need to challenge gifted students. Three participants' responses differed from other' responses concerning gifted learners' needs. Participant 5 stated that gifted learners also needed a person who could accommodate and support their needs. Participant 6 also mentioned the need for a person who could create a curriculum suitable for the learners' needs. Similarly, Participant 8 believed that gifted learners needed a teacher who would consider their needs. Overall, the participants recognized that gifted learners had characteristics and needs different than most other students.

When describing giftedness, there were many commonalities in the participants' responses. Participant 1 reported that a gifted learner often "exceeds expectations, one who can perform with a high level of independence, often understanding concepts quickly and easily." When I further prompted Participant 1, Participant 1 went on to say that gifted learners do not "require a lot of academic support to perform high academic achievement." Similarly, two other participants believed that gifted learners were quick learners. For example, Participant 3 stated, "A gifted learner learns quicker than the average student and finishes their work before other students. May also retain the information quicker and ready to move on faster." Likewise, Participant 5 observed that gifted learners were "fast learners, but also had good memories for mastery of content."

Although Participant 3 had similar answers to other participants, Participant 3 was the only participant who described gifted learners as those students who were "above the 85 percentiles of their norms, scores, and achievement."

Whereas Participants 5 and 6 had very similar responses to other participants when describing gifted learners, both participants also made connections to the importance of having people advocate and support gifted learners' needs. To illustrate, Participant 5 believed that gifted learners "need people who are accommodating…they need someone appreciative and someone willing to go their path." Likewise, when describing what gifted learners need, Participant 6 stated:

> Need of someone to come up with a curriculum that is fitting them, the need to use differentiated instructions, and the need for someone to listen to them, and they need people to understand and not judge, and to motivate them.

Consistent with the response of Participant 6, Participant 8 described the teacher as someone who needed to "look at the whole child and the needs of the individual, strengths, and weaknesses to be able to reach them best."

As participants defined what a gifted learner was, three participants believed that gifted learners could be defined in many ways. In other words, the participants believed that gifted learners had qualities that could be classified in various ways depending on what they had been exposed to and the natural talents the learner might possess. In one example, Participant 8 stated that there is not just one way to describe a gifted learner "because giftedness comes in many different ways." When prompted further, Participant 8 went on to say that "creativity and adaptability can describe gifted learners as well as

the ability to use critical thinking skills." Similarly, Participant 4 described gifted learners as:

> Well, there's a lot of different descriptions for a gifted learner. In my experience, I found that gifted learners fit in a couple of categories. You either have those students that come with a great background, wealth of knowledge already. They have a wealth of life experiences that they're able to apply. They're able to dive right in with whatever the content is, whatever the information is, and be able to have an approach. They have great critical thinking skills already in place. But then, there's your gifted learner who is more of a fluency. They're able to work quickly. Things come very easy to them. They may not even have that experience, but things come very easy.

Participant 6 likewise reported that gifted learners were independent, quick learners who frequently understood content easily. However, Participant 6 also stated that a gifted learner might also have a high intelligence quotient. When further questioned, Participant 6 explained that a gifted learner has different capabilities than other learners "in terms of how they explain themselves."

Another commonality emerged concerning gifted learners' needs within the responses of Participants 2 and 4. Both participants believed that gifted learners needed to be challenged to meet their academic needs. For instance, Participant 2 stated that gifted learners need to be challenged because the students often think "they know it all." When probed further, Participant 2 said that perhaps gifted learners know the content, but by not being challenged, behavior problems may develop, or students may become bored. In like

manner, Participant 4 stated that gifted learners can be quick workers, and the teachers need to "stay ahead of them by having material that enriches and challenges to keep them engaged with the content."

As well as the need to be challenged, a common pattern appeared in which Participants 4, 7, and 8 stated that gifted learners needed real-world applications and connections. Having the opportunities to apply their background knowledge and experiences provided enriched and meaningful learning for gifted learners. To demonstrate this point, Participant 8 stated that gifted learners "have the ability to make connections between what they are learning in class, previously learned material, and real-world experiences." The participant noted that when gifted students learn something new, they get excited about the connections. Likewise, Participant 4 stated that when gifted learners have so much background information, they are able "to take different inroads into things." The participant went on to say that gifted learners think more deeply, and they want to apply their knowledge to different things. Participant 7 further supported this opinion, stating that gifted students need to be "engaged in their curiosity."

Many of the participants had contrasting definitions of giftedness and gifted learners' needs. Some participants reported that gifted learners were quick, independent learners, whereas other participants stated that giftedness is multi-faceted. Teachers believed that gifted learners needed to be challenged and enriched to remain engaged with the content being taught. In other cases, teachers believed real-world connections and applications were key to meeting gifted learners' academic needs.

Research Question 2

The second research question addressed how general education teachers describe their preparedness to differentiate instruction for gifted students at the middle school level. In the interviews, I asked individuals about their experiences with university coursework and PD, which they may have engaged in to prepare them for differentiating instruction for gifted learners. As I analyzed the data, several patterns emerged, which I grouped into categories under Theme 2. The categories applicable to this research question were *teachers' preparedness*, *teachers' evolution*, *definitions of differentiation*, and *planning*. The four categories were grouped to develop Theme 2 (There are varying levels of preparedness to differentiate instruction for gifted learners). In the following section, I describe how patterns emerged from the data and the evidence to support the patterns and variations in the data.

Theme 2 served as the umbrella to describe how teachers have been prepared or trained to differentiate instruction and how teachers prepare their lessons for gifted learners. A common pattern emerged when participants described the experiences which prepared them to implement differentiation for gifted students. Of the eight participants, seven individuals reported that they did not receive differentiation training while in undergraduate school. Six individuals cited PD as the source of preparation for differentiation.

Both Participant 1 and Participant 2 reported that they attended no university classes that addressed differentiation; however, the participants did engage in plenty of PD. Specifically, Participant 1 reported that her preparedness was "not quite adequate."

In addition, Participant 2 stated, "when I was going to school many years ago, we did not have that kind of class, but at work we've had plenty of PD." When further questioned, Participant 2 stated that she sought PD on her own time to improve her differentiation teaching practices. Participant 7 also noted a lack of coursework regarding differentiation, stating, "Even in my undergraduate studies, in English education, I didn't see training to meet students with an exceptional, whether they are still in special needs, whether they're gifted or had a learning disability." Likewise, Participant 5 reported that she did not "really think there was concentration on differentiation."

Similarly to other participants, Participant 8 also had "several PDs throughout my career, short career," but Participant 8 also stated, "I think I learned a lot through my college courses." In contrast to other participants, Participant 8, who has been teaching for 5 years, learned quite a bit about differentiation during her university coursework, stating:

> There was a differentiation course that I took in my undergrad, and so I remember some things from that. I can't remember the book that we used the title of it, but I remember reading all these different strategies and different things you can do in your classroom. But also, the AIG [academically and intellectually gifted] courses that you have to take to get your certification, there was a differentiation course, and I remember having to take a lesson plan and make every part of the standard differentiated for below grade level learners, for regular learners, and then for gifted learners, and that was really probably one of the first times I really thought it all through.

When promoted, Participant 8 further described her coursework as including

differentiation strategies and implementation tips. Table 4 summarizes the participants'

experiences.

Table 4

Teachers' Descriptions of Preparedness

Participant	No training or coursework	Self-trained	Professional development	Coursework
Participant 1			X	
Participant 2			X	
Participant 3			X	
Participant 4		X	X	
Participant 5			X	
Participant 6	X			
Participant 7	X			
Participant 8			X	X

As participants described their preparedness to differentiate, there were some

differences regarding the participants' descriptions of differentiated instruction.

Significantly, Participant 4 noted frustration, stating that during trainings it was not

clearly explained when and how to implement differentiation, instead that teachers just

needed to do it. To illustrate, Participant 4 said:

That you need to differentiate. Well, you got to differentiate for those kids. You

got different kids, and they have different learning styles. You have to

differentiate. You hear the word. It's a nice big word, and you hear the word over,

and over, and over. Okay, so by doing what? I don't feel like I've had a lot of

direct training. They've said it, and then I was like, so, what exactly do I do?

What do you mean?

When further probed, Participant 4 stated that she did not believe there was a lot of

explicit training to provide a clear understanding of what precisely differentiation entails.

Participant 4 described her perception of differentiated instruction as:

Gosh, do I even know? We had so many different schools of thought about what

differentiation is. I think when I think of differentiating it is meeting the needs of

the student. That to me is the core of it is being able to meet that student where

they are and to see what I can do to structure that instruction ... Tailored is the

word I'm looking. Tailor that instruction to their needs.

Participant 4 further noted that differentiation could mean moving faster, learning

independently, or compacting programs.

Along the same lines, Participant 1 believed differentiated instruction to mean that

the teacher is "providing instruction that's designed with the individual needs of the

learner in mind." Both Participants 3 and 7 described differentiated instruction for gifted

learners as the need to challenge the learner. For example, Participant 3 noted that

differentiated instruction meant "giving the students with higher learning levels more

challenging assignments after they have completed the mastery of the lesson." Along the

same lines, Participant 7 described the need to challenge the gifted learner:

When I think about differentiated instruction for a gifted learner, I would have to challenge that learner in the classroom so that learner does not become bored or see that class as redundant. So, I need to challenge that learner, so I can constantly keep their skills above.

Conversely, Participants 2 and 8 reported that differentiated instruction is meant to meet the students where they were, rather than challenge them. Both participants homed in on the idea of providing different methods of instruction or content to differentiate instruction. To illustrate, Participant 2 stated, "So differentiation means you meet every student where they're at. So, you may be doing the same skill, but the kid that's low gets a different kind of activity to do than the kid that's high." In the same manner, Participant 8 reported similar experiences:

It means meeting the student where they are. As teachers, I think it can be a difficult thing because you want to deliver the content to everybody in a way that reaches them to the best of your ability, but also each child needs something different, and so differentiation is reaching the kids where they need, so that's small groups or individualized instruction based on whatever their needs are.

Interestingly, Participant 8 further noted that differentiation could be very empowering for students when the "light bulb comes on." Although the participants had varying ideas of what differentiation was, the participants did share the similar idea that differentiation involved making changes within their modes of instruction.

Similar responses emerged when I asked teachers to describe their preparedness for differentiating for gifted learners. Of the eight participants, six participants considered

their preparedness levels as insufficient. Participants often expressed frustration when describing their preparedness levels. For example, when relating to preparedness, Participant 1 stated, "I would say just slightly below adequate." Participant 2 reported, "It could be a whole lot better." Participant 3 agreed, saying, "It could be better." Participant 2 reported that when preparing for differentiation, "I struggled. I really struggled. I don't think I do a good enough job to meet my gifted students where they need."

Participant 1 noted, "I'm not completely and totally prepared for that type of learner." When further questioned, Participant 1 stated that gifted learners were "few and far between," and, because of the participant's lack of access to gifted learners, Participant 1did not feel "extremely prepared." When again prompted, Participant 1 stated, "The things that drive me to prepare for my content requires so much differentiation for the other end, for the lower performing learners that my gifted learners tend to get the leftovers of me."

In addition, Participant 4 reported not being prepared to differentiate specifically for gifted learners because PD often focused on students who required academic support. To illustrate this belief, Participant 4 stated:

> Typically, more for special needs, because usually you're talking about either the EC [exceptional child] teacher's role, and that they're going to pull-out and do this, and that the classroom teacher could continue to do this. It was more for EC. And then, even talking about in the MTSS [multi-tiered system of supports] strain, how small group, individual, one-on-one, that was usually for the special

needs for my EC students, and not as much for my AIG [academically and

intellectually gifted] students.

Likewise, Participant 6 also described her preparedness for gifted learners as challenging

"without the proper training because of the need to engage every student."

Other participants noted that they felt overwhelmed because of the diversity or

size of their classes. Creating several plans of instruction to address student diversity and

managing large classes often became challenging for some participants. For instance,

Participant 4 stated, early in her career, she often "felt overwhelmed with the idea of

having to provide multiple lesson plans to the varying levels of learners in her class."

Participant 4 followed up with, "I got the idea that I should have twelve different lesson

plans…and if they can move faster, then you should move them on. Are you kidding

me?" In the same manner, class size also presented a challenge to differentiate. In one

example, Participant 3 reported class size being a barrier, stating that the "excessive

amount of students you have in a classroom [is a barrier]…31 students are different than

having 12."

Another pattern that emerged under Theme 2's umbrella is that different teachers

have different needs to support their preparedness levels to differentiate for gifted

students. Differences can occur in teachers' preparation and experience levels, the content

taught by the teachers, and the type of students in a teacher's class. In one instance,

Participant 5 reflected that she had many gifted learners, and the need to serve them all

could be challenging. To illustrate, Participant 5 stated, "So, getting to know what their

needs really are, is a challenge and getting to know what to do with every gifted learner...

Especially if you have a large number of gifted learners, it could be overwhelming to you." On the contrary, Participant 1 and Participant 2 both stated that they have very few gifted learners because of the content they teach. Participant 1 also noted that content could drive teachers' preparedness or ease to differentiate:

> And then, we gear it toward our content areas. So, the core teachers differentiate in a different way than elective teachers may differentiate. We have a little bit of more opportunity depending on your content area for varied differentiation versus always differentiating in the same way over and over again. Some of our content have somewhat embedded differentiation can't help but differentiate, but others might have more of a challenge. I personally have somewhat of an embedded differentiation with my content.

Another similarity emerged in participants' responses when participants described their evolution and adaptability to prepare for gifted learners. Three participants believed that because of their experiences and desire to serve gifted learners, the participants were able to meet the needs of their gifted students. Take the case of Participant 4, who reported that differentiation preparedness was "continuing to evolve but has reached a place where I feel like I am meeting my students' needs. Some of it through training, some of it through self-realization." When further probed, Participant 4 stated that the school district's attitude toward preparing teachers was "Well, they're smart. You'll figure it out, and they'll figure it out." Participant 5 stated that she had to "learn on the job," and Participant 8 described her preparedness as a "work in progress."

Differences were revealed as participants reported how they created plans and materials as part of their progression in preparing for gifted learners. Many participants stated that they spent minimal time planning lessons specifically for gifted learners because planning requires a great deal of effort and time. Participant 1 said that she has an "enrichment plan as part of her standing lesson plans." Participant 1 further supported her response when she said that she has tiered the assignments within the enrichment plan, though the plans are not "necessarily individualized." Whereas Participant 2 plans lessons for gifted learners by trying to add a creative spin to activities but has found that the gifted learners did not want to participate even though the activities were more fun. Specifically, Participant 2 noted:

> It was more work, which the students were not interested in doing. Then I got to try to come up with something better for these gifted kids to do so. Many of the gifted kids didn't want to do the other activity because it was, even though it was more fun, more interesting, it was more work. So, a lot of the kids said, no thanks, and they were just fine doing the average thing.

There were other variations that emerged from participants' responses regarding how the participants planned or delivered differentiation for gifted learners. Some participants stated they used preassessments or student interest surveys, whereas others used rigorous learning opportunities, flexible grouping, and vertical planning. When planning for gifted learners, assessments and student interest surveys were used by Participants 3, 5, and 6. Participant 3 reported that once she assessed her students, she provided rigor with "higher-level learning" opportunities for her gifted learners.

Likewise, to best instruct gifted students, Participant 5 used flexible grouping to group students based on their skills, interests, and abilities. To clarify, Participant 5 added:

First, it will depend on the content of what you're going to learn that time, and what are the interests of these children. And they have varying interests. So, most of the time you'll find ourselves also embracing teamwork, and group work, and collaboration. So, that sometimes…there's the fast learners and the slow learners. And also coming up ways of getting to understand the needs of every student. So, this will guide you in coming up with the content.

Similarly to Participants 3 and 5, Participant 6 also noted the use of assessments to drive the decisions made about the content taught. Participant 6 went on to describe the use of teamwork and collaboration to address the needs of her students, stating, "It will encourage the students to be motivated and feel like they have something to contribute. It enables them to ask additional questions, which could be very meaningful and differentiated. And this promotes differentiated learning." Participant 6 found vertical planning to be essential when planning for gifted learners and providing the opportunity for exploratory learning. Participant 6 justified the use of exploratory learning:

So, for gifted students, I always try to find something more exploratory where they're discovering versus where I'm front-loading and scaffolding the information. I think that all kids can learn through exploring, but sometimes I feel like the lower-level learners miss the boat with what you're trying to get them to achieve, and it just becomes frustration.

Although the data collected within Theme 2 revealed some similarities regarding teachers' preparedness to differentiate instruction for gifted learners, there was variation in how teachers planned for and delivered differentiated instruction. Overall, teachers received most of their training from PD provided by their school districts and thus, had received varying definitions and understandings of what differentiation is. However, some participants expressed frustration in their lack of preparedness and knowledge of strictly how differentiation should be implemented. Some participants reported student diversity and class size as challenges to differentiation. Still, other participants believed they had successes to differentiation because they sought out PD and learned from their personal teaching experiences.

Research Question 3

The third research question addressed how general education teachers describe their strategies for differentiating instruction for gifted students at the middle school level. During the interview process, participants described and shared the strategies they employed for differentiating instruction based on the resources and experiences they had. The categories that apply to this research question were *methods and strategies teachers use*, and *materials and resources*. The two categories were grouped to develop Theme 3 (Teachers have limited resources and strategies for differentiating instruction for gifted learners). In the following section, I describe frequencies, similarities, and differences in the data.

A common pattern was revealed when study participants were asked to describe the strategies used for differentiating instruction for gifted students. Several participants

stressed the importance of getting to know the students to meet their needs. For example, Participants 2 and 6 stated that it was difficult to accommodate everyone with differentiation strategies but that it was essential to discover students' interests and allow the students to explore those interests. Participant 2 noted:

> I try to think of what the student is interested in. I do think about that if I know a particular gifted student, like last year I had couple of gifted kids in sixth grade and I knew some of their interests, so I would look for certain things based on their interest.

> Consistent with Participant 6, Participant 8 explained the importance of getting to

know one's students by responding:

> Learning your students and knowing who they are, and then figuring out what you need to do, because no matter what you've tried before, it's not always going to work, and every kid isn't the same. And so, I think my strategic approach is to first learn the students.

Although there were some commonalities among the participants who believed they had a starting place by getting to know their students to begin differentiating instruction, there were variations in the participants' responses regarding having knowledge or access to strategies. For instance, Participants 3 and 7 noted that their strategies were somewhat limited. When probed, Participant 3 reported that the participant tried to help gifted students "achieve at a higher level or standard to help them be successful;" however, Participant 3 also noted that available resources were limited, and the participant often "scoured" the Internet for instructional ideas. Likewise,

Participant 7 discussed the lack of strategies and the hunt for more, stating, "That's where I spend most of my time…looking for resources during my planning."

Whereas two participants noted that their differentiation strategies were limited, there were variations in other participants' responses. Participants 1 and 5 described their strategies as effective but still inadequate in some ways, such as meeting gifted learners' needs and the amount of time preparing lessons. To demonstrate, Participant 1 stated, "The differentiation strategies I use are embedded in my lessons; however, once gifted students begin to separate themselves, it becomes challenging in how to differentiate specifically for them." Similarly, Participant 5 explained her response by saying, "My strategies are effective, but lessons incorporating differentiation required a great deal of time and collaboration to prepare."

One commonality among participants' responses was that many of the participants learned to use flexible grouping as a differentiation strategy during PD provided by their school district. Participants 3, 4, 7, and 8 reported grouping as one of the strategies they implemented after training. In this case, Participant 4 noted that grouping for gifted learners is "quite effective because gifted learners tend to be competitive." In addition, Participant 4 justified her grouping methods stating, "I've seen strong evidence to support that that student is going to reach ahead rather than drop behind to try to match, or equal, or compete with that higher group." Similarly, Participant 8 claimed that using flexible groups offers an opportunity for her to "provide scaffolding and enrichment for the students."

Some differences in how flexible grouping was implemented among participants were the incorporation of providing additional support for students and opportunities for developing leadership skills. To illustrate, Participant 3 stated, "I allow the gifted learners to be leaders in flexible groups or provide them with additional assignments." In addition, Participant 3 noted that while students worked in groups, the participant might "help maybe certain students that need additional help or give them extra assignments that makes it a little bit harder for them." This participant went on to say that often the decisions about how to differentiate for gifted students "comes down to their leadership skills and social development." Similarly to Participant 3, Participant 7 reported letting gifted learners lead groups and said, "[The students like to be] the teacher's helpers, and they almost felt like they were teaching that... helping to assist that class, so to speak."

Another similarity among participants' responses was project- and problem-based learning (PBL) to support differentiated instruction. Three of the participants described the success of PBL as a differentiation method because students were able to have a certain amount of freedom and ownership within the tasks. Participants 4, 5, and 7 all considered PBL as a strategy to differentiate instruction. When discussing PBL with Participant 5, the participant stated that by using PBL, students could control their learning, "make it their own, so to speak." Participant 5 added that by using PBL, the participant could "focus on supporting her lower ability students." Although Participant 7 was also a proponent of PBL, the participant expressed that PBL could also be time-consuming to plan. Specifically, Participant 7 reported that PBL "requires a lot of

frontloaded planning, but it pays off in the end because students like the freedom to make decisions about their learning."

One variation in the methods and strategies the participants described was the approach recommended by Tomlinson's (2015b) theory of differentiation. Tomlinson's theory highlights the use of product, process, choice, and environment as a standard best practice to differentiate instruction. Participant 1 mentioned strategies supported by Tomlinson as an approach learned during PD in the interview. Specifically, Participant 1 stated that choice was a primary strategy used because there is a focus on skills, and so students have a choice in what they perform. In other words, the students could demonstrate the skills using any content that interests them. To explain, Participant 1 stated:

> So, the product, the process, the environment, having choice. Those typical types of differentiating components. I mean, we do the typical, the standard best practices type of learning or PD for differentiation. Choice is probably the primary one because of the content, because I'm teaching skills. So, in the skills arena, there's not a choice in how you perform the actions, but there's choices in what we perform. So, you get to demonstrate a skill in a various amount of content versus the other. I'm not saying everybody has to do an anti-bullying PSA [public service announcement]. I'm just saying you have to demonstrate these skills in a PSA, but your content can be whatever interests you.

Participant 3 also responded that choice was used regularly as a strategy by allowing

students to "determine their groupings by considering their own strengths and

weaknesses."

One commonality that emerged was the participants' use of student engagement

as a differentiation strategy. Three of the participants believed that differentiation could

also be implemented by employing methods that kept students engaged. Although several

participants cited engagement as an effective strategy, the participants achieved student

engagement using different methods. For example, Participant 2 stated that the

participant had several favorite websites to "engage students because the websites

allowed students to work out their own levels." Whereas Participant 2 used websites,

Participant 6 often presented ideas using "visual and auditory methods to engage the

students." In one example, Participant 4 described the use of cooperative grouping and

station work to engage learners:

> But it gave a chance for independent learning, teacher-directed, peer-to-peer, and
>
> you rotated through those stations. If you got to three tomorrow, you would do the
>
> last two. But from my experience with middle school students is that it's
>
> challenging when you're having that one teacher in a group or that one-on-one
>
> trying to have the other eyes in the backs and sides of your heads working.

Assessment and monitoring were revealed as another pattern among two

participants. Participant 3 reported using assessment as a first step to differentiating

instruction for gifted students so that the participant could begin to get to know the

students. To illustrate, Participant 3 explained, "Once the students mastered the basics, I

tailor my instruction to meet their needs." Similarly, Participant 6 described assessment and monitoring as an essential part of the participant's differentiation methods. Participant 6 stated, "Assessments help me to understand the needs of every student. So, this will guide you in coming up with the appropriate content."

A common pattern was revealed when participants described the materials and resources available to them. There was a general dissatisfaction with the materials and resources available to the participants. Some participants believed the materials were unengaging and lacked appropriate, consistent materials. In one instance, Participant 1 reported the need to "explore the internet constantly due to the boring and unengaging lessons that come with my curriculum materials." When Participant 1 was probed, the participant added, "The materials are digital, so they are somewhat interactive, but because they are in the form of a textbook, students find them quite dull." Likewise, Participants 2, 5, and 6 all stated that they had to scour the internet for resources because very few differentiation lessons for gifted learners were included in their curriculum materials. To illustrate, Participant 2 reported:

> I have used Teachers Pay Teachers looking for the creative spin on activities. The Smithsonian. I'm thinking of English because that's what we just did this year. But with French, no, I probably just let them be more creative with the French, even still, I don't think there's any websites.

In like manner, Participant 6 reported, "I think for me, the Internet has really assisted me. I could do YouTube to see what other teachers are doing, and then try to like make a plan based on what I learned."

Another source of dissatisfaction among participants was the lack of textbooks. In particular, Participant 4 described the problem new teachers had of not having textbooks to rely on because new teachers had limited resources and experiences. Participant 4 stated that for those veteran teachers who might have some resources, the lack of consistency among grade levels and practices could be a big problem:

Textbook? What's that? No textbooks. Now, me, the hoarder, there's still some textbooks on my shelf, but as far as the school curriculum, there are no textbooks. And we're having discussions about that, too, because newer teachers don't have something to put their hands on. And so, that's a problem, too. And so, they're doing away with textbooks. I know it's a budgetary thing or whatever, but I think it's really hurt not to have a textbook. Because some of the textbooks did have strategies. I have a textbook in my room right now that says that on the side column, it says differentiation. And it had a section on a new lesson that said tips for differentiating. And it had little ideas right there. And then, even with math, not everything is taught the same or approached the same. And so, you lose that consistency. Especially for those kids who really need a consistent building on one topic, on another, on another, on another.

Also voicing frustration, Participant 8 stated, "We don't have a textbook; we don't have resources; we don't have anything given to us. So, there's no driving curriculum or anything like that, so we can really do whatever we want that reaches the standards."

Theme 3 encompassed teachers' methods, strategies, and resources to differentiate instruction. But the common thread was that the participants employed some type of

differentiation strategies to meet the needs of their gifted learners. The types of strategies

the participants used often relied on the resources that were or were not available to them.

A few participants were frustrated with the lack of textbooks to supply differentiation

tactics, while others had differentiation embedded in curriculum materials. Some

participants used flexible grouping to support students and at the same time allowed

leadership skills to develop. At the same time, other participants struggled with

maintaining groupings in their class management. Overall, reported having limited

resources and strategies for differentiating instruction for gifted learners.

Research Question 4

The fourth research question addressed what general education teachers perceive

as barriers or challenges to differentiating instruction for gifted students at the middle

school level. From the participants' responses, I collected data about teachers' perceived

barriers and challenges to implementing differentiation for gifted learners. The categories

that apply to this research question were *challenges to differentiate*, *need for PD*,

teachers' attitudes, and *administrative and staff support*. The four categories were

grouped into Theme 4 (Teachers require professional support to differentiate instruction

for gifted learners). In the following section, I describe patterns and similarities and

differences in the data.

Theme 4 was developed from the participants' responses to challenges when

differentiating, such as their comfort levels or meeting the demands of standardized

testing. Theme 4 also encompassed the participants' beliefs that they needed effective

PD, specifically addressing gifted learners and realistic strategies that the participants

could implement. Another commonality developed under Theme 4 was the participants' attitudes and perceptions about differentiation. Lastly, under the umbrella of Theme 4 is the participants' reports of requiring support and collaboration from administration and other staff members.

Several commonalities were revealed when participants described their perceived challenges to differentiate instruction for gifted learners. One pattern that emerged was the comfort level of teachers to differentiate instruction. Some participants did not feel comfortable within their content area to differentiate for gifted learners. In contrast, other participants noted diversity, class size, or the number of gifted learners in one class. In one example, Participant 1 stated that the participant was unsure how to differentiate within the content area for gifted learners, stating, "But I'm not completely and totally prepared for that type of learner." In like manner, both Participants 4 and 6 noted the lack of understanding in how to differentiate affected their confidence in preparing lessons. For example, Participant 4 stated, "And I think sometimes when we're overwhelmed, I don't even know where to begin, so I'm just going to do what I always did."

Although some participants struggled with a comprehensive understanding of differentiation, two participants' responses differed because their challenge had to do with the diverse levels of learners in their classes. In one example, Participant 3 described her class as having at least three categories of learners, stating, "Having gifted, average, and special needs students all in one class, often with a large number of students, can be overwhelming. It's just too much." Participant 6 also reported having many students in her classes, but her challenge was on having so many gifted learners and trying to meet

their varying needs. Participant 6 felt the same as Participant 3 but focused on the needs of the gifted learners. To illustrate, Participant 6 explained that "The gifted know so much. So, getting to know what their needs really are, is a challenge, and getting to know what to do with every gifted learner…it could be overwhelming to you."

A pattern emerged related to the teachers' attitudes regarding differentiating instruction. Several of the participants expressed beliefs that other teachers were unwilling to differentiate, whether this was due to personal beliefs or the different demands of being a middle school teacher. To illustrate this belief, Participant 5 stated, "Some teachers simply do not want to apply the differentiation model which can impede student achievement." Participant 5 continued to say that some teachers believe that "all students are the same" and do not want to take the time to get to know students' needs and interests. Similarly, Participant 8 stated that she sometimes found planning together for differentiation as difficult and time-consuming because not all teachers were "on board with differentiation."

On the contrary, some participants sought help to implement successful differentiation, even from parents. Participant 5 stated the importance of getting parents involved with meeting the unique needs of gifted learners. To illustrate, Participant 5 said:

And also, parents should be involved in the students' academics. At times, you would find that a teacher has noticed that this child has a good... Probably she's skilled in something. And at times the parents have also realized, or let's say if

it's a talent, maybe in doing some projects, constructing some things...You see

some parents will not have noticed this. Working together…

On the other hand, Participants 1, 2, 7, and 8 reported the need of support from peers and

administration to implement differentiation. In particular, peer support from the gifted

resource teacher would be beneficial. For instance, Participant 1 said:

If I could get the gifted ed teacher to come in my classroom even one time,

because it's never happened, and just see what I do, how I do it, and then be able

to offer a scope of this is the potential that you have, or these are maybe some

avenues that you haven't thought of that could potentially serve this student or

these groups of students. That would be great because I'm sure there are things

that I'm not seeing or looking at…I don't want my smarter kids or my more high-

functioning kids to feel punished because they finish so fast or because they get it

quickly.

In the same manner, Participant 2 stated:

Well, I would like more support with the gifted learner... Our gifted teacher that

has our school and the other feeder school that feeds into the high school, she

goes to that school as well. I think her schedule changes and fluctuates every

school year; I'm pretty sure dependent on the student population from each

school. So, I would really love to see more collaboration between herself and

myself as well. And I'm sure other teachers in math and ELA [English language

arts] would love to see that type of collaboration that we could talk and

collaborate more with meeting those students' needs.

Likewise, Participant 8 discussed having access to support staff who have some expertise

working with gifted students. When prompted, Participant 8 described a new position

recently filled at the participant's school:

> But it was my understanding that she would come in and extend and do activities
>
> with the kids. And I think having another person that is comfortable and has
>
> taught gifted students, that has that experience to help with extension activities
>
> and extension ideas, and to really push the content forward for students. I mean,
>
> we had that position, so having that help would be, you know what I mean?

Also expressing some frustration, Participant 2 stated she wished she could collaborate

authentically with her teammates, rather than being required to attend endless,

meaningless meetings: "I wish that we could collaborate the way we want to collaborate,

not these stupid, lovely meetings that we have. I would like to see more productive

collaboration relevant to me and my classes." In addition, Participant 2 discussed the

following regarding collaboration:

> Well, I really wish we had an ISS [instructional support staff] for gifted that came
>
> to the average teacher, not gifted teacher, but to the average teacher or had the
>
> gifted teacher come to us because, even with the SPED [special education], even
>
> though I think I do a good job differentiating, they'll come in with a great idea,
>
> and I'm like, oh, why didn't I think of that? So, it helps to bounce ideas off of
>
> somebody else.

In the same manner, Participant 3 also suggested that working more closely with her

peers would be "beneficial to share ideas on how to challenge my gifted students."

Voicing similar beliefs as Participant 3, Participant 8 observed, "Every teacher doesn't have that experience, and so I think that having those conversations with colleagues would help it be a little less challenging."

One similarity emerged as participants also named administrative support an important element of successful differentiation. In one instance, Participant 6 stated that "a lack of support and motivation to support differentiation on the part of administrative was discouraging." In addition, Participant 6 further indicated that administration needs to "provide time and training for teachers to effectively plan for differentiation." Similarly, Participant 2 noted, "My principal often has good intentions when planning time for teachers to plan and discuss differentiation strategies, but this often goes to the wayside as other items become the priority."

Many participants found their school districts' emphasis on student achievement, curriculum goals, and standardized testing barriers to successful differentiation. For example, Participant 4 reported that her school district spent a great deal of time on the accountability of the end-of-year standardized tests, which left very little time to prepare effective differentiated lessons for gifted students. When questioned more, Participant 4 stated:

> And so, we have to be very careful of saying that differentiating is making it easier, or like I say, watering down the content. Because they're going to be held accountable, so the differentiation needs to be more of a how can I break it down into understandable chunks, and not like, "Well, I'm just going to give them this two-grade level below material." That's really not differentiating for the kids.

Further supporting this opinion, Participant 6 stated that administration should be "more lenient in the case of achievement and goals and allow teachers the time to work together to prepare lessons for gifted students." Participant 6 concluded that ultimately it all came down to the end-of-year test as the teacher's priority rather than differentiation. Regarding administrative support for differentiation, Participant 6 noted, "At times the objectives cannot be met within a short period of time. So, more time should be given in terms of the curriculum, and more encouragement from the administration, because it's not easy to do it all."

When asked about training and PD, there were many variations in the participants' responses regarding the participants' needs. Some participants believed the need for effective PD was paramount. Whereas other participants reported the need for PD focused on gifted learners. Equally important were the participants' beliefs regarding high-quality, realistic PD.

A common pattern that emerged regarding PD was the participants' responses citing the lack of PD as a challenge they faced. Although many of the teachers participated in PD for differentiation, several participants reported that the PD usually focused on the academically needy student. For example, Participant 1 stated:

> And when we get differentiated instruction, which we tend to get often, it's still more geared towards how do we support those learners who need support and differentiate for them versus all learners. So, there is an adequate amount of ..., and it's probably based on the fact of the population that I serve or that we serve, because we serve so many low functioning or low performing students are

differentiated, PD on differentiation tends to be geared toward how do we meet the needs of all of these learners? And then the gifted learners are kind of an add-on, so we get some, but it's just not very much in-depth for the gifted learner.

Similarly, Participant 2 had the same experience describing a co-teacher for the special education students, so those students were the focus. More precisely, Participant 2 said, "I hate to say it, but the lower end kids, this year I had a co-teacher who helped me with the lower end kids, so they were really our focus, which I hate to admit, but it's more geared towards them." Likewise, Participant 5 responded that there was not a concentration on differentiation for the gifted leaners and that "as the teacher, you have the duty…to come up with tactics to make sure the class is at par."

Thus, many of the participants stated that there was a need for effective PD that focused on a clear understanding of differentiation for the gifted students. Participant 4 stressed that PD needs to be of "high-quality spent on modeling and training of methods in which I could realistically deliver." In addition, Participant 4 continued by saying that there needed to be "realistic expectations and time for teachers to digest the training before implementing it. We shouldn't be expected to put everything we learned into place the day after PD." Lastly, Participant 4 described the PD experiences as being for the "special needs students and there not being anything provided for the gifted learners." Likewise, Participant 2 concurred, stating, "It's just having the time and knowing really how to meet each one of my gifted kids." Finally, Participant 5 also communicated similar beliefs as other participants reporting, "Often I feel like it should be clear. More

teaching for teachers, there should be more training hours. So that you understand and appreciate that all students are different."

Theme 4 was the umbrella under which patterns and variations related to the participants' perceived challenges are gathered. Some participants reported the conflicting need for time to meet curriculum goals and plan for differentiation as a barrier. Other participants cited the need for effective PD as a barrier. Lastly, several participants considered administrative, and staff support essential to effective differentiation. Table 5 summarizes the participants' perceived challenges.

Table 5

Teachers' Perceived Challenges

Participant	Lack of time	Need for resources and materials	Personnel resources or support	Need for professional development
Participant 1		X	X	X
Participant 2	X		X	X
Participant 3			X	
Participant 4	X	X	X	X
Participant 5	X			X
Participant 6		X		X
Participant 7			X	
Participant 8	X		X	X

Discrepant Cases

There were eight participants in this study, and of the eight, only one of the participants reported an experience that did not appear to fit in any of the categories or themes. In this case, Participant 6 reported having felt discriminated against during her own childhood experiences due to her slow learning and working pace. In describing differentiated instruction, the participant stated, "You should use different reading materials for each and every student, based on their varying readability levels. And it should be in a way that is not discriminating in a way." In addition, when describing the needs of a gifted learner, Participant 6 said, "The need for someone to listen to them, and they need people to understand and not judge, and to motivate them." When asked to describe the preparedness level for differentiation, the participant stated:

> I remember I'll be the last, almost the last, people to capture content, and there are these fast learners who will be always raising their hands to answer questions. So, I kind of had that bad blood between me and them, and throughout, the teacher always was going with the fast learners.

This participant's responses presented contrasting experiences in these areas compared to the other participants and did not fit into any of the themes developed from the data. The participant's experiences were important to note because the participant may have had different expectations and biases when differentiating instruction.

However, there was also evidence of consistent experiences. Similarly to other participants, Participant 6 believed that gifted learners required instruction suitable to their individualized academic needs stating, "It should capture all students, and you

should use different reading materials for each and every student, based on their varying readability levels." Like other participants, Participant 6 also stated that it was essential to get to know the students and their interests. Specifically, the participant noted, "I have to come up with tests that are suitable for these students, encourage them, and give them an opportunity to explore, give them an outdoor tour, and also speak to them about their interest, and motivate them in that area of interest they most specifically have." Participant 6 believed the need for collaboration with colleagues was an essential part of planning for differentiated lessons when the participant stated a barrier to differentiation as the "lack of collaboration amongst staff."

Evidence of Trustworthiness

I employed member checking to establish the credibility of data interpretations and analysis (see Ravitch & Carl, 2016). Of the eight participants, I conducted follow-up interviews for member checking with three participants to share an overview of the data, the four themes, and the recommendations. The interviews were conducted via Zoom, except in one case because the participant was having technical issues. The interview with that participant was conducted by telephone. While performing the interviews, I also used the Rev application to record and later transcribe the member checking interviews. The three participants agreed with my initial findings and recommendations. In particular, two of the participants provided positive feedback about the recommendations I shared.

Evidence supporting the possible transferability of the findings was provided by including detailed descriptions of the data so that the data can be applied to other settings

(see Merriam, 2009). I provided an interpretation of the data by describing the patterns and variations which emerged from the data. Then I provided evidence of my interpretations by directly quoting the participants' responses. The precise, detailed data descriptions may allow the reader to transfer the information to other settings, possibly providing support for another study.

To ensure dependability during the study, I determined the best methods to answer the research questions and conducted multiple reviews of the data and findings. The reviews began immediately after the first interview was completed and were ongoing throughout the data collection and analysis collection. To establish credibility, I used the approach of triangulation. I used multiple methods for collecting data to answer the research questions, which in this study included both the participants' responses to the interview questions and the responses to sentence completion stems (see Glesne, 2011).

Confirmability was addressed by using data directly from the participants' transcriptions to provide evidence for data interpretation. The Rev application transcribed the interviews, and I compared them to the Zoom recording to confirm accuracy. I then transferred the transcribed interviews directly into an Excel sheet, which was organized by the questions, so that I could copy the participants' quotes directly. To remain aware of potential bias that I might have had during the research process, I used a self-reflection journal to record my questions and insights.

Summary

With this basic qualitative study, I investigated the teachers' preparedness to differentiate, the strategies used to differentiate, and the perceived barriers or challenges.

To answer the research questions, I collected data through interviews with eight middle

school teachers who taught general education classes with gifted students enrolled. I used

the analysis from the participants' responses to address the following research questions:

1. What are the general education teachers' understanding of giftedness and the
   gifted students' needs at the middle school level?

2. How do general education teachers describe their preparedness to differentiate
   instruction for gifted students at the middle school level?

3. How do general education teachers describe their strategies for differentiating
   instruction for gifted students at the middle school level?

4. What do general education teachers perceive as barriers or challenges to
   differentiating instruction for gifted students at the middle school level?

As I conducted the interviews and analyzed data, 12 categories emerged, which I

grouped into four themes. The four themes were (a) Teachers understand gifted learners'

needs; (b) There are varying levels of preparedness to differentiate instruction for gifted

learners; (c) Teachers have limited resources, and strategies for differentiating instruction

for gifted learners; and (d) Teachers require professional support to differentiate

instruction for gifted learners.

The first research question addressed the general education teachers'

understanding of giftedness and the gifted students' needs at the middle school level. The

participants' responses revealed variations in the definitions of differentiation and the

processes to plan differentiated lessons for gifted learners. The participants reported they

believed gifted students are independent, quick learners who possess critical thinking

skills and need to be challenged. In addition, the participants also stated that teachers need to prepare tasks for gifted learners which require real-world connections and applications.

The second research question explored the general education teachers' preparedness to differentiate instruction for gifted students at the middle school level. Evidence emerged from the data that teachers possess varying levels of readiness to differentiate instruction for gifted learners. From the participants' responses, I discovered that many teachers lacked university coursework to prepare them for teaching gifted students, and because of this deficit, teachers often were trained only through PD or sought out training on their own.

The third research question investigates how teachers describe their strategies for differentiating instruction for gifted students at the middle school level. I discovered that teachers have limited resources and strategies for differentiating instruction for gifted learners during data analysis. Again, there were variations in the participants' responses regarding the methods, strategies, and resources in their middle school classes. Some participants used flexible grouping and choice, whereas others employed PBL tasks. In addition, some participants expressed frustration in the lack of materials, resources, and personnel to support their implementation of differentiation for gifted students.

Lastly, the final research question addressed what general education teachers perceive as barriers or challenges to differentiating instruction for gifted students at the middle school level. The data revealed that teachers require professional support to differentiate instruction for gifted learners. The participants reported their lack of

experiences and relevant PD were barriers to differentiating instruction. .The participants cited the demands of high stakes testing and accountability for teaching the curriculum as challenges preventing them from implementing differentiation. Equally important, from the participants' perspective, was the perceived lack of support from peers, gifted personnel, and their administrators.

In Chapter 5, I describe my findings compared to the literature review and the study's limitations. I also make recommendations for further research that are grounded in the study's strengths. Then finally, I describe the study's potential impact for positive social change and recommendations for change.

Chapter 5: Discussion, Conclusions, and Recommendations

The purpose of this basic qualitative study was to investigate general education teachers' perceptions of differentiating instruction for gifted learners and any challenges or barriers the teachers may experience at the middle school level. I implemented a basic qualitative approach to understand the participants' perceptions regarding differentiating instruction for gifted learners. Qualitative research aims to understand individuals in their natural settings, reflect on the meaning the individuals make from their experiences, and provide insight into the participants' perceptions and beliefs (Ravitch & Carl, 2016). The current study was conducted because many educators lack a comprehensive understanding of how to differentiate lessons for gifted learners (Brigandi et al., 2018). By understanding the barriers and challenges teachers face, school leaders may take steps to support the teachers to do so (Brigandi et al., 2018; Dack, 2018; Johnsen & Kaul, 2019; Russell, 2018).

Data were collected through semistructured interviews with eight participants to answer four research questions. As a result of the data analysis, I identified four themes (a) Teachers understand gifted learners' needs; (b) there are varying levels of preparedness to differentiate instruction for gifted learners; (c) teachers have limited resources and strategies for differentiating instruction for gifted learners; and (d) teachers require professional support to differentiate instruction for gifted learners. The data collected from this study add to the current literature by describing the perceptions of teachers at the middle school level. The review of the literature did not reveal middle school teachers' perceptions. Participants reported that they understand gifted students'

needs regarding the unique characteristics of a gifted learner and the necessity of

providing challenging lessons with real-world connections and applications. The

participants experienced varying levels of preparedness to differentiate instruction due to

their experiences from training on the job, lack of coursework, or the need for a clearer

understanding of differentiation. The data revealed that teachers have limited resources

and strategies for differentiating instruction for gifted learners. Some participants

reported using PBL as a strategy to differentiate, whereas other participants used

grouping and choice. However, most participants expressed frustration over the limited

resources or unengaging materials provided with curriculum materials. Lastly,

participants reported that teachers require professional support to increase their comfort

levels. The participants suggested that this support can come from effective PD, parental

involvement, or resource personnel and administrative backing.

Interpretation of the Findings

The conceptual framework for this study was Tomlinson's (2015b) theory of

differentiation. Tomlinson specified that differentiation is a best instructional practice in

which teachers differentiate lessons to engage students according to their varying needs.

Student engagement might be achieved by using different approaches to learning,

addressing students' interests, and modifying instruction (Tomlinson, 2015b). Because

Tomlinson's conceptual framework describes the components necessary for effective

differentiated instruction, I compared Tomlinson's theory to the participants' practices

and perceptions revealed during the research process. The comparison helped me

understand the needs of teachers. I also compared the data with the research discussed in the literature review found in Chapter 2.

Findings Related to Research Question 1

The first research question addressed what the general education teachers' understanding of giftedness and the gifted students' needs are at the middle school level. From the data analysis, I found that teachers understood giftedness and the unique needs of a gifted learner. According to the literature review, there are varying definitions of giftedness such as academically gifted, social leadership motivation, and native intelligence (Callahan et al., 2017; McBee & Makel, 2019; Riley, 2016; Russell, 2018). Consistent with the literature, the participants also had varying views on giftedness. For example, participants described gifted learners as fast learners, critical thinkers, and masters of content; however, participants also described gifted learners as students with vast background knowledge who do not require academic support and often perform well on classroom assignments. One participant stated that giftedness comes in many forms. The literature also indicated that gifted learners were often identified by achievement or ability tests (Callahan et al., 2017; Gubbins et al., 2021). One participant described giftedness as being observed in students above the 85th percentile of norms, scores, and achievement.

The literature review revealed the need for gifted students to connect to their personal interests (DeMink-Carthew & Olofson, 2020; Dole et al., 2016; Mammadov et al., 2018). Similarly, some participants noted that gifted learners needed to have opportunities to make real-world connections and apply their background knowledge to

new experiences. Some participants stated that gifted learners think more deeply and can take many inroads to complete tasks that engage their curiosity by connecting prior experiences to new experiences.

Tomlinson's (2015b) theory suggests that teachers must be flexible with time, use a range of instructional strategies, and be aware that there is no one-size-fits-all teaching style in the differentiated classroom. The participants in the current study stated that gifted students need a curriculum tailored to their needs and suitable for their abilities and talents. Many participants reported the need for meeting students where the students were academically by individualizing instruction for the student's specific needs and interests.

Findings Related to Research Question 2

The second research question addressed how general education teachers describe their preparedness to differentiate instruction for gifted students at the middle school level. The data analysis revealed varying levels of readiness in how the participants differentiate instruction. The lack of university coursework experienced by the participants was a common pattern. Only one of the eight participants experienced any kind of coursework preparing them to differentiate lesson plans. Only two of the participants considered their preparedness levels sufficient, whereas some reported a lack of understanding of what differentiation truly was. These findings are similar to findings in the literature review. Perspective teachers often do not fully understand differentiation or the coursework to support implementation within their instruction (Dack, 2018; Pereira et al., 2021; Spoon et al., 2020). In addition, most participants reported that some PD experiences provided differentiation training; however, the PD usually focused on

students who required academic support, not on gifted students. This finding was consistent with the literature review (see Brigandi et al., 2018; Callahan et al., 2017; Dack, 2018; Dimitriadis, 2016; Johnsen & Kaul, 2019; Russell, 2018; Tomlinson, 2015a; Turner & Solis, 2017; VanTassel-Baska et al., 2020). Tomlinson's (2015b) theory states that differentiation is a method of teaching by which teachers are prepared to engage students according to the students' varying needs. However, according to the data, many participants did not believe that they were appropriately prepared to differentiate for gifted learners. These findings add to the literature by identifying the type of PD teachers believe they need to implement differentiate. In particular, the participants believed PD focusing on the needs of gifted learners would be most beneficial.

Although the participants were not formally trained to differentiate, most desired to provide differentiated instruction to their gifted learners. Several participants reported that they learned to differentiate on the job or by seeking out strategies to improve their differentiation practices. In contrast, Dack (2018) stated that teachers sometimes abandon efforts to differentiate practices for other less labor-intensive strategies. Although the data revealed frustrations by many participants, it was apparent that the teachers wanted to provide the best instruction possible for their gifted learners.

Findings Related to Research Question 3

The third research question addressed how general education teachers describe their strategies for differentiating instruction for gifted students at the middle school level. Several findings from the study's data were confirmed in the literature review. For example, Sharp et al. (2018) stated that assessment is an essentially part of the

differentiation process. Ongoing assessment can provide teachers with information about appropriate materials and lessons (Brink & Bartz, 2017; Frankling et al., 2017; Johnsen & Kaul, 2019; Sharp et al., 2018). Several participants stated that assessment and monitoring was necessary to differentiating instruction. The participants also cited flexible grouping as a common practice to differentiate. Flexible grouping was indicated in the literature review as another option for differentiated instruction based on students' academic needs (Dack & Triplett, 2020; Handa, 2019; Park & Datnow, 2017; Pereira et al., 2019; Riley, 2016). Participants reported project- or problem-based learning as a differentiation method they used. The literature review confirmed these findings as a strategy in which students make connections to their interests (DeMink-Carthew & Olofson, 2020; Dole et al., 2016; Mammadov et al., 2018).

One strategy reviewed in the literature was acceleration for differentiating for gifted students. Acceleration, the process in which students spend less time on basic skills can occur by subject or grade level (Dare & Nowicki, 2019; Handa, 2019; Szymanski et al., 2018). None of the participants in the current study mentioned acceleration as a method they used to differentiate for gifted learners.

Tomlinson's (2015b) theory includes key ideas that encourage teachers to differentiate by the content, process, and product based on students' readiness, interest, and learning profile. The literature review and the data from my study support Tomlinson's theory. Turner and Solis (2017) identified differentiating instruction through the learners' needs, interests, and readiness as the initial step of the planning process. Current participants stated that it was critical to discover students' interests to give them

opportunities to explore these areas and use variety in content, process, and product as a best teaching practice.

Although there were cases in which participants provided examples of differentiation strategies used during instruction, most participants expressed frustration with the lack of appropriate materials and resources available to them. Many participants reported the materials were either unengaging or inappropriate for gifted learners. Some participants stated that they spent a lot of time searching the internet on websites such as Teachers Pay Teachers and YouTube looking for resources to assist in differentiation planning. The literature review showed that educators use technology resources to help differentiate lessons; however, the literature focused more on digital tools such as one-on-one devices rather than the use of websites to support differentiation (Arnesen et al., 2019; Bingham et al., 2018; Duren et al., 2021; Haymon & Wilson, 2020; Park & Datnow, 2017). Overall, the data analysis revealed that teachers have limited resources and strategies for differentiating instruction for gifted learners.

Findings Related to Research Question 4

The fourth research question addressed what general education teachers perceive as barriers or challenges to differentiating instruction for gifted students at the middle school level. The data analysis revealed that teachers require professional support to differentiate instruction for gifted learners. Many participants did not believe they were adequately equipped to differentiate for gifted learners. These perceptions were comparable to the information discovered in the literature review that showed many educators lacked a solid understanding of how to structure differentiated lessons

(Bingham et al., 2018; Bogen et al., 2019; Dack, 2018; Holland et al., 2018; Johnsen & Kaul, 2019; Russell, 2018; Spoon et al., 2020). As a result of a lack of understanding of how to differentiate, many participants desired help from a resource person who specialized in gifted education. Cross et al. (2018) cited a shortage of resource personnel as a challenge that teachers often face. Along with a lack of resource personnel, the current participants also reported the need for support from their administrator in the form of PD and understanding regarding the challenges of differentiating. The literature review also indicated a need for administrators to provide support to teachers but in the form of offering clear expectations about how teachers are to differentiate (Cross et al., 2018; Handa, 2019; Johnsen et al., 2020). However, the findings add to the literature by identifying a gifted education expert who can collaborate with teachers, not to serve only as a resource personnel.

A significant barrier for teachers is the lack of appropriate learning materials and resources (DiCicco et al., 2016; Johnsen et al., 2020; Johnsen & Kaul, 2019; Turner & Solis, 2017). The data analysis showed this to be true among the current participants too. The participants identified a lack of materials, resources, and time as challenges. Although, many participants reported a need for time to plan differentiated lessons, they also identified a desire and the need to collaborate specifically with peers. These findings also add to the literature. The participants cited having large class sizes or student diversity as challenges to differentiating. Parallel to these findings, the literature review also revealed this to be true (Brigandi et al., 2018; Cross et al., 2018; Johnsen & Kaul, 2019; Mofield, 2020; Russell, 2018; Turner & Solis, 2017).

Equally important to the current participants was the lack of access to effective PD and training. The participants stated that they were not prepared to differentiate through their university coursework and relied on PD through their school districts. The participants also reported that their PD was ineffective, inconsistent, piecemeal, and irrelevant for gifted learners. The participants also stated that there was little follow-up after PD. My review of the literature also showed that educators receive little PD for gifted learners and that trainers rarely provided ongoing support, leaving teachers unable to provide responsive differentiated instruction (see Azukas, 2019; Brigandi et al., 2019; Mammadov et al., 2018; Rowen & Townend, 2016).

Limitations of the Study

There were imitations that might affect the trustworthiness of this study. The first limitation was the small number of participants. My sample size was small, and all participants were women. If both male and female participants had been interviewed, the findings might have differed. The study also focused on middle school general education teachers; therefore, the findings may not apply to elementary schools or high schools.

Another limitation was that a basic qualitative study's data collection and analysis could be time-consuming. I ensured that enough time was set aside to collect and analyze the data to address this limitation. Teachers may have been reluctant to participate due to the time required to conduct the interview; however, I provided participants with an estimate of the time needed for the interview and a $25 gift card from Amazon as an incentive.

The last limitation was my personal biases. I planned to be objective throughout the research process. I did not want my personal beliefs or opinions to influence the findings of the study. I work as a teacher in an educational setting; therefore, my personal biases may have influenced the study results by. To mitigate my personal biases, I maintained a self-reflection journal during the research process to regularly assess my biases and subjectivity.

Recommendations

From this basic qualitative study, I developed three recommendations for further research grounded in the strengths and limitations of this study and the reviewed literature. This study provided a detailed description of the participants' perceptions concerning differentiated instruction for gifted learners at the middle school level. Based on the data collected, future researchers may be interested in examining the effect that PD focusing solely on differentiation for gifted learners might have on teachers and students. A second recommendation for future research is exploring the effect of employing a gifted education resource teacher on teachers' implementation of differentiation. A third recommendation is exploring the use of collaboration among teachers and resource personnel to meet the needs of gifted learners. Because this study sample consisted of only eight middle school general classroom teachers, researchers could also expand the sample size and scope to include a larger sample size and elementary and high school teachers.

Recommendation 1: Professional Development for Differentiating for Gifted Learners

Based on the data collected in this study, the participants believed a need for practical and ongoing PD was necessary to implement differentiation strategies for gifted learners. Therefore, my first recommendation for further research is to examine the effect that PD focusing solely on differentiation for gifted learners might have on teachers and students. When asked about the most significant barrier to implementing differentiation strategies, Participants 4, 5, and 6 stated that the lack of training was a challenge. Participants 4 and 6 reported that the PD needs to be clear in helping teachers understand that students are different. The participants also cited the lack of PD specifically for gifted learners as a barrier. Participant 1 said:

> And when we get differentiated instruction...it's still more geared towards how do we support those learners who need support…because we serve so many low functioning or low performing students, our differentiated, PD on differentiation tends to be geared toward how do we meet the needs of all of these learners? And then the gifted learners are kind of an add-on, so we get some, but it's just not very much in-depth for the gifted learner.

Likewise, Participant 4 had similar beliefs when describing the need for practical, relevant PD:

> In training, we've been told you have stations, and you got to differentiate. I've heard the word a lot in the training sessions, but typically nobody really explains what you're supposed to do. I don't feel like I've had a lot of direct training.

They've said it, and then I was like, "So, what exactly do I do? What do you

mean?" I don't think training-wise that there was a lot of time spent on something

that I thought I realistically could do. Typically, more for special needs, because

usually you're talking about either the EC [exceptional child] teacher's role, and

that they're going to pull out and do this, and that the classroom teacher could

continue to do this. It was more for EC.

Similarly to this study's findings, the literature review revealed the need for

appropriate PD for teachers. Researchers recommended that PD be a priority to ensure

that teachers are prepared to address the unique needs of the diverse learner (Handa,

2019; Spoon et al., 2020). To implement differentiated instruction, teachers need

ongoing, effective PD experiences and support (Brigandi et al., 2019; Frankling et al.,

2017; Horak & Galluzzo, 2017; Rowen & Townend, 2016; Spoon et al., 2020). Most

important was the need for PD to be delivered in a way that teachers can relate the

training to their unique teaching environment (Sharp et al., 2018; Skyhar, 2021).

Recommendation 2: Impact of Employing Gifted Education Resource Personnel

Five of the eight participants noted the need for access to a gifted education

resource person during the interviews. Hence, a second recommendation for future

research is the impact of employing a gifted education resource teacher on teachers'

implementation of differentiation. The participants discussed the necessity to have

regular contact with a resource teacher specializing in gifted education and could provide

the participants with insight, suggestions, and feedback. According to Participant 7, a

gifted teacher was employed by their school, but the teacher was shared with another

large school. Participant 7 stated:

> Because we have one gifted teacher that serves our school and serves another
>
> school, so she's with our school a couple of days a week. I know she serves two
>
> schools with more than a thousand students, while I know her students a little bit
>
> less. So, I don't always feel as prepared to serve my students until I get that
>
> information from her, which may take a month or so.

Participant 1 also cited the desire for access to either an instructional support staff (ISS)

or the gifted teacher, stating:

> I really wish we had an ISS for gifted that came to the average teacher, not gifted
>
> teacher, but to the average teacher or had the gifted teacher come to us because,
>
> even with the SPED [special education] even though I think I do a good job
>
> differentiating, they'll come in with a great idea, and I'm like, oh, why didn't I
>
> think of that?

Likewise, Participant 3 believed a gifted resource person could "tell me, what can I do to

help the gifted students move on to a higher-level learning or to make them more

challenged." Looking forward to the assistance from a newly hired facilitator who had

gifted education experience, Participant 8 said:

> One of our new positions…last year was a curriculum, not curriculum, AIG
>
> facilitator, and we didn't really get to do much last year because of COVID and
>
> just the structure of things, but it was my understanding that she would come in
>
> and extend and do activities with the kids. And I think having another person that

is comfortable and has taught gifted students, that has that experience to help with extension activities and extension ideas, and to really push the content forward for students.

Similar to the data from this study, the literature also revealed the need for teachers to have access to a resource person, whether it came in the form of a coach, mentor, or curriculum facilitator (Cross et al., 2018; Handa, 2019; Park & Datnow, 2017). Gifted education resource personnel can provide teachers with the necessary support to implement differentiation strategies into instructional practices (Brink & Bartz, 2017; Handa, 2019; Park & Datnow, 2017). By having access to resource personnel, teachers can receive on the spot relevant training specific to the needs of individual teachers (Brink & Bartz, 2017; Handa, 2019; Park & Datnow, 2017).

Recommendation 3: Collaboration Among Classroom Teachers and Resource Personnel

The third recommendation for future research is the use of collaboration among teachers and resource personal to meet the needs of gifted learners. During the interviews, the participants noted the desire for time to collaborate with colleagues specifically to discuss the challenges of differentiation and the needs of gifted learners. For example, Participant 2 stated, "It's just finding the time and knowing how to meet the needs of each one of my gifted kids." The participants reported wanting to collaborate with their peers and resource personnel that might be available to them. Specifically, Participant 1 discussed having a gifted teacher at the participant's school but not having

access to the gifted teacher because of other obligations. When prompted, Participant 1
explained:

> If I could get the gifted ed teacher to come in my classroom even one time,
> because it's never happened, and just see what I do, how I do it, and then be able
> to offer a scope of this is the potential that you have, or these are maybe some
> avenues that you haven't thought of that could potentially serve this student or
> these groups of students. That would be great because I'm sure there are things
> that I'm not seeing or looking at.

Likewise, when discussing the possibility of collaboration with the gifted education
teacher and grade-level peers, Participant 3 responded, "What I would like to see maybe,
things other teachers are doing in their classrooms, from your peer teachers, what are
some pros and cons that they have?" Similarly to Participant 3, Participant 8 said, "Every
teacher doesn't have that experience, and so I think that having those conversations with
colleagues and spending a little bit more time vertically planning and just having those
discussions would help it be a little less challenging." Both Participants 3 and 7 also
believed that having the time to collaborate with their peers and seeing what works for
their peers could benefit their differentiation implementation.

Participant 2 expressed frustration in having to collaborate in ways that were not
meaningful to the participant and cited the need for relevancy, stating:

> I wish that we could collaborate the way we want to collaborate, not these stupid,
> lovely meetings that we have. Actually say, "this is what my unit is going to be
> on." "These are the skill sets." Then we could all, like how we used to do, history

would do what they needed to do, and English would do what they need to do,

and then you could have the gifted in there too and say, well, how about this for

the gifted kids? So yeah, I would like to see more productive collaboration

relevant to me and my classes.

Resembling the data from this study, the literature supports the recommendation

of collaboration to improve the implementation of differentiation strategies to meet the

needs of gifted learners. The literature stated that when given time to collaborate on

differentiation strategies, teachers increase the implementation of the strategies (Brennan,

2019; Goddard & Kim, 2018). Specifically, cross-curricular collaboration was beneficial

for differentiation implementation. When the gifted education teacher is included in the

collaboration process, student learning and teachers' competencies in differentiation both

increase (Frankling et al., 2017; Goddard & Kim, 2018; Mofield, 2020). Teachers who

maintain participation in collaborative groups improve their differentiation strategies

(Brennan, 2019; Copur-Gencturk et al., 2019; Frankling et al., 2017; Skyhar, 2021).

Implications

This basic qualitative study contributed to research about teachers' perceptions of

differentiated instruction for gifted students in the middle school general classroom. The

findings from this study can promote social change by addressing equity for all learners

and by providing gifted students with the same opportunity for academic growth and

challenge as other diverse populations of learners. Middle school leaders may use the

findings from this study to improve the support provided to general education teachers to

implement differentiated instruction for gifted students. By providing ongoing PD, access

to expert education personnel, and time to collaborate with peers, middle school principals may increase the knowledge and confidence of their teachers for implementation. The PD should include tenets of Tomlinson's (2015b) theory of differentiation. In turn, by incorporating the best practices outlined explicitly in Tomlinson's theory into classroom instruction, teachers may improve instructional quality for gifted learners by meeting students' needs according to their interests and readiness. Thus, social change may occur by improving the quality of instruction for gifted learners and improving teachers' self-efficacy.

Conclusion

General education teachers are struggling to adequately meet the needs of gifted students with differentiated instruction at the middle school level. To better understand teachers' difficulties, I designed a study of teachers' perceptions and any challenges or barriers teachers may experience. After conducting data analysis from interviews with eight middle school teachers, I was able to identify four themes. The four themes were (1) Teachers understand gifted learners' needs; (2) There are varying levels of preparedness to differentiate instruction for gifted learners; (3) Teachers have limited resources, and strategies for differentiating instruction for gifted learners; and (4) Teachers require professional support to differentiate instruction for gifted learners.

By identifying the four themes, I developed three recommendations for future research. Future researchers may be interested in examining the impact that PD might have on teachers and students, the effect of employing a gifted education resource teacher on teachers' implementation of differentiation, and the use of collaboration among

teachers and resource personnel to meet the needs of gifted learners. The

recommendations provide an opportunity for school leaders to support teachers in their

endeavor to implement differentiation strategies. There is potential to improve student

achievement by providing gifted students with the same opportunities for growth and

challenge as other diverse learners.

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Appendix A: Social Media Flier

Differentiation and Gifted Students Research Study

- **Are you a general education teacher in a middle school?**

- **Do you have gifted students in your general education classes?**

If you answered yes to both of these questions, you might be eligible to participate in an IRB-approved research project that is designed to understand teachers' perceptions of differentiated instruction for gifted students in the middle school general classroom.

You will be asked to participate in a 30 to 40-minute interview and a follow-up discussion in which I share my interpretations of the data so that you can provide me with your feedback. You will earn a $20 gift card for your participation.

The aim of this study is to benefit society by increasing teachers' knowledge and use of differentiation as a strategy to improve the educational experiences of gifted learners.

If you would like to learn more, please contact Christine Belzic at

christine.belzic@waldenu.edu

Appendix B: Interview Protocol and Questions

Name of Person Interviewed: _____

Date: _____ Time: _____ Video Platform: _____

Introduction: Thank you for taking the time to meet with me today. The interview will

take approximately 30 to 40 minutes. The purpose of the interview is to gather your

perceptions about differentiation for gifted students in regular education classes. I will be

recording the session while we speak. All responses are kept confidential, which means

the study will not identify you as a participant. You do not have to answer any questions

you do not want to, and you may end the interview at any time. Do you have any

questions about what I just explained?

Questions:

1. How would you describe a gifted learner?

2. What does differentiated instruction mean to you?

3. How would you describe your preparedness for differentiating for gifted learners
   in a regular education classroom?

4. What kind of training (preservice or professional development) have you
   experienced in regard to differentiation?

5. What kinds of differentiation strategies did you learn during training?

6. How do you plan for differentiated instruction for gifted learners?

7. What kind of materials, resources, or technology do you use to differentiate
   instruction?

8. What do you perceive as barriers or challenges to differentiating for gifted learners?

9. What kind of support would you like to receive to implement differentiation strategies for gifted learners?

Appendix C: Sentence Completion Stems

Name of Person Interviewed: _____

Date: _____ Time: _____ Video Platform: _____

Sentence Completion Stems:

1. I would describe giftedness and gifted students' needs as…

2. I would describe my preparedness to differentiate instruction for gifted students
   as…

3. I would describe my strategies for differentiating instruction for gifted students
   as…

4. A barrier or challenge to differentiating instruction for gifted students is…