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# Perceptions of Middle School Teachers Regarding Differentiation Instruction

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A thesis

presented to

the faculty of the Department of Education Leadership

East Tennessee State University

In partial fulfillment

of the requirements for the degree

Doctor of Education in Education Leadership

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by

Karen McLerran

December 2022

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Dr. Pamela Scott, Chair

Dr. William Flora

Dr. Virginia Foley

Keywords: differentiation of instruction, inclusion, individual education plan, learning disability

## ABSTRACT

### Perceptions of Middle School Teachers Regarding Differentiation Instruction

by

Karen McLerran

The purpose of this qualitative phenomenological study was to examine the perceptions of middle school teachers regarding differentiation of instruction for students with mild to moderate disabilities. Although there has been little documentation in the literature regarding instructional differentiation five factors that facilitate change have been identified in the framework.

Data collection strategies included one-on-one semi-structured interviews and questionnaires.

Analysis of data occurred in three phases: (a) transcribing interviews, (b) member checking of the transcripts, (c) coding-recoding of the data. The analysis of data was based on the theoretical proposition that student achievement, positive behaviors, and increased learner motivation fosters the change process when differentiation is implemented. The credibility of the analysis was protected by triangulation of data through multiple sources of evidence, code-recode strategy, and member checking.

The results indicate that differentiation has a positive influence on student learning. Five themes emerged from the analysis of data: (1) teachers' personal definition of differentiation, (2) a variety of implementation strategies yield positive student results, (3) barriers to implementation of differentiation, (4) needed supports for implementation of differentiation strategies, and (5) student achievement.

## DEDICATION

This study is dedicated to my husband, Joe McLerran and son William McLerran. You have always been so supportive throughout this entire process. I cannot say thank you enough for the support and the encouragement throughout this process.

This study is also dedicated to my parents, Rex Pryor and Debbie Pryor, and my sisters, Kristie Dalton and Renee Robbins. Daddy, “Thank you” for always believing in me and always encouraging me to believe in myself.

## ACKNOWLEDGEMENTS

There are so many people that I would like to say, "Thank You," too for helping me get this far. I would like to acknowledge these individuals because they have left an impression on me, and I will forever be grateful. First, I want to thank my life partner, my best friend and my husband, Joe McLerran. Joe, I am not sure how I would have been able to have made it through this journey without your unwavering love and support. Through the difficulties the cries and good days and bad days and health and sickness you have always been my cheerleader. No matter what I was going through you were always there to encourage me and remind me that I could do it, and for that I am forever grateful. I love you and look forward to spending the rest of my life with you.

My son William McLerran has learned more about differentiation than he cares to admit. William, I have been blessed beyond measure being your mother. You are the best gift that I have ever received, and it is an honor to be called your mother. Thank you for all the support that you have shown and continue to show me. Through challenging times, all I must do is look at your face and I muster the ability to dig down deep and keep moving forward. Thank you for being my rock, and as long as I live, I will be yours. Dream and set goals because you can accomplish them, just dig down deep and keep moving forward and I will always be with you no matter how close and or how far away.

I would like to acknowledge my sisters, Kristie Dalton and Renee Robbins. Thank you both for always believing in me and always pushing me to keep moving forward, your support and love helped me on the challenging days. I knew that I could pick up the phone and call you and that you would have encouraging words. I love you and appreciate everything.

My nieces, great-nieces, and nephew, I want you to know that I love each of you and am immensely proud of you, you can achieve your dreams, do not let anything hold you back. Reach

for the stars and never look back. There will be obstacles in life, it is up to you what you do when those obstacles occur, but there is always a solution, just keep looking.

Last but certainly not least, I want to thank Dr. Pamela Scott. I want to express my upmost gratitude and appreciation to Dr. Scott for all her support. Dr. Scott, thank you for your tireless support and your willingness to go above and beyond to help me during this process. You made me feel important and not like a number on a roster. You took time to call, check on me, email me and encourage me to keep moving forward. I have learned so much from you not only as a student but as a kind-hearted person, I hope you know that you have not only my respect but my admiration as well.

## TABLE OF CONTENTS

ABSTRACT .....	2
DEDICATION .....	3
ACKNOWLEDGMENTS .....	4
Chapter 1. Introduction .....	9
Statement of the Problem.....	10
Significance of the Study .....	12
Purpose of the Study .....	12
Contextual Framework.....	12
Research Questions.....	12
Definitions of Terms .....	13
Limitation and Delimitations of the Study.....	14
Summary .....	15
Chapter 2: Review of Literature .....	16
Overview and History .....	16
Differentiated Instruction.....	23
Theories of Differentiation .....	24
Differentiation Challenges in the Classroom.....	27
Differentiation Benefits .....	30
Research Supporting Differentiated Instruction .....	32
Framework to Guide Change .....	36
Summary .....	38
Chapter 3: Methodology .....	39
Research Questions.....	39

Research Design.....	39
Site Selection .....	40
Population .....	40
Sample.....	41
Data Collection .....	41
Data Analysis Strategies .....	43
Procedures.....	44
Conceptual Framework.....	44
Assessment of Quality and Rigor .....	45
Ethical Considerations .....	48
Researcher Role .....	48
Summary.....	48
Chapter 4: Findings.....	50
Results.....	50
Research Questions.....	51
Findings .....	52
Teachers Definition of Differentiation.....	52
Examples of Implementation of Differentiation in the Classroom .....	52
Barriers of Implementation .....	53
Supports of Implementation .....	53
Effects of Student Achievement .....	54
Summary.....	54
Chapter 5: Conclusion and Recommendations.....	56
Discussion.....	56



Recommendations for Practice .....	60
Recommendations for Future Research .....	60
Outcomes .....	61
References.....	63
APPENDIX: Interview Questions .....	78
VITA.....	82

## Chapter 1. Introduction

Differentiated instruction is a pedagogical-didactical approach that provides teachers with a starting point for meeting students' diverse learning needs (Smale-Jacobse et al., 2019). In that approach, all students have the same learning goal, but the instruction varies based on their interests, preferences, strengths, and struggles (Tucker, 2021). Just as everyone has a unique fingerprint, every student has an individual learning style (*Differentiated instruction: Examples & classroom strategies*, 2021). Chances are not all students grasp a subject in the same way or share the same level of ability, which can create a learning disability and cause students to have trouble learning and using specific skills (*Differentiated instruction: Examples & classroom strategies*, 2021). The skills most often affected by Learning Disabilities (LD) include reading, writing, listening, speaking, reasoning, and math (National Dissemination Center for Children with Disabilities, 2011). One way to help diverse learners understand the material is by differentiating lessons. Many teachers find differentiated instruction beneficial because it keeps students motivated and involved in learning.

A practical method of addressing the needs of diverse populations that gives all diverse learners equal access to learning is differentiation instruction (Ford, 2019). A growing body of research reported that differentiated instruction consistently yielded positive results across a broad range of targeted groups. Differentiated instruction allowed students to practice what they learned from course lecture components; thus, when teachers differentiated lessons in the regular classroom, they could maximize the learning of all students. Differentiated instruction was not a single strategy but a framework that teachers could use to implement a variety of techniques, many of which were evidence-based (*What is differentiated instruction*, 2022)

The model of differentiation is multifaceted; thus, it presents several misunderstandings. One of those issues involves school officials emphasizing standardized tests for all students,

which means that every student needs to learn at the same rate and pass the same test under the same circumstances. Another misconception is that some educators are hesitant about integrating differentiation in the classroom. When educators do not proactively implement instructional strategies that align with their students' learning styles, students' focus tends to shift, causing students to lose their train of thought (*What are the advantages of differentiated instruction*, 2019).

Students that test in single-strategy educational environments often show poor retention of the subject matter covered. This could result in a higher dropout rate, a lower pass rate, and a reduced graduation rate (National Center for Education Statistics, 2021a). The most important aspect of differentiating instruction is that teachers reach students at the students' level, which allows students more time to participate and engage. Thus, students above grade level may not suffer boredom and disengagement, and students below grade level may not fall further behind. Instead, they can learn and grow at their own pace. Finally, students at grade level will get individualized lessons, not simply a one-size-fits-all textbook.

### **Statement of the Problem**

In the 2019-2020 school year, the number of students aged 3-21 who received special education services under the Individuals with Disabilities Education Act (IDEA) was 7.3 million, or 14 % of all public-school students. Among students receiving special education services, the most common category of disabilities (33%) was specific learning (National Center for Education Statistics, 2021a). A learning disability (LD), specific learning, is a neurological disorder that affects the brain's ability to receive, process, store, and respond to information (National Association of Special Education Teachers, 2011). A learning disability can account for the unexplained difficulty a person of at least average intelligence may have in acquiring the basic academic skills essential for success at school and work and for coping with life (National

Center for Education Statistics, 2021b). In 2021, six million special-needs students were in pre-K-12 schools in the United States (National Center for Education Statistics, 2021b), and school systems across the country label approximately one in every ten students as exceptional (Kirk et al., 2014). The students may have any number of special needs, usually grouped as mild to moderate, including but not limited to learning disabilities, emotional or behavioral disorders, attention deficit disorder, cognitive disabilities, and autism (Finson et al., 2011). In 1975, Congress passed the Individuals with Disabilities Education Act (IDEA) to ensure that children with disabilities had equal access to public education. To reach this student population, many educators used differentiated instruction strategies that permitted them to consider factors, such as learning preferences, ability levels, identified special needs, and language proficiency, when planning and delivering lessons.

Some researchers proposed differentiating subjects for students with Individual Education Plans (IEPs) as an effective means to address the difficulties they could face in the general education curriculum. Rock et al. (2008) indicated that the full implementation of differentiated instruction in mixed-ability classrooms could result in positive results for all. Based on that information, the current study examined teachers' perspectives on differentiating subjects for their diverse learners or students with mild to moderate disabilities.

### **Significance of the Study**

The current study was worthwhile because the results provided insight and understanding into the ways in which differentiating subjects for diverse learners or students with mild to moderate disabilities could be effective.

### **Purpose of the Study**

The purpose of the current study was to examine the perceptions of middle school teachers regarding differentiation of instruction for students with mild to moderate disabilities. The results

might provide insight and understanding concerning ways in which differentiating subjects for students with mild to moderate disabilities could be effective for classroom learning.

### ***Contextual Framework.***

Vygotsky's Zone of Proximal Development Theory was the contextual framework guiding the study. Vygotsky's Zone of Proximal Development Theory demonstrated the potential benefits of Differentiation of Instruction (DI) in improving academic performance. The contextual framework for the study assumed that children learned well in numerous ways and with various degrees of structure (Tomlinson, 2010).

The theory supported this study and the use of differentiation instruction. Vygotsky defined his key construct the Zone of Proximal Development (ZPD) as the space between what a learner could do without assistance and what a learner could do with adult guidance or in collaboration with more capable peers (Zone of proximal development, 2022). For educators to implement differentiation instruction in the general education classroom, they must understand and use concepts that reach all student's ability levels.

### **Research Questions**

The research questions guiding this study are listed below. The primary question was: What are middle school teachers' perceptions of middle school teachers regarding differentiation of instruction for students with mild to moderate disabilities?

Four supporting sub-questions guided this research, as follows:

RQ1. How does differentiated instruction for students with mild to moderate disabilities influence student outcomes?

RQ2. What knowledge is considered for differentiation in the classroom for students with mild to moderate disabilities?

RQ3. What barriers do middle school teachers face when implementing differentiation for students with mild to moderate disabilities?

RQ4. What resources are available to middle school teachers that facilitate differentiation of instruction for students with mild to moderate disabilities?

### **Definitions of Terms**

Differentiation of Instruction (DI). DI tailors instruction to meet individual needs. Whether teachers differentiate content, process, products, or the learning environment, the use of ongoing assessment and flexible grouping makes this a successful approach to instruction (Mills et al., 2019)

Inclusion. Inclusion is the preferred term involving supporting students with disabilities through individual learning goals, accommodations, and modifications so that they are able to access the general education curriculum (in the general education classroom) and be held to the same high expectations as their peers (*What is inclusion and why is it important, 2022*).

The Individuals with Disabilities Education Act (IDEA). Act ensures that all children with disabilities are entitled to a free appropriate public education to meet their unique needs and prepare them for further education, employment and independent living (Individuals with disabilities education act, n.d.).

Individualized Educational Plan (IEP). An IEP is a plan or program developed to ensure that a child with a disability identified under the law attending an elementary or secondary educational institution receives specialized instruction and related services (*What is the difference between an IEP and a 504 plan, 2022*).

Learning Disability (LD). A disorder in one or more basic psychological processes that may manifest itself as an imperfect ability in certain areas of learning, such as reading, written expression, or mathematics (*What are learning disabilities, 2012*).

Response to Intervention (RTI). RTI is a multi-tier approach to the early identification and support of students with learning and behavior needs (Gorski,2022).

Zone of Proximal Development Theory (ZPD). According to theory, the Zone of Proximal Development is the space between what a learner can do without assistance and what a learner can do with adult guidance or in collaboration with more capable peers (Zone of proximal development, 2022).

### **Limitations and Delimitations of the Study**

The study was limited to the perception of middle school teachers and did not account for the perception of the high school or elementary teachers, special education teachers, or school administrators. The major limitation of this study was the limited number of teachers who responded to the research study to the number of flyers that as distributed among the school. A delimitation of the study was the research participant's preconceived opinions of special education.

### **Summary**

Chapter 2 provides a review of literature on differentiation of instruction and associated issues. Chapter 3 offers the methodology used for the current study and includes the research question(s), research design, population and sample, participants, data, data analysis strategies, and conceptual frameworks. Chapter 3 also consists of the assessment of quality and rigor, ethical consideration, and the role of the researcher. Chapter 4 reports on the findings. Finally, Chapter 5 provides conclusions, implications for practice, recommendations for future research, and a chapter summary.

## Chapter 2. Review of Literature

This chapter provides an overview of the relevant literature on differentiating instruction. The literature review draws on the history and findings that highlight the challenges faced by diverse learners, the possible advantages of differentiation instruction and underscores the importance of differentiation in this context. Findings from previous research illustrated the definition of differentiation instruction, noted challenges for diverse learners, and discussed effective ways in which to implement differentiation instruction in the regular classroom. In addition, findings from previous research aided discussion on teaching quality and the ways in which it applied to daily practice.

### Overview and History

In the eighteenth century, both French and American academics investigated the needs of individuals with disabilities, and by the nineteenth century, this interest focused on children with mental disabilities (Alkahtani, 2016). While most of those children at that time lived in institutions because of their daily difficulties, the American and French research led to their being educated in special schools (Alkahtani, 2016). By 1919, there were upwards of 190,000 one-room schoolhouses operating in the United States. However, as the country transitioned from the one-room schoolhouses to grade schools, educators assumed that all children of the same chronological age could learn the same materials at the same pace (*A snapshot of the history of differentiated instruction*, 2011). In 1972, Senator Harrison Williams proposed an Education for All Handicapped Children Act (EHCA) supported by Representative John Brademas, Chairman of the House Subcommittee on Select Education (Dragoo, 2019). The bill, passed in 1975, provided services and support to students with disabilities to aid their effective progress in school (Blackwell & Rossetti, 2014).



In 1990, Congress renamed the EHCA as the Individuals with Disabilities Education Improvement Act (IDEIA). In 1997, President Bill Clinton signed the Individuals with Disabilities Education Act (IDEA) that provided positive changes to the previous legislation (Block et al., 2019). This Act allowed all students, including typical and diverse learners, the ability to use the same high-quality curriculum, guaranteed that diverse learners could learn in their least restricted environment (LRE), and required special education teachers to be highly qualified (Block et al., 2019). By 2004, the Individuals with Disabilities Education Act mandated that children with educationally defined disabilities must receive free, appropriate, public education (FAPE) (Simon, 2006).

According to Blackwell and Rossetti, in 2014, there were an estimated 6.6 million students with disabilities who received special education services in public schools in the United States. This also indicated the development and implementation of approximately 6.6 million Individualized Education Programs (IEPs) (Blackwell & Rossetti, 2014). By the 2019-2020 school year, the number of students aged 3-21 who received special education services under the Individuals with Disabilities Education Act (IDEA) grew to 7.3 million or 14 percent of all public-school students (National Center for Education Statistics, 2021). Among students receiving special education services, the most common category of disabilities (33%) was specific learning disability (LD) (National Center for Education Statistics, 2021). The skills most often affected by LD included reading, writing, listening, speaking, reasoning, and doing math (National Dissemination Center for Children with Disabilities, 2011). Many educators discovered that one way to help diverse learners understand material was by differentiating lessons. Teachers agreed that differentiated instruction was beneficial because it kept students motivated and involved in the learning process.

The origins of differentiated instruction derived from several learning approaches, including the idea of multiple intelligences developed by psychologist Howard Gardner (*Differentiated instruction and strategies*, n.d.) Gardner posited that people could process information in one of seven ways: linguistic, logical-mathematical, spatial, bodily-kinesthetic, musical, intrapersonal, and interpersonal. He noted these individual abilities operated simultaneously to form complexity, thus providing a more comprehensive view of what constituted human intelligence (Maftoon & Sarem, 2012). Using Gardner's theory of multiple intelligences, educators could address students' diverse intelligence by creating individualized learning environments (Maftoon & Sarem, 2012).

A second theorist, David Kolb, created Kolb's Experiential Learning Theory, a solid foundational approach to all structures regarding learning, knowledge development, development, and change (*What is experiential learning*, 2021). The experiential learning model offered a four-stage circular process, Concrete Experience, Reflective Observation, Abstract Conceptualizations, and Active Experimentation (McCarthy, 2016). Kolb argued that learners should actively engage in all four components for learning to occur. Most students favored one part of the cycle over other parts, hence indicating their learning style preference (McCarthy, 2016).

A third theorist, Jean Piaget, contributed to the field of education through his concept of cognitive development (Mcleod, 2020). Piaget's contributions had a significant effect on the science of child development, particularly the issues regarding the education process with children and transferring cognition into psychology (Babakr et al., 2019). Perhaps the most important theorist for the purposes of the current study, Lev Vygotsky developed concepts of cognitive learning zones, known as the Zone of Actual Development. According to Vygotsky, the Zone of Actual Development occurred when students could work independently and

complete tasks on their own (Blake & Pope, 2008). Vygotsky also developed the Zone of Proximal Development (ZPD) to describe the gap between what learners could do on their own and what they needed help accomplishing (Daniels, 2001). Instruction and learning occurred in the ZPD. When students were in this zone, they could be successful with instructional help (Blake & Pope, 2008). These theories had differences but similarities as well with respect to learning. With the overlying similarities, they played a vital role in laying the foundation for differentiation of instruction.

Differentiation provided a critical component in education and all teachers must consider and use it to deliver quality education (Bushie, 2015). Teachers employed differentiation in various ways throughout the curriculum, such as using smaller group settings, designing lessons based on the students' learning styles, and assessing and adjusting lessons to meet the students' learning interests and abilities. Educators could interpret and implement differentiation in numerous ways to meet the needs of the students.

Researchers Reis and Renzulli (2015) presented five components most often associated with successful differentiation: 1) Content, 2) Instructional Strategies, 3) The Classroom, 4) Products, and 5) The Teacher. Under content, they noted that different academic abilities and interests could be challenging for teachers, but they could address those differences in the content and curriculum they delivered to the students. While some students could maintain the same curriculum, others needed a curriculum to match their interests or challenge them. Thus, lessons required individualization because students did not learn at the same rate (Reis & Renzulli, 2015). Educators could embellish their instructional strategies for students with different learning styles by offering options, such as group work, working alone, doing projects, or discussions. Teachers could differentiate in the general education classroom by using different

strategies that matched the learning style of the individual or groups at the school (Reis & Renzulli, 2015).

According to Reis and Renzulli (2015), differentiation could occur in a learning environment through the ways teachers managed it. One suggestion was to allow students to work with students with the same learning style or those with different learning styles to enable them to express themselves and show their uniqueness. Another possibility was to introduce guest speakers or technology in the classroom or bring new things to the learning environment like a computer lab, library, or even a field trip.

Students learned differently and expressed learning in various ways, thereby creating a product of sorts. Some students preferred speaking or through written form, some were better at understanding through technology, some were better with social action, and others were better with visual learning. Students needed options and to choose their learning methods to demonstrate what they have learned (Reis & Renzulli, 2015). It would be impossible for teachers to differentiate every lesson every day for every student. Differentiation was about making educational decisions and choices for students and knowing what is best for the students. Teachers should consider the students' learning styles, ability levels, interests, and expression styles when implementing differentiation in the lessons and allow the student to be creative and flexible while learning (Reis & Renzulli, 2015).

Faced with differentiating, educators needed to welcome and embrace the challenge. When they were more open to examining and determining the needs of each diverse learner, they could realize the benefits in differentiation. Teachers should remain open-minded and continually examine their students' ability and readiness, interest, and learning profile (Tomlinson, 2014). In determining a student's ability level, a teacher could look at a student's data, such as Aims Web, benchmarks, state tests, or others from previous years and check current scores. When

determining instructional actions, it would be vital to use a variety of data to understand every day and unique student needs (*Differentiation: How do I use data to adjust instruction for groups*, n.d.). Students could create groups in various ways, for example according to areas of interest. When a topic connected to what students liked to do, engagement deepened as they willingly spent time thinking, dialoguing, and creating ideas in meaningful ways (McCarthy, 2014). Making learning contextual to real-world experiences was a crucial learning technique, creating differentiation for student interests (McCarthy, 2014).

Differentiation occurred when teachers grouped students with others of the same ability level. This grouping allowed students to do the work at the same rate as their peers, thus giving them the confidence to move forward and take ownership of their work. This could also happen in creating smaller groups. Students tended to interact more in small groups because they had more opportunity to respond and confirm their thinking and learning (*Differentiated instruction*, 2022.). Last, educators could practice differentiation by grouping students according to their learning styles. Teachers know that students do not always operate in the same learning style for all discipline areas (*Differentiated instruction and strategies*, n.d.).

Educators tended to collaborate with other educators when it came to differentiation. An ideal classroom would allow time to plan the lesson(s) and be prepared for each class or to have another licensed professional assisting in the delivery of the task in hopes that every student could learn. Since this was not always the case, educators relied heavily on one another for tips and advice for implementing differentiation in the most effective ways. General education teachers often needed support in differentiating the diversity in their classrooms (Mofield, 2020). When educators collaborated, they brought new and different skills and perspectives to the planned instruction. Collaboration with a gifted education teacher could be an efficient way to

build a general education teacher's skills and competencies that could transfer to increased outcomes for student learning (Mofield, 2020).

Educators should familiarize themselves with their students' abilities as well as the outcomes they hoped to achieve. Educators could employ questionnaires and surveys to determine students' preferences, thus making instruction differentiation more meaningful (Conderman & Hedin, 2015). Once the teacher and the student developed a strong rapport, meaningful learning could occur. The teacher-student relationship had significance for a good learning environment to facilitate learning and create positive attitudes (Al Nasser et al., 2014).

Differentiated instruction was both a universal and controversial pedagogical approach that gave attention to student needs (Manivannan & Nor, 2020; Smale-Jacobse, 2019; Tomlinson, 2000). Benefits and barriers came with implementing differentiation. Manivannan and Nor showed teachers faced challenges when implementing differentiation. In their research, eleven barriers emerged, as follows: lack of differentiation knowledge, time constraints, class size, school administration, lack of resources, students, lack of teaching methodology knowledge, curriculum, personal characteristics, personal teaching beliefs and styles, and nature of differentiation of instruction. The researchers noted that lack of familiarity with differentiation led to insecurity. Time was a reoccurring barrier. Time was also one of the factors listed by Chien (2015) and Shareefa et al. (2019) in their studies. Aldosari (2018) and Avgousti (2017) reported their teacher participants did not receive sufficient support from the administration, which made it more difficult to carry out differentiation instruction.

Educators expressed mixed reviews regarding differentiation in the classroom. Seasoned educators might find adding differentiation an easier task since they had more training and hands on experience than a novice might have. On the other hand, a newly licensed educator might have more current knowledge of the rules and laws in serving diverse learners. Regardless of

where educators are in their career, they should take the time to learn the students' needs and ways to implement differentiation strategies effectively.

### **Differentiated Instruction**

A common misconception about differentiated instruction was that it was extremely complicated (Bushie, 2015). When addressing differentiation, Strahan et al. (2012) noted, "Many educators mistakenly think that differentiation means teaching everything in at least three different ways that a differentiated classroom functions like a dinner buffet. This is not differentiation, nor is it practical" (p. 3). This misbelief about differentiation discouraged teachers from even considering the possibility of incorporating the method into their teaching pedagogy (Bushie, 2015).

Differentiated instruction was a collection of practices and theories educators could use to help diverse learners achieve academic success. Various definitions exist for the term differentiation. According to VanTassel-Baska (2012), differentiation meant tailoring teaching to address specific students' needs and the way they learn. Osuafor and Okigbo (2013) posited that differentiated instruction meant creating multiple parts of a learning outcome "so that students of different abilities, interests or learning needs experience equally appropriate ways to absorb, use, develop and present concepts as a part of the daily learning process" (p. 556).

"Tomlinson (2005), a leading expert in this field, defined differentiated instruction as a philosophy of teaching based on the premise that students learned best when their teachers accommodated the differences in their readiness levels, interests, and learning profiles" (Subban, 2006). Differentiated instruction was both a philosophy and a way of teaching that respected the different learning needs of students and expected all students to experience success as learners (*What is differentiated instruction*, 2016).

Differentiated learning activities might depend on students' readiness for learning the specific content or skill, their interests, or their preferred ways of learning. In a differentiated classroom, students experienced learning in multiple configurations, such as working in small groups (with peers having similar or different readiness, interests, or learning preferences), with a partner, individually, and as a whole group (University of Virginia, 2016). This approach could also highlight the importance of reaching students with mild to moderate disabilities to offer a chance of success in the classroom. Differentiation could lead to successful accomplishments for the diverse learner.

### **Theories of Differentiation**

Many theories contributed to the framework of differentiation of instruction. The most influential of these theories were those posited by David Kolb, Jean Piaget, Lev Vygotsky, and Howard Gardner. Each added an individual perspective that aided understanding of how students learn.

Kolb's experiential learning model and learning styles inventory offered the most prominent theory and instrument on differentiation (McCarthy, 2016). Kolb (1984) stated that experiential learning theory offered fundamentally different views of the learning process from those of the behavioral theorists. "Based on an empirical epistemology or the more implicit theories of learning that underlie traditional educational methods, methods that for the most part are used on a rational idealist epistemology" (Kolb, 1984, p. 20). The experiential learning model is a four-stage circular process (McCarthy, 2016). Kolb (1984) argued that learners should actively engage in all four components for learning to occur. The four stages included: Concrete Experience, Reflective Observation, Abstract Conceptualizations, and Active Experimentation. Most students favored one part of the cycle over other parts, hence indicating their learning style preference (McCarthy, 2016). Kolb (1984) noted that learning was the major process of human



adaptation and the concept of learning is considerably broader than that commonly associated with the school. Piaget's theory of cognitive development explained the way in which a child constructed a mental model of the world (McLeod, 2020). Piaget stated the following:

“It is impossible to dissociate psychology from epistemology . . . how is knowledge acquired, how does it increase, and how does it become organized or reorganized . . . The answer we find, and from which we can only choose by more or less refining them, are necessarily of the following three types: Either knowledge comes exclusively from the object, or it is constructed by the subject alone, or it results from the multiple interactions between the subjects and the object but what interactions and in what form? Indeed, we see at once that these are epistemological solutions stemming from empiricism, apriorism, or diverse interactionist.” (Piaget, 1978, cited in Kolb, 1984)

Like Kolb, Piaget proposed one of the most renowned theories with respect to cognitive development in children. His theory offered four cognitive developmental stages for children, as follows: sensorimotor (birth to 2 years), pre-operational (2 to 7 years), concrete operational (7 to 11 years), and the formal operational stage (ages 12 and up) (Babakr et al., 2019). Piaget's contributions, particularly regarding the process of education among children and transferring cognition into psychology, had a significant effect on the science of child development (Babakr et al., 2019).

Unlike Piaget's concept that children's development must automatically lead to their learning, Vygotsky (1978) argued, "Learning is a necessary and universal aspect of the process of developing culturally organized, specifically human psychological function" (p. 90).

Vygotsky's theory developed concepts of cognitive learning zones known as the Zone of Actual Development (Blake & Pope, 2008). The Zone of Actual Development occurred when students

could work independently and complete tasks on their own (Blake & Pope, 2008). He also developed what is known as the Zone of Proximal Development (ZPD). Vygotsky (1978) stated that “The Zone of Proximal Development, is the distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers” (p. 86). This required adults or peers to aid students who were unable to complete a task on their own without assistance (Blake & Pope, 2008). The ZPD defined the gap between what learners could do on their own and what they needed help doing (Daniels, 2001). Instruction and learning occurred in the ZPD. When students were in this zone, they could be successful with instructional help (Blake & Pope, 2008).

Gardner proposed a multiple intelligence theory (MI). Gardner viewed intelligence as “the capacity to solve problems or to fashion products that are valued in one or more cultural setting” (Gardner & Hatch, 1989, p. 4). The objective was to focus on the content and ideas of learning, thus proposing a means to understand the many ways in which human beings are intelligent (Maftoon & Sarem, 2012). Gardner theorized that people were able to process information in one of seven ways: linguistic, logical-mathematical, spatial, bodily-kinesthetic, musical, interpersonal, and intrapersonal. He noted that these individual abilities operated together to form a more complex way of accomplishing tasks, thus providing a more comprehensive view of what constitutes human intelligence (Maftoon & Sarem, 2012). Gardner’s theory of multiple intelligences could address students’ diverse intelligences by creating individualized learning environments (Maftoon & Sarem, 2012).

In public school classrooms, student academic abilities could span across multiple ability levels (Bondie et al., 2019; Hertberg-Davis et al., 2006). The theories listed above illustrated there was not a *one size fits all approach* to education. Kolb, Piaget, Vygotsky, and Gardner

agreed that learning occurred differently and that people learned at different rates, thus establishing a need for differentiation of instruction in the classroom.

### **Differentiation Challenges in the Classroom**

Diverse learners faced varied daily challenges while in school one of which was cultural diversity. Cultural diversity has increased and produced not only a challenge for students but a challenge for teachers as well. In 2014, U.S. public schools hit a minority-majority milestone with Latino, African American, and Asian students surpassing the number of White students (Drexel University, School of Education, 2000). The U.S. Census predicted that by 2044 over half of the nation's population would be people of color, so cultural diversity would remain a factor in the classroom (Drexel University, School of Education, 2000). In preparation, teachers should begin incorporating distinct cultures into their instruction, especially the cultures of the students in their classrooms daily. Yuan (2017) revealed that qualified teachers struggled with the curriculum, content, and practicum in a traditional educational setting because their students were more diverse and from different countries. The literature proposed several methods to reform traditional teaching strategies to meet the needs of the multicultural student population and instructional context.

Another challenge faced by diverse learners in the classroom included lessons delivered at different levels. Not all students could learn at the same rate. The idea that learners had different learning needs and that a one-size-fits-all approach did not suffice gained educational momentum (Smale-Jacobse et al., 2019; Subban, 2006). In addition, the classroom curriculum might not match the students' current abilities. The unaccommodating curriculum could hinder meeting the needs of diverse learners. According to Zwane and Malale's (2018) research, the curriculum used in some schools had no modifications to accommodate learners with a wide array of educational needs. Mainstream techniques created challenges for teachers as well as students

with learning disabilities in an inclusive classroom, thus making it harder to reach diverse learners.

Madrazo and Motz (2005) explained how the brain functioned and how the students' minds learned, absorbed, and thought. They concluded that the curriculum often mismatched content and teaching practices with the thinking and learning processes of students. They stated teachers must promote active learning through the incorporation of research on brain-based education and the corresponding academic needs of the students (Madrazo & Motz, 2005).

Mprah, Amponteng, and Owusu's (2015) qualitative research investigated data that consisted of 25 participants in the Wiamoase Educational Circuit in the Sekyere South District in the Ashanti Region of Ghana. They focused primarily on students with special needs using in depth interviews and observations. The findings from the research indicated that support for the pupils with special needs in the general education setting suggested those children were not getting adequate support in the public schools due to lack of appropriate resources. Educators gave the students information and expected the students to decipher what they received. Lack of resources in the classrooms could cause stress on both students and educators, thus preventing students from learning at their fullest potential. The primary insufficient resource was, of course, money. Banerjee (2016) conducted a systematic review that identified factors associated with the education and underachievement of disadvantaged students. Banerjee's systematic review, completed between 2005 and 2014, merged thirty-four studies that identified factors for 771 underachieving and underprivileged students. Preferred reporting items followed protocol for all the systematic reviews and meta-analyses. Results suggested significant factors linking deprivation to underachievement categorized as a lack of favorable environment and support (Banerjee, 2016).

Educators also faced challenges with differentiation instruction. Lavania and Nor (2020) provided a summary of challenges that teachers faced with differentiation of instruction. The authors selected research articles from 2014 to 2019 and chose nineteen empirical studies for their report. Their findings showed teachers facing numerous challenges, including lack of differentiation of instruction knowledge, time, and class size ( Manivannan & Nor, 2020). Quantitative and qualitative studies revealed that teachers faced challenges relating to knowledge of differentiation of instruction (Avgousti, 2017; Boston, 2017; Chien, 2015; deJager, 2016; Lavania & Nor, 2020; Lunsford, 2017; Moosa & Shareefa, 2019; Merawi, 2018; Robinson et al., 2014; Siam & Al-Natour, 2016; Suprayogi & Valcke , 2016; Tobin & Tippet, 2014; Wan, 2016); knowledge of teaching and learning methodology ( Boston, 2017; deJager, 2016; (Lavania & Nor, 2020; Lunsford, 2017; Wan, 2016); personal teaching beliefs ( Boston, 2017; deJager, 2016; Lavania & Nor, 2020; Wan, 2016); and personal characteristics (Dixon et al., 2014; Lavania & Nor, 2020 Merawi, 2018; Suprayogi & Valcke , 2016; Tobin & Tippet, 2014).

### **Differentiation Benefits**

Educating all students should be the primary goal for educators (Boyle et al., 2011). Since early stratification of students might have unintended effects on the educational opportunities of students with varying background characteristics, addressing students' learning needs by teaching adaptively within heterogeneous classrooms was the best choice for a fair educational system (Oakes, 2008; Schütz et al., 2008; Smale-Jacobse et al., 2019). Every student deserves the chance to be educated and has the right to an appropriate education (Taylor, 2011). According to Subban (2006), various researchers noted that, by employing differentiation, teachers could value each student for his or her unique strengths, while offering students opportunities to demonstrate skills through a variety of assessment techniques. Differentiation allowed the creation of an environment in which all students could succeed and from which they could derive benefits.

Ensuring success with differentiation instruction involved supporting the educator in delivering the instruction along with the key stakeholders. The key stakeholders included but were not limited to support teachers, counselors, administrators, and parents (Woodcock et al., 2012).

In a study investigating the use of differentiated instruction on student scores on standardized tests, teachers' perceptions of their ability to meet the needs of diverse students and parents' expectations of student performance, Hodge (1997) found that students who were prepared for tests using differentiated techniques showed a gain in their mathematics scores. Effective use of differentiation had association with increased learner motivation, higher academic achievement, and greater collaboration among students with a similar ability (Gentry & Owen, 1999; Hertberg-Davis, 2009; McNamara et al., 1997; Taylor, 2017). Differentiated instruction increased student engagement. Students reported feeling highly engaged in differentiated lessons and assessments revealed significant increases in understanding after implementing differentiation. Additional benefits, including a student-centered classroom and independence, were evident (Koehler, 2010).

According to the Association for Supervision and Curriculum Development (2010), Tieso (2005) studied 31 math teachers and 645 students and found that differentiated instruction was effective in keeping high-ability students challenged in heterogeneous classrooms. Differentiated instruction was quite effective in enhancing the students' interests and attitudes towards the lessons. Various researchers discovered that in classes using differentiated instruction application the students' academic success, interest in the lesson, learning levels, and participation in the lesson were enhanced (Baumgartner et al., 2003; Beecher & Sweeney, 2008; Fahey, 2000; Karadag et al., 2010). Students who studied at their academic level were more likely to attempt the work and stay engaged than were those unable to accomplish the task who gave up.

Differentiation instruction is a proactive approach that meets the students at their level, allowing them to work at their own pace while completing the number of tasks as their typical peers. Because it is student-centered, differentiation instruction could enable teachers to maximize each student's individual growth. Effective use of differentiation could produce increased learner motivation, higher academic achievement, and greater collaboration among students with similar abilities (Taylor, 2017). In addition, differentiating instruction could allow students to engage academically in their work by offering material that energizes the thinking process (Hileman, 2009).

Differentiation encouraged students to ask essential questions, collaborate with teachers on grandiose ideas, and become classroom leaders. Differentiation provided insight into students' interests, abilities, and learning styles, while shifting some of the responsibility to the learners themselves. The change brought increases in motivation, independence, and opportunity for democracy in action, wherein students became members of learning communities (Chick & Hong, 2012). Differentiation sometimes allowed diverse learners to pair with other students, thus allowing diverse learners to form healthy bonds and make friends in the classroom setting.

When classrooms employed differentiation, students maintained task behavior, eliminating unnecessary disruptions from bored or unchallenged students who might consider the material not meeting their understanding level or who might not engage with the lesson (Greene, 2011). When implemented correctly, differentiation allowed the students to work without complications. It also allowed for more communication between the teacher and student, which lead to more praise for positive behaviors.

### **Research Supporting Differentiated Instruction**

As one of the most respected differentiation theories, Vygotsky's (1978) work offered relevance to this research because it provided rational insights into why differentiation worked in

general education classrooms and explained ways to reach all learners. Differentiation could enable students with a wide range of abilities and disabilities to receive an appropriate education. Vygotsky's 1978 Zone of Proximal Development Theory (ZPD) provided an instructional approach to help teachers understand the capabilities of diverse learners and encouraged teachers to seek guidance or collaboration with more capable peers. Vygotsky's sociocultural theory of learning and the Zone of Proximal Development strongly supported the use of differentiated instruction (Bushie, 2015; Vygotsky, 1986). In addition, the findings in brain research also had significant implications for differentiated instruction. Brain-based research was relevant to education because a brain's ability to process, store, and retrieve information relied on the environment in which the students were situated, the challenges proposed, and students' ability to make meaning of the information through connections relevant to their lives (Bushie, 2015; Tomlinson et al., 1998).

Smale-Jacobse et al.'s (2019) systematic review of literature from 2006 to 2016 provided an overview of the theoretical conceptualizations of differentiated instruction as well as a discussion of prior findings on its effectiveness. The systematic review of literature provided evidence that differentiated instruction for secondary school students improved academic achievement (Smale-Jacobse et al., 2019). The researchers selected fourteen papers with twelve studies to review. Topics included generic teaching training for differentiation instruction, ability grouping and tiering individualization, heterogeneous grouping, understanding, and remediation in flipped classroom lessons. The results indicated moderate to positive effects on student achievement. These empirical findings indicated the possible benefits of differentiated instruction as well as noting severe knowledge gaps, which suggested needed research (Smale-Jacobse et al., 2019).



A study by Simmons (2015) focused on differentiation's response to intervention. Simmon's research consisted of five-sixth grade students. The researcher monitored the students' reading levels through response to intervention (RTI) using differentiation. All participants needed services, but only three received the services. Results showed the positive effects that differentiation had on the students throughout the RTI model process as their reading improved (Simmons, 2015).

Darra and Kanellopoulou (2019) examined 16 diverse studies regarding differentiated instruction that took place between 2008-2018 in higher education settings in different cultures and different social environments. They noted that the research sprang from international as well as United States origins. Their findings revealed that differentiation had a positive and significant impact on students' learning experiences. The students in differentiated environments performed better than did those in traditional learning; however, there was no improvement in grades. The researchers posited that teachers in the studies had a better understanding of differentiation and supported differentiation in their curriculum. Two of the studies reported that inexperienced teachers offered that the program had little or no impact to help them teach science and or math with differentiation instruction and not all students appeared satisfied with the instruction. They noted that, when the students were enthusiastic about differentiation instruction, they reflected their teachers' positive feelings about the method. Overall, the research showed differentiation improved teaching and developed positive attitudes not only among teachers but also with the students as well. This study also revealed a need for further research, especially in Greece where no studies existed that could compare to the other international studies on differentiation instruction (Darra & Kanellopoulou, 2019).

A study by Kotob and Abadi (2019) described the way in which differentiation instruction influenced academic achievement among English Language Learners in a mixed ability

classroom. The researchers selected twenty students from an English Language Learner class, including ten low academic achievers and ten high academic achievers. All students took a pretest before the differentiation intervention. According to the subsequent posttest, it was clear that the lower achievers benefited from differentiation of instruction and that differentiation of instruction maximized their performance. The low achievers test scores increased, which ensured academic growth. As for the higher achievement students, their scores did not change after differentiation. The researchers concluded the high achievers test scores did not change between the pre and posttest scores because of their high academic performance (Kotob & Abadi, 2019). The findings from this study suggested that, when implemented correctly, differentiation of instruction was an effective strategy to help low or struggling students in their education.

A research study by Obafemi (2022) examined the effects of differentiated instruction on pupils' academic achievement in mathematics in Ilorin West Local Government Area of Kwara State. The results of the study revealed that differentiation treatment had a significant effect on the students' academic achievement in mathematics but gender and school type did not affect student achievement in the area of mathematics. Based on the findings from this particular study, differentiation improved student academic achievement in mathematics with a consequent recommendation that differentiation be used in primary schools in mathematics for students.

Salar and Turgut (2021) conducted a study at Ataturk University in Erzurum, Turkey on the effects of differentiated instruction and 5E learning cycles on academic achievement and self efficacy of students in physics. The purpose of the research was to examine and compare the effects of differentiation of instruction and 5E learning cycles on student achievement and self efficiency. A pre and posttest addressed the research question. Participants included 162 tenth grade students from three schools. The experiment occurred three separate times, one time at each school, with a control group at each of the three schools. The following tests comprised the

data: Electricity Achievement Test, Electricity Prior Knowledge Test, and Physics Self-Efficacy Test. In order to obtain quantitative data, the researchers employed a SPSS version 20 software. A two-factor mixed measures ANOVA determined a difference between the students' pre and posttest scores on self-efficacy. Based on the findings, differentiation of instruction improved the academic achievement of low- and mid-achieving students; however, the self-efficacy scores indicated no significant difference between the groups. They recommended that teachers using differentiation in their classroom should create level groups in their classroom (Salar and Turgut, 2021).

Suson et al. (2020) identified the role of differentiation instruction in teaching reading and fostering comprehension in basic education in the Philippines. The study looked at four different guided-reading strategies, identifying the main idea, noting details, sequencing events, and predicting outcomes. Analysis of the data was through weighted means, standard deviations, and Chi-square. The results of the study found that the students who benefited from differentiation instruction developed reading comprehension. This information was in line with other empirical studies revealing that diverse learners achieved better academically when implementing differentiation. According to the findings, teachers needed to provide more activities and learning techniques in their curriculum through differentiation instruction to enhance the reading comprehension of all intelligence levels. Differentiation instruction was vital in reading comprehension to create a persistent benefit to diverse learners (Suson et al., 2020).

### **Framework to Guide Change**

Using a framework to guide change was one way to ensure that educators gained the knowledge and skills to plan and teach lessons to meet the needs of all diverse students. Hanover Research did a research study in 2018 that supported Washington school districts' focusing on

differentiating instruction to support diverse students within a multi-tiered system of support (MTSS) framework. Hanover Research noted the following:

- Differentiation required teachers to plan instruction that met all students' needs and to adjust instruction in response to unanticipated needs.
- Differentiation focused on varying instruction to meet individual students' needs.
- Teachers needed substantial professional development to differentiate instruction effectively.
- Schools could use classroom observations to support professional development and to monitor the implementation of differentiated instruction.
- Differentiation required effective formative assessments. (Hanover Research, 2018)

With schools facing diversity every day, the need for differentiation was more common.

Cheney and Muscott (1996) explored the concept of responsible inclusion in considering the successful placement of students with complex social, emotional and behavioral needs in inclusive schools. Booth and Ainscow, 2011 stated that, for inclusion to be successful, the following must take place:

- supporting everyone to feel that they belong
- increasing participation of children and adults in learning and teaching activities, relationships, and communities of local schools
- reducing exclusion, discrimination, barriers to learning and participation
- viewing differences between children and between adults as resources for learning
- emphasizing the development of school communities and values, as well as achievements
- restructuring cultures, policies, and practices to respond to diversity in ways that value everyone equally (Booth & Ainscow, 2011, p. 11).

McMaster reported successful inclusion through examples found in literature. In his research, he shared a vision of inclusion along with a common definition. He reported on the process reflecting the best evidence for professional learning and development and discussed the changes that took place on a cultural level. Last, he discussed a successful tool called differentiation used throughout the world to facilitate his process of change (cited in Timperley et al., 2007).

### **Summary**

Educational psychologists, instructional designers, and teachers unanimously agreed that every student learned differently. To make the learning process beneficial for the learners, one should consider their individual differences and modify the type of content delivered, the assessments conducted, the sequence of delivery of content, and various other learner characteristics (Rasheed & Wahid, 2018). Tomlinson (2005) defined DI as a teaching philosophy based on the premise that students learned best when their teachers accommodated the differences in their readiness levels, interests, and learning profiles. This chapter detailed the history and value of differentiation instruction and discussed its worth as a valuable learning tool for diverse learners. Studies highlighted the success of differentiation throughout this chapter and identified barriers that came with differentiation. The literature established the need for more research on differentiation regarding teachers' perceptions and a framework to guide that change. The chapter outlined numerous strategies to highlight the approach outlined for differentiation instruction. The next chapter describes the research design methodology for this study.

### **Chapter 3. Methodology**

Chapter 3 identifies the procedures used to investigate the perceptions of middle school teachers regarding differentiation of instruction for students with mild to moderate disabilities. A qualitative research method produced an in depth understanding of the participants' experiences and perceptions regarding differentiation for middle grades in the public schools. Four themes aided understanding of the features of qualitative design: the goals of the research; the primary instrument of data analysis; the method used throughout the research; and the outcome of the research. The goal of the research was to create a description of how the subjects experienced differentiation in the classroom.

#### **Research Questions**

The following questions examined the perceptions of the middle school teachers concerning differentiation in the general education classroom. The research questions guiding this study are below. The primary question was: What are middle school teachers' perceptions of middle school teachers regarding differentiation of instruction for students with mild to moderate disabilities?

Four supporting sub-questions guided this research, as follows:

RQ1. How does differentiated instruction for students with mild to moderate disabilities influence student outcomes?

RQ2. What knowledge is considered for differentiation in the classroom for students with mild to moderate disabilities?

RQ3. What barriers do middle school teachers face when implementing differentiation for students with mild to moderate disabilities?

RQ4. What resources are available to middle school teachers that facilitate differentiation of instruction for students with mild to moderate disabilities?

## **Research Design**

Phenomenological research is a qualitative research approach that seeks to understand and describe the universal essence of a phenomenon. The approach investigates the everyday experiences of human beings while suspending the researchers' preconceived assumptions about the phenomenon (Ho & Limpaecher, 2022). Qualitative methodology was appropriate for the current study because the focus was on collecting rich, in-depth information from teachers regarding their perspectives about differentiation in the general education classrooms for diverse learners and or students with mild to moderate disabilities. Qualitative research describes the process of educational activities that find shortcomings and weaknesses and improves them. Researchers can use the methodology to analyze a symptom, facts, and educational events in the field or compile a hypothesis related to the concepts and principles of education based on information and data that occur in the field (Lembaga Penelitian dan Pengabdian kepada Masyarakat Universitas Medan Area, 2020). By adopting qualitative methodology, the researcher can fine-tune pre-conceived notions as well as extrapolate the thought processes, analyzing and estimating the issues in-depth (Jamshed, 2014).

## **Site Selection**

The current study took place in a rural school in Loveland, TN with 741 students for the 2021-2022 school year. There were 368 males and 373 females in the chosen school, including 233 students in 6th grade, 259 in 7th grade, and 249 students in the 8th grade. Administrators identified sixty-five students as having mild to moderate disabilities and eighty-five had an IEP. Of the 741 students enrolled, 63% were economically disadvantaged and qualified to receive a free/reduced-price lunch.

## **Population**

This study population included fifteen teachers with a license in general education in the state of Tennessee. The participants for this research study were general education teachers from the public school system in Loveland, TN. The levels they taught ranged from sixth grade through eighth grade. The educators had diverse teaching backgrounds with a minimum of three years instructing students with disabilities.

## **Sample**

The sample for the research comprised middle school teachers that taught 6th, 7th, and 8th grade students with mild to moderate disabilities during the 2021-2022 school year. Fifteen teachers from one school district that offered differentiation to diverse learners in grades 6th through 8th grade in the general education classrooms met the study criteria. The researcher verified names and credentials of the volunteers with the state of Tennessee Department of Education website and school district website. The fifteen teachers were eligible to complete the interview process for research purposes.

## **Participants**

A group of fifteen teachers participated in the study, which was sufficient to reach data saturation. Previous recommendations suggested that qualitative studies required a minimum sample size of at least twelve to reach data saturation (Clarke & Braun, 2013; Guest et al., 2006; Vasileiou et al., 2018). Therefore, a sample of fifteen was sufficient for the qualitative analysis and scale of this study. This allowed the researcher to evaluate their perceptions on differentiation in the classroom for diverse learners and or students with mild to moderate disabilities. Table 1 below illustrates the demographic breakdown of the participants.



**Table 1***Participant Profiles*

Pseudonym	Gender	Years Experience	Subject Taught	Degree
KDO	F	10+	Math	Bachelor's
AKO	F	10+	Social Studies	Bachelor's
RPO	F	7	English	Bachelor's
DMO	M	10+	English	Masters
CBO	F	8	English	Bachelor's
CRO	F	10+	Science	Bachelor's
CCO	M	10+	Science	Bachelor's
JWO	M	10+	Math	Bachelor's
RSO	F	10+	English	Bachelor's
RCO	F	10+	Science	Bachelor's
KSO	M	10+	Social Studies	Bachelor's
WMO	M	10+	Social Studies	Masters
SBO	F	7	English	Bachelor's
BOO	F	10+	Science	Masters
NKO	F	10+	English	Bachelor's

Before collecting data, the researcher ensured there were fifteen educators willing to participate in the research study. Researchers must respect those individuals and should allow them to make their own informed decisions about whether to participate in research. To treat people as autonomous, the researcher provided the individuals with complete information about the study and encouraged them to decide whether to enroll (Global Advocacy for HIV Prevention, 2019).

## **Data Collection**

The semi-structured interviews aided collection of the qualitative, open-ended data, including exploring the participant's thoughts, feelings, and beliefs about the topic, and discussing personal, and sometimes sensitive, issues (DeJonckheere & Vaughn, 2019). The researcher prepared a list of questions before the semi-structured interviews took place and asked four identified experts to review. Experts had been in the special education field for at least ten years and had a general understanding of differentiation. The identified experts included a Special Education Director, two Special Education teachers, and one Comprehensive Development Classroom (CDC) Special Education Teacher. The experts offered suggestions based on their experience to improve the data collection opportunity.

Once there were fifteen participants, the researcher engaged with each via email and in person to ensure their understanding of the study. During the face-to-face conversations, the researcher asked the participants to sign a waiver and consent form (Appendix D), indicating that he/she agreed to take part. The researcher discussed the purpose of the study and answered any questions.

Data collection involved questionnaires (Appendix C) as well as face-to-face interviews with the fifteen teachers. A password-protected laptop that belonged to the researcher served as a storage site for all data. The researcher explained that the information obtained would be securely locked away and destroyed after a three-year period.

## **Data Analysis Strategies**

The researcher recorded and transcribed all interviews. The researcher listened to the interviews several times to ensure accuracy when transcribing. After the interviews were transcribed and member-checked by study participants, the researcher entered the data into a computer system called Quirkos that identified themes and codes. The identified data created

five main themes, as follows: a) teachers' personal definition of differentiation, b) examples of implementation of differentiation in the classroom, c) barriers to implementation, d) needed supports, and f) student achievement.

## **Procedures**

Qualitative research determined the perceptions of differentiation among 6th, 7th, and 8th grade teachers. After identifying a school, the researcher contacted the LEA, special education supervisor of instruction, and the director of schools to offer written information about the research study. A signed letter from the director of schools and the special education director granted permission to conduct the research study on October 15, 2021 (Appendix A). The researcher received a signed letter from the LEA granting permission to conduct the research study on November 19, 2021 (Appendix B).

## **Conceptual Framework**

The conceptual framework for this study incorporated theories and definitions of differentiation of instruction. According to VanTassel-Baska (2012), differentiation of instruction included tailoring one's own teaching to attend to a specific students' need to help them with the way they learn. Differentiation was a direct approach to teaching diverse learners that entails planning and implementing various levels in one classroom. Although many definitions for differentiation of instruction existed, Tomlinson (2005), a leading expert in this field, defined differentiated instruction as a philosophy of teaching based on the premise that students learned best when their teachers accommodated their differences in readiness levels, interests, and learning profiles. Differentiated instruction was not a single strategy but a framework that teachers could use to implement a variety of strategies, many of which were evidence-based. (*What is differentiated instruction*, 2022).

## Assessment of Quality and Rigor

Members of the academic community share responsibility for ensuring rigor in qualitative research, whether as researchers who design and implement, manuscript reviewers who critique, colleagues who discuss and learn from each other, or scholarly teachers who draw upon results to enhance and innovate education (Johnson et al., 2020). Uniquely positioned, qualitative research can provide researchers with process-based, narrated, storied data more closely related to human experience (Stahl & King, 2020). Qualitative research's trustworthiness can depend on the credibility of the researcher (Merriam, 2009).

Attributes of rigor and quality suggest best practices for qualitative research design related to the steps of designing, conducting, and reporting qualitative research in education. A research question must be clear and focused and supported by a strong conceptual framework, which contribute to the selection of appropriate research methods that enhance trustworthiness and minimize researcher bias inherent in qualitative methodologies (Johnson et al., 2020). Lincoln and Guba (1985) established four criteria as benchmarks for quality based on the identification of four aspects of trustworthiness relevant to both quantitative and qualitative studies: truth value, applicability, consistency, and neutrality.

Johnson et al., (2020) noted five steps for common standards of rigor and best practices for qualitative research from design through dissemination. The five steps included:

- 1) Identifying a research topic: Identifying and developing a research topic comprises two major tasks: formulating a research question and developing a conceptual framework to support the study.
- 2) Qualitative Study Design: The development of a strong conceptual framework facilitates the selection of appropriate study methods to minimize the bias inherent in qualitative studies and to help readers trust the research and the researcher.

- 3) Data Analysis: In many qualitative studies, data collection runs concurrently with data analysis. Specific standards of rigor commonly used ensure trustworthiness and integrity within the data analysis process, including use of computer software, peer review, audit trail, triangulation, and negative case analysis.
- 4) Drawing Valid Conclusions: According to Swanwick and Swanwick (2013), Lingard and Kennedy succinctly state that the purpose of qualitative research was to deepen one's understanding of specific perspectives, observations, experiences, or events evidenced through the behaviors or products of individuals and groups as they situate in specific contexts or circumstances. Conclusions generated from study results should enhance the conceptual framework, or contribute to a new theory or model development, and are most often situated within the discussion and conclusion sections of a manuscript.
- 5) Reporting Research Results: The keys to quality reporting of qualitative research results are clarity, organization, completeness, accuracy, and conciseness in communicating the results to the reader of the research manuscript (Swanwick & Swanwick, 2013).

Lincoln and Guba (1985) stated that credibility was essential to establish trust and that one method of promoting credibility was through triangulation, which used several sources of information to develop a repeated pattern (Stahl & King, 2020). Another way to pursue credibility was to involve informants (e.g., tutees, tutors, and program coordinators from a writing center) in verifying researchers' interpretations of the facts (Stahl & King, 2020). Transferability was the second factor for trustworthiness offered by Lincoln and Guba (1985). In transferability, patterns from one context might apply to another. Dependability was the third perspective of trustworthiness noted by Lincoln and Guba. In qualitative research, in which researchers, producers, and consumers actively build their trust in the events as they unfold, there are a few concrete research practices that not only produce confidence but also make one feel

trustworthy (Stahl & King, 2020). The fourth perspective on trustworthiness was confirmability or getting as close to objective reality as qualitative research can get (Stahl & King, 2020).

Using Lincoln and Guba as a guideline, the current research addressed each of the four areas for establishing credible and trustworthy findings. Member checking aided credibility through member checking during the interview process. During the interview process, the researcher summarized and restated information and questioned participants about the accuracy. Expert sampling provided transferability by interviewing regular education teachers who taught students with mild to moderate disabilities. A code-recode strategy produced dependability using data from the interviews and the transcripts and placing them accordingly. Triangulation offered confirmability by checking and rechecking the data and entering the information into a CAQDAS software called Quirkos.

Researchers must assure that the instrument used in the research measures what it is supposed to measure. Validity in qualitative research means appropriateness of the tools, processes, and data. Whether the research question is valid for the desired outcome, the choice of methodology is appropriate for answering the research question, the design is valid for the methodology, the sampling and data analysis is appropriate, and finally, the results and conclusions are valid for the sample and context (Leung, 2015). To meet this criteria, the researcher transcribed the interviews carefully by writing each word verbatim from the recordings and entered the data into Quirkos.

### **Ethical Considerations**

Given the nature of a qualitative research study, the interaction between the researcher and participants can be ethically challenging. Ethical guidelines are important for the protection of participants for any research study. Research ethics govern the standards of conduct for scientific

researchers. It is important to adhere to ethical principles to protect the dignity, rights, and welfare of research participants (World Health Organization, 2022).

The researcher treated the participants in the current study with respect and courtesy. The aim and methods of the research were clear to all participants, who could choose or decline to participate. Researchers must respect those individuals and allow them to make their own informed decisions about whether to participate in the research. To treat people as autonomous, individuals must have complete information about a study and decide on their own whether to enroll (Global Advocacy for HIV Prevention, 2019).

### **Researcher Role**

The researcher undertook collecting on-site permissions and permission forms, arranging and conducting interviews, gathering information and data including transcribing and coding appropriately. The school provided space for the interviews to take place, thus allowing for a more inviting and familiar comfortable setting with which everyone was familiar.

### **Summary**

A qualitative design was appropriate for this study in order to create an understanding of differentiation in the general education classroom through the perceptions of middle school teachers. The chapter offered the research questions, the venue for the study, and information about participant selection. The chapter included information about the interviewing process, including recording, transcribing, coding through Quirkos, and identifying patterns and or themes within the data. The chapter considered credibility, transferability, dependability, and confirmability, and the role of the researcher.

## Chapter 4. Findings

This chapter features an in-depth examination of the purpose of the research and the ways in which the methodology allowed the participants to discuss their views implementing differentiation in the classroom. It presents the findings from the interviews, discusses the research questions, and offers a summary.

The purpose of this qualitative study was to examine the perceptions of middle school teachers regarding differentiation of instruction for students with mild to moderate disabilities. Vygotsky's Zone of Proximal Development Theory provided the contextual framework that guided the study. Ten interview questions and four research questions guided the study.

### Results

The purpose of this research was to examine the perception of middle school teachers on ways in which to implement differentiation for students with mild to moderate disabilities in the general education classroom. The research allowed the participants to discuss their views and their individual definitions of differentiation. It encouraged them to look at ways that differentiation could increase student achievement and identify barriers teachers faced when trying to implement differentiation in the general education classroom. In addition to identifying personal perspectives on their comfort levels when dealing with differentiation, participants discussed their perceptions of differentiation in the general education classroom.

A qualitative method was appropriate for this research. Among other views, the general education teachers consistently noted there was not enough time and or support in the general education classroom to deliver differentiation effectively. The teachers expressed legitimate concerns about the number of students with mild to moderate disabilities in the school that received differentiation instruction from one individual due to insufficient support for effective implementation.



This study examined fifteen middle school teachers' perceptions of differentiation of students with mild to moderate disabilities in the general education classroom. The interviews consisted of ten questions that were audio-recorded and transcribed. The purpose of this study was to investigate middle school teachers' perceptions of differentiation of students with mild to moderate disabilities in the general education classroom. The research question and sub questions illustrated the experiences of the teacher's using differentiation in a rural school in Lafayette, TN. The questions examined the teachers' experience regarding differentiation strategies and ways in which they addressed barriers. The analysis of the data revealed the following themes: a) teachers' personal definition of differentiation, b) examples of implementation of differentiation in the classroom, c) barriers to implementation, d) supports for implementation, and f) effects on student achievement.

### **Research Questions**

The research questions guiding this study are listed below. The primary question was: What are middle school teachers' perceptions of middle school teachers regarding differentiation of instruction for students with mild to moderate disabilities?

Four supporting sub-questions guided this research, as follows:

RQ1. How does differentiated instruction for students with mild to moderate disabilities influence student outcomes?

RQ2. What knowledge is considered for differentiation in the classroom for students with mild to moderate disabilities?

RQ3. What barriers do middle school teachers face when implementing differentiation for students with mild to moderate disabilities?

RQ4. What resources are available to middle school teachers that facilitate differentiation of instruction for students with mild to moderate disabilities?

## **Findings**

Each interview identified various points of dissatisfaction with differentiation instruction in the general education classroom for students with mild to moderate disabilities. The researcher coded the data from the participant's responses and categorized responses based on the emerging themes: The analysis of the data revealed the following themes: a) teachers' personal definition of differentiation, b) examples of implementation of differentiation in the classroom, c) barriers to implementation, d) supports for implementation, and f) effects on student achievement.

### ***Teachers Definition of Differentiation***

The interview questions disclosed the participants' perceptions of differentiation of students with mild to moderate disabilities in the regular classrooms in a middle school setting. The participants offered different definitions of differentiation. RPO described differentiation as, "Catering to the students' needs and providing a learning environment suitable for all students no matter how they learn." NKO stated differentiation was, "Using a variety of diverse teaching methods to reach every student in the classroom, ensuring that all can attain their full potential and learn at different rates." JWO stated that differentiation was "teaching to students at different education levels."

### ***Examples of Implementation of Differentiation in the Classroom***

Participants provided examples of the areas in which they implemented differentiation in the classroom. The common theme among the teachers included needing more time; three of the fifteen teachers stated students needed more of the teachers' time. SBO noted a need for "flexible due dates," while CRO discussed presenting material in multiple ways. RSO added a comment about "grading on a different scoring scale.". Other mentions included: reducing the number of questions on a test, reading aloud, and offering instruction based on ability level.

### ***Barriers to Implementation***

The participants were asked about barriers they faced when they implemented differentiation in the classroom. RPO, SBO, NKO, and JWO stated that time was a barrier. CRO noted that there was not enough time for planning. AKO reported, “With such a short time in class and no aid to assist in the class, it is difficult to provide assistance to all students.” KSO listed the barrier of “having such a combination or wide range of ability levels in one classroom.” DMO added, “Logistics. With five classes and approximately 130 students, I find it difficult to differentiate instruction and assessment so that each student has a fair chance of achieving success. Except for my two inclusion classes, there is only one of me to meet the needs of each class. The likelihood of my teaching meeting the students at each student’s individual level is slight.”

### ***Supports for Implementation***

Participants responded to whether the school system provided middle school teachers with ways to implement instruction in the classroom. Five teachers said that the school system provided support, six teachers noted support was not evident, and one reported receiving support on occasion. CRO stated, “I feel that we are on our own when it comes to implementing instruction. We work with teachers to determine what strategies work best.” When RSO responded to whether the school system provided middle school teachers with ways to implement instruction in the classroom, the response was, “Not really, we are given teaching material and assigned a classroom.” AKO stated, “I do think that the school system provides teachers with ways to implement instruction in the classroom.” NKO reported that assistance was given “occasionally.” JWO responded “No.” BOO stated, “Math and Language Arts teachers have a paraprofessional and or special education teacher in the inclusion class” but DMO argued, “Not that I am aware of.”

### ***Effects on Student Achievement***

When participants were asked if differentiation instruction in the classroom led to increased student achievement, fourteen teachers answered that differentiation could lead to student achievement in some way. BOO stated, “Yes and No. Some students with IEP’s and 504’s expect to pass without having to do any work; whereas, some appreciate the extra help. It really depends on the student.” KSO added, “Yes.” RPO, CBO, RSO, CBO, WMO, MMO and CCO replied, “Yes, if done correctly.” SBO stated, “I do believe that differentiation can lead to student achievement. However, I do think that to be ‘most’ beneficial the educators need to [have] less constraints in the classroom setting. Fewer students in class would allow better time to assess the student’s needs and cater to each individual student’s needs.” CRO agreed, “Yes, because it gives students the opportunity to learn in a way that suits them.”

### **Summary**

This chapter provided an analysis of the data from fifteen participants interviews. The purpose of this study was to examine the perceptions of middle school teachers who worked with students with mild to moderate disabilities in the general education classroom setting. The interviews were face-to-face and transcribed by the researcher. Once transcribed, information was coded, establishing categories from the emerging patterns of responses. The following themes emerged from the interviews: a) teachers’ personal definition of differentiation, b) examples of implementation of differentiation in the classroom, c) barriers to implementation, d) supports for implementation, and f) effects on student achievement.

## Chapter 5. Conclusion and Recommendations

The purpose of this study was to examine the perceptions of middle school teachers regarding the differentiation of instruction for students with mild to moderate disabilities. Research through interviews exposed the views of fifteen middle school general education teachers regarding their perception about differentiation of instruction, ways in which differentiation could be effective, and barriers they faced when implementing differentiation. The emerging themes from the analysis of data could improve the school system's ability to implement differentiation.

The interviews supplied a thorough qualitative study of differentiation in the middle school setting. All fifteen teachers willingly volunteered for the research study. Face-to-face interviews took place and questions given to the participants previously guided the interview process (Appendix D). After the interviews, the researcher transcribed the answers and coded them with keywords related to the categories of differentiation in the classroom. This helped align the information appropriately. The researcher sorted and grouped the answers accordingly. The researcher looked for patterns, shared thoughts, and or indicators pertaining to differentiation, and entered the data into Quirkos.

### Discussion

This section presents discussions derived from the analysis of data in Chapter 4.

#### **Research Question # 1.**

RQ1. How does differentiated instruction for students with mild to moderate disabilities influence student outcomes?

Differentiation allowed the creation of an environment in which all students could succeed and from which they could derive benefits (Subban, 2006). Fourteen of fifteen participants responded that differentiation could help a student be successful if implemented appropriately.

When asked if differentiation instruction in the classroom could lead to increased student achievement, BOO stated, “Yes and no. Some students with IEP’s and 504’s expect to be passed because they have an IEP or 504 without doing any work. Other students appreciate the extra individual help. It really depends on the student.” Only one participant said that differentiation instruction did not lead to student achievement or success. Teachers also reported that the students needed to be willing to accept the help offered for differentiation to work.

Differentiation is a direct approach to teaching diverse learners because it entails planning and implementing various levels in one classroom. Tomlinson (2005), a leading expert in this field, defined differentiated instruction as a philosophy of teaching based on the premise that students learn best when their teachers accommodate their differences in readiness levels, interest, and learning profiles.

**Research Question # 2.**

RQ2. What knowledge is considered for differentiation in the classroom for students with mild to moderate disabilities?

Some educators rate students’ knowledge based on their ability level. When asked what about knowledge related to differentiation in the classroom for students with mild to moderate disabilities, JWO stated, “Using different methods of teaching allowing one to see what students are capable of doing on their own and what they need.” When asked the same question, AKO offered, “I look at my students IEP’s and any information such as assessments I may have to see what might best help them.” Some participants questioned and observed students as they worked independently. Teachers assessed students’ knowledge through oral answers, work labs, watching facial expressions, trial and error, and testing. Some teachers looked at the students’ IEP’s to understand the learning strategies the students might use. Differentiated instruction derived from several learning approaches, including the idea of multiple intelligences developed

by psychologist Howard Gardner (*Differentiated instruction and strategies*, n.d.). Gardner posited that people could process information in one of seven ways: linguistic, logical-mathematical, spatial, bodily-kinesthetic, musical, interpersonal, and intrapersonal. He theorized that these individual abilities operated together to form a more complex way of learning, thus providing a more comprehensive view of what constitutes human intelligence (Maftoon & Sarem, 2012).

### **Research Question # 3.**

RQ3. What barriers do middle school teachers face when implementing differentiation for students with mild to moderate disabilities?

Teachers face many barriers when implementing differentiation in the classroom. When asked the research question, AKO remarked, “With such a short time in class, and no aide to assist in my class, it is difficult to provide assistance to all students.” When asked the same question, NKO stated, “With classes of thirty students, it is difficult to meet every child’s needs with only one teacher/adult. Overcrowded classrooms make it challenging to accommodate every student.” RPO added, “Time was the biggest restraint”. SYO agreed, “Time constraints, students feeling singled out when you handle their education differently and having time to prepare and plan the different ways to implement these differentiations.” Participants in the study noted time was the largest barrier. The second barrier was not enough help in the classroom. The teachers said there needed to be another person to implement the differentiation in order for it to be effective. The third barrier identified was the various learning levels and the fourth barrier identified was that the teacher felt that it was hard for the teacher to be secretive when implementing differentiation and finally student engagement. Manivannan and Nor (2020). conducted a study that showed teachers faced challenges when implementing differentiation. In their research, eleven barriers emerged as follows: lack of differentiation knowledge, time

constraints, class size, school administration, lack of resources, students, lack of teaching methodology knowledge, curriculum, personal characteristics, personal teaching beliefs and styles, and nature of differentiation of instruction. Barriers prevent teachers from being able to deliver lessons with differentiation instruction effectively.

**Research Question # 4.**

RQ4. What resources are available to middle school teachers that facilitate differentiation of instruction for students with mild to moderate disabilities?

Available resources included hands-on experience, technology, and freedom within the curriculum to employ different forms of teaching. One teacher stated that they were given materials and assigned to a classroom.

Six teachers expressed their school did not help when it came to implementing instruction in the classroom. When asked if her school system provided ways that middle school teachers could implement instruction in the classroom for students with mild to moderate disabilities, CRO stated, “I feel like we are on our own when it comes to implementing instruction.” Five participants said that the school system provided ways to implement instruction. When asked the same question, CBO stated, “Yes, we have technologies to use and freedom within the curriculum to use different forms of teaching.” One teacher argued that certain subjects had paraprofessionals in their room to help implement instruction, while another reported that the school gave insufficient materials to implement. According to Manivannan and Nor (2020), Aldossari (2018) and Avgousti (2017) posited that their teacher participants did not receive sufficient support from the administration, which made it more strenuous to carry out differentiation instruction.



## **Recommendations for Practice**

This study could guide classrooms with differentiation on the perception of middle school teachers working with mild to moderate disabilities. Through analysis of the data, it became obvious that differentiation could be beneficial if done correctly. However, the teachers noted barriers they faced that could prevent them from implementing differentiation correctly. These barriers were noted in Chapter 4.

The purpose of the study was to develop a better understanding through the perceptions of middle school teachers regarding the differentiation of instruction for students with mild to moderate disabilities. The lack of research on this topic suggested a need for additional research.

## **Recommendation for Future Research**

1. It is recommended that future studies be replicated in different schools and compared for a comparative analysis. Such studies could expand throughout the region or in other school districts to evaluate the perceptions of middle school teachers regarding the differentiation of instruction for students with mild to moderate disabilities.

2. This study was limited to middle school students; it is recommended that future studies should open to elementary school students. Opening the study may focus on data that contributes to improved understanding of the perception and barriers that teachers face in hopes of deriving a solution

3. This study was limited to middle school students; it is recommended that future studies should open to high school students. Opening the study may focus on data that contributes to improved understanding of the perception and barriers that teachers face in hopes of deriving a solution

4. It is recommended that future studies be replicated with special education teachers in different settings and compared for a comparative analysis. Such studies could expand into city

schools and rural schools as well to determine the perception of middle school teachers regarding differentiation of instruction for students with mild to moderate disabilities.

5. It is recommended that future studies be replicated with general education teachers in rural counties throughout the region and compared to other regions compatible in a different state to examine the perspectives of middle school teachers regarding differentiation of instruction for students with mild to moderate disabilities.

6. It is recommended that future studies be replicated with special education teachers in rural counties throughout the region and compared to another region compatible in a different state to examine the perspectives of middle school teachers regarding differentiation of instruction for students with mild to moderate disabilities.

## **Outcomes**

The purpose of this qualitative study was to explore the perceptions of fifteen middle school teachers regarding differentiation of instruction for students with mild to moderate disabilities as related to the research questions. The phenomenological approach allowed a comprehensive view of the experiences of the middle school teachers. The research design offered the teachers a chance to share their perspectives and share their thoughts and knowledge about differentiation instruction. The results of the study indicated that time was a factor when appropriately implementing differentiation instruction.

The research questions focused on the following:

RQ1. How does differentiated instruction for students with mild to moderate disabilities influence student outcomes?

RQ2. What knowledge is considered for differentiation in the classroom for students with mild to moderate disabilities?

RQ3. What barriers do middle school teachers face when implementing differentiation for students with mild to moderate disabilities?

RQ4. What resources are available to middle school teachers that facilitate differentiation of instruction for students with mild to moderate disabilities?

Participants identified barriers as lack of support, lack of time for planning, and having a wide range of ability levels in one classroom. The results of the study indicated that teachers must understand how to implement differentiation instruction in order to do so successfully. Teachers would benefit from more help in the classroom, fewer students in the classroom, and more time for planning. This study offered suggestions for future research as well as suggestions on how to implement differentiation instruction successfully. This research could inspire others and help others to consider implementing differentiation instruction to meet the needs of students with mild to moderate disabilities.

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## APPENDIX: Interview Questions for Research

1. What does differentiation in the classroom mean to you.
2. Can you give me an example of where you have implemented differentiation in the classroom?
3. Do you think that differentiated instruction in the classroom leads to increased student achievement? Yes and No.
4. How is a student's knowledge appraised for differentiation in the classroom for students with mild to moderate disabilities?
5. What barriers do middle school teachers face when implementing differentiation in the classroom for students with mild to moderate disabilities?
6. Do you feel like you had a proper education, to implement differentiation in the classroom?
7. Does your school system provide middle school teachers with ways to implement instruction in the classroom?
8. If so, what are those?
9. Would you feel more comfortable if the school system you work for gave you more assistance with implementing instruction in the classroom?
10. Do you feel that one person is able to provide and implement differentiation in the classroom? Why or why not?

# EAST TENNESSEE STATE UNIVERSITY

**RESEARCH STUDY:** Perception of Middle School Teachers Regarding Differentiation Instruction

**Investigator:** Karen McLerran

**PURPOSE of RESEARCH STUDY:**

To examine the perceptions of middle school teachers regarding the differentiation of students with mild to moderate disabilities in middle school.

**PARTICIPATION:** Middle school teachers in grades: 6th, 7th, and or 8th grade, that have students with mild to moderate disabilities in the general education classroom.

Participation is voluntary and refusal to participate will involve no penalty of loss of benefits to which the participant is otherwise entitled.

Participation may discontinue at any time without penalty.

**Duration and Procedure:** You will be asked to attend an interview that should not exceed two hours in length. Interviews can be in person or via Zoom. Zoom interviews will be audio/video recorded.

Dates of interviews vary depending on your schedule.

Days and Times allocated for research are as follows: M-F 3pm- 8pm, Saturday 8am-8pm

**Research questions are as follows:**

R1: Does differentiated instruction in the classroom leads to increased student achievement? Why or Why not?

R2: Is knowledge appraised for differentiation in the classroom for students with mild to moderate disabilities? Why or Why not?

R3: What barriers do middle school teachers face when implementing

differentiation in the classroom for students with mild to moderate disabilities?

R4: Do school system provides middle school teachers ways to Implement instruction in the classroom for students with mild to moderate disabilities?

**RISK or Discomforts:** As we are working with identifiable data, there is a possible risk of loss of confidentiality. Pseudonyms will be used to help maintain confidentiality.

**BENEFITS:** Participants may learn more about their perceptions regarding differentiation in the classroom for diverse learners and or students with mild to moderate disabilities. There is no direct benefit for completing an interview

**CONFIDENTIALITY OF RECORDS:** Data will be stored in a locked filing cabinet and personal laptop of the Investigator (laptop is guarded with password protection and facial recognition). There is a possible risk of loss of confidentiality.

All Information that can be identify will be removed from the data. This data will then be stored for possible use in future research studies. We will not ask for additional consent for those studies.

**Who should I contact for questions?** If you have any questions or research-related problems at any time, you may call Karen McLerran, at 931-397-7891, at Dr. Pamela Scott at 423-439-4430. This research is being overseen by an Institutional Review Board (IRB). An IRB Is a group of people who perform independent review of research studies. You may also contact the ETSU IRB at 423-439-6054 or [IRB@etsu.edu](mailto:IRB@etsu.edu) for any issues, questions or input that you may have about the research or your rights as a research participant.

By signing below, I confirm that I have read and understand this consent form. I also confirm that I had the opportunity to have it explained to me verbally. I confirm that I was able to ask questions and that all my questions have been answered. By signing below, I confirm that I am 18 years or older and I freely and voluntarily choose to take part in this research study.

**Title of Research Study:** Perception of Middle School Teachers Regarding  
Differentiation Instruction

**Principal Investigator:** Karen McLerran

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Signature of Participant

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Date

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Printed Name of Participant

*You will be provided with a copy of this signed consent form.*

VITA

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