Differentiated Instruction: A Qualitative Study Focusing on the Voices of Elementary Teachers and Their Needs

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Differentiated Instruction: A Qualitative Study Focusing on the Voices of Elementary Teachers and Their Needs

A Dissertation Presented to the Faculty of
Department of Educational Leadership and Higher Education Administration
West Chester University
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In Partial Fulfillment of the Requirements for
the Degree of Doctor of Education

By
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Abstract

This qualitative study examined teachers’ perspectives about their implementation of differentiated instruction in an effort to support district-led professional development programming. Differentiated instruction is based on well-considered goals and thorough analysis of students’ achievement, progress, and instructional needs, combined with formative assessments and progress monitoring (Van Geel et al., 2019). An initial questionnaire was administered to all K-5 teachers in a suburban school district, followed by individual interviews with three teachers who expressed that they often use differentiation in the classroom. Each of the three teachers participated in two interviews lasting 45-60 minutes each over the course of several weeks. The researcher coded for themes and interpreted data to determine what teachers could benefit from in professional development opportunities. The findings indicated that teachers want to learn about differentiated instruction through collaborative efforts with other educational professionals and by exercising autonomous instructional decisions based on the academic needs of their students. They value strong, effective ongoing leadership that supports consistent and ongoing professional development opportunities designed to cultivate robust classroom management skills that reinforce and sustain efforts to differentiate in the classroom.
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Finally, I wish to express my sincere appreciation to the three participants who generously contributed their time, insights, and experiences to this study. Their willingness to engage in the research process via interviews and share their perspectives has been invaluable in shaping the findings and conclusions of this dissertation. Their voices have enriched the depth and breadth of this work, and I am deeply grateful for their participation. They represent great teachers everywhere and they represent them well.
Dedication

To my besties, the ones who need no introduction, this dissertation is dedicated to you for standing by me through the tears, self-doubt, and lack of my attendance at all the things. Your consistent support, empathy, and motivation have truly anchored my academic journey. In moments of uncertainty, you were there to lift me up with your spontaneous drop ins and words of wisdom.

To both of my sisters. Nancy, the epitome of kindness, this dissertation is dedicated to you, the cutest cheerleader I know. Your unwavering encouragement has infused confidence into every milestone achieved, and you have never wasted an opportunity to tell me how proud of me you are. Jayne, from the minute I decided this was my dream, it became yours, too. Your edits, both on and off the paper, kept me grounded and sane throughout this journey. With deepest gratitude and admiration, I dedicate this work to both of you, for your consistent support and endless guidance have been vital for my academic journey.

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Chapter 1: Introduction

COVID-19, which began as a health crisis, grew almost overnight to include a myriad of educational consequences (Kaffenberger, 2020). This deadly virus led to school closures and disruptions in learning all over the world (Tirado, 2021) and consequently, 94% of the student population in more than 190 countries were impacted by COVID-19 (Patrinos & Donnelly, 2021). As a result of school closures to limit the spread of the virus, teachers were forced to provide instruction online. In record time, Zoom, a communications platform that allows users to connect via video, experienced a more than six-fold increase in traffic, yet the amount of time teachers spent with students decreased dramatically (Lupas et al., 2021). Within a matter of weeks, nearly 60 million students attending schools in the United States abruptly transitioned to remote learning for the first time ever (Becker et al., 2020; Russ & Hamidi, 2021). Consequently, unexpected school closures caused a reduction in effective instructional time, altering educational achievement (Eyles et al., 2020). This sudden transition to online learning was disadvantageous for students with the most significant problem being interrupted learning (Uzun et al., 2021). Specifically, learning is interrupted when students do not progress educationally at the same rate at which they had historically (Patrinos & Donnelly, 2021). Interrupted learning can occur across a range of subjects, grade levels, and geographic regions.

This interrupted learning has continued to cause challenges for students in their acquisition of academic skills and has created a need for educators to provide ways to minimize those challenges moving forward (Engzell et al., 2021). Differentiated instruction is a method of teaching that supports optimal academic gain for learners which is the main benefit (Tomlinson et al., 2003; Van Geel et al., 2019). There are many advantages to providing targeted, consistent, and differentiated instruction, and researchers have discussed the value it holds in moving
learners toward academic success with some degree of consistency (Shareefa, 2019). Differentiated instruction, without comprehensive and meaningful professional development opportunities, is unlikely to be effectively implemented by teachers. Educators, both seasoned and inexperienced, would benefit from continuous professional development opportunities designed to integrate differentiated instruction. Accordingly, it is the administration’s job to provide educators with functional assessments and progress monitoring tools, practical strategies for implementation and the time to perfect critical teaching skills through valuable professional development for successful application of differentiated instruction (Tomlinson, 2014).

An essential factor in a child’s adaptation to and subsequent success in school is the relationship with the teacher and peers (Uzun et al., 2021). When a student’s personal engagement in instruction is coupled with the teacher’s specific planning, differentiation is successful. The relationship between teachers and students is crucial in determining learning motivation and educational success (Purnama et al., 2021). Social isolation was a major drawback of online learning and caused a lack of interaction between teachers and their students (Purnama et al., 2021). Students’ emotional symptoms such as sadness, anger, temper tantrums, and frustration worsened during the pandemic, and even the youngest of learners experienced feelings of isolation and hopelessness (Lupas et al., 2021). Additionally, severe limitations affected virtual learning in the following ways: (a) the amount of time spent on instruction, (b) the quality of interactions between students and teachers, and (c) disruptions to routine (Uzun et al., 2021). Emergency online instruction correlated with students experiencing unfavorable conditions with online learning during the pandemic (Russ & Hamidi, 2021). Without any in-person instruction, students fought to progress academically and socially directly resulting in interrupted academic and emotional growth (Dorn et al., 2020; Lupas et al., 2021).
During the pandemic, many parents indicated that their children spent less than three hours on school related activity per day and experienced a major decrease in sociability opportunities (Becker et al., 2020). This amount of school time is a sizable decrease from the traditional seven and half hours students experience while in brick-and-mortar schools especially considering this transition occurred almost overnight. With inadequate professional development for teachers, limited technology, and the myriad of disruptions it was challenging at best to facilitate student learning. Virtual learning provides a plethora of challenging obstacles for students. Students who lacked the focus to successfully use distance learning because of siblings, cell phones, televisions, conversations, eating, and parents intervening unnecessarily were at a disadvantage (Uzun et al., 2021). In addition, students experienced complications such as homework incompletion, excessive screen time, absenteeism, communication concerns, poor studying conditions, minimal support from family members, lack of internet access, technology equipment failure, and security inadequacies during virtual instruction (Uzun et al., 2021). The pandemic affected learners of all ages, but especially those facing a critical period in the educational timeline. Young students gaining foundational skills in both reading and math are working doubly hard to minimize academic gaps post pandemic (Uzun et al., 2021). Likewise, students in primary grades were more vulnerable to interrupted learning than secondary students because of their inability to seek learning on their own (Patrinos & Donnelly, 2021). During remote learning, students in grades one through seven, more than other grade levels, experienced far greater interruptions to learning (Tirado, 2021).

Online learning was more cumbersome and tenuous for students who required specific support based on their individualized learning plans (IEP) (Becker et al., 2020). Few school systems provided plans to support students who required accommodations for special needs
and/or interventions for academic support (Kuhfeld et al., 2020). As a result, students with specific learning disabilities encountered a multitude of obstacles, such as: lack of structure, distractibility, and minimal support. Remote instruction and the ability to attend to and complete work was especially arduous for students with ADHD (Lupas et al., 2021). Students with ADHD experienced academic difficulty due to their lower motivation, poor planning, and inadequate time management skills, as reported by Becker et al. (2020). Additionally, Lupas et al. (2021) expressed real concern for children with disabilities whose functional impairments made remote instruction especially difficult and limited their access to an appropriate education.

The pandemic exacerbated existing inequalities that disproportionately impact historically-underrepresented students and students with disabilities (Tirado, 2021). The “summer slide” typically sees two to three months of interrupted learning, but the pandemic was hypothesized to have added three to six months, most notably for underrepresented groups (Tirado, 2021). The majority of interrupted learning occurred for students of color located in low-income areas (Tirado, 2021) and as a result, students of color fell three to five months behind in learning (Dorn et al., 2020). During school closures, 40% of black students and 30% of Latinx students received little to no online instruction creating a sizable delay in academic progress (Goudeau et al., 2021). In addition, black and brown students were less likely to have access to devices, internet access, and live contact with teachers (Dorn et al., 2020). As a result, minority students were disproportionately affected by insufficient access to technology, limited Wi-Fi capabilities, and insufficient face-to-face contact with teachers and peers (Dorn et al., 2020).

Students with varying demographic characteristics, in all grade levels and subject areas, experienced a reduction in achievement growth (Tirado, 2021). Discrepancies in technology
resources available to students with lower socio-economic status caused additional challenges (Minkos & Gelbar, 2020). School districts across the nation struggled with providing students with everything they would need for effective distance learning. Additionally, children with disadvantaged backgrounds were more likely to be affected because of fewer resources and less access to online learning (Eyles et al., 2020). A lack of Wi-Fi connection forced many students to miss online school, a privilege often taken for granted by students from families with higher socio-economic status. Families with less income were more likely to experience financial burden intensifying existing inequalities for youth living in poverty (Becker et al., 2020). As a result, students living in poverty were significantly less likely to receive effective online instruction because they are especially vulnerable when learning relies on extensive use of digital devices rather than face-to-face instruction from teachers (Becker et al., 2020; Goudeau et al., 2021). This disparity has created a cycle of missed learning opportunities, which students did not cause or create, yet they are most vulnerable to experiencing gaps academically (Minkos & Gelbar, 2020). Goudeau et al. (2021) associated social class with inequities of access to digital tools, familiarity with digital skills, and uses of digital tools for educational purposes. Although teachers made themselves and their instructional materials available online, many students lacked sufficient access for electronic devices at home (Kuhfeld et al., 2020). Unfortunately, digital tasks such as emailing, printing documents, and using word processors, are essential for online learning (Goudeau et al., 2021).

Students were not the only group who experienced disadvantages from remote learning. Managing the uncertainty surrounding education at the time of the shutdown threw educators into an abundance of ambiguity. Unfortunately, most teachers were severely unprepared for the impact of distance learning during a pandemic (Uzun et al., 2021). They were forced to build
emergency instruction systems immediately (Patrinos & Donnelly, 2021). As a result, many teachers were unfamiliar with adapting, developing, and creating accessible online content (Russ & Hamidi, 2021). Teachers experienced a lack of clear guidance in how to abruptly move instruction online (Lupas et al., 2021). Although they are often skilled in working with learners in the classroom, they did not have proper preparation in educating those same learners online (Russ & Hamidi, 2021). Over time many school districts developed remote instruction plans, but much of the initial administration was left to individual teachers who were used to instructing students in person (Lupas et al., 2021). In the early stages of the pandemic, teachers were burdened with creating virtual learning lessons without awareness of digital platforms or preparation for teaching strictly online (Russ & Hamidi, 2021). Teachers with the youngest students experienced the most difficulty providing online instruction (Uzun et al., 2021). Differentiation became cumbersome and the most common remote instruction techniques were whole group instruction and independently completed assignments (Lupas et al., 2021). In the face of great adversity, schools and teachers struggled to adopt on-line based solutions for differentiated instruction as well as assessment and progress monitoring materials (Engzell et al., 2021). As a result, educators recognized unfinished learning for all students, but especially those students of color, low socio-economic status, and specific learning disabilities.

When state assessments were canceled in 2020, achievement data was limited (Tirado, 2021). Teachers needed to rely on Spring 2021 data and hurried informal assessments which came after a full year of altered instruction (Tirado, 2021). This was not optimal in helping teachers pinpoint the learning levels of their students (Tirado, 2021). Undoubtedly, when students are entering school for the first time, educators provide essential additional assistance to support student learning (Minkos & Gelbar, 2020). If teachers are unable to adapt curriculum and
instruction that considers the specific learning needs of students upon re-entry into school, children can fall further and further behind, as was witnessed with the pandemic (Kaffenberger, 2020). Teachers can consider grade- and age-based proficiency standards as points on a developmental trajectory and infer the likelihood of later success, but considering the strengths and weaknesses of students in real time would be helpful (McConnell et al., 2014). Until they collect extensive data to enhance their understanding, educators might consider avoiding assumptions about the academic gains or setbacks children made during times of school closures (Minkos & Gelbar, 2020). To minimize the damage related to distance learning, a plan to maximize instruction is imperative as pandemic restrictions continue to lift. As a result of the myriad of academic, social/emotional, and behavioral challenges students have experienced during virtual learning, there are various facets of support they need. For that reason, the impact of the pandemic on learning should encourage teachers to better understand students and use strategies such as differentiation to help them (Tirado, 2021). In addition to a wide variety of academic needs, schools might consider being prepared to address psychological and neurological implications that have continued to arise from the prolonged school closures (Minkos & Gelbar, 2020). Efforts teachers make in reaching the diverse learners in the classroom are supported by pinpointing areas of challenges and strengths. Consequently, students acquiring new skills is problematic if instructional processes are too advanced or too rudimentary (Kaffenberger, 2020). Students who experienced a major interruption to academic progress while obligated to online learning can also gain the most with a return to in-person, differentiated instruction (Kuhfeld et al., 2020).
Problem Statement

The COVID-19 pandemic forced a move away from differentiation at a time when students may have needed it most. Teachers were not sufficiently prepared to manage remote settings, and many would agree that differentiation, for an online elementary classroom, was difficult. Addressing the needs of primary students is challenging enough without adding the presence of a global pandemic and the pivot to remote emergency teaching (Ciampa & Jagielo-Manion, 2021). The COVID-19 pandemic interrupted student learning, and unexpected school closures reduced instructional time, leading to delayed educational achievement (Eyles et al., 2020). During the height of the pandemic, differentiation was not necessarily a top priority above social distancing, and this facilitated a messy and complicated time in education. Teachers managed a technological and distanced platform for learning that forced the necessity for either whole group instruction or independent assignments.

Purpose of the Study

Given the increasing need for differentiation post-pandemic, the purpose of this study was to examine teachers’ perceptions of what teaching skills and strategies are most beneficial for providing students with effective differentiated instruction in the classroom and, in turn, use that to inform district-led professional development. While some teachers provide comprehensive and effective differentiated instruction naturally, others struggle to provide differentiation at all, yet most teachers will only need guidance and support in the form of coaching and professional development to successfully incorporate differentiation into their classrooms (Rise & Renzulli, 2018). Teachers who differentiate successfully will provide data, which will be instrumental in formulating the necessary facets of effective, efficient, and meaningful professional development opportunities. My goal is to find out what effective
educators do to facilitate students to access the curriculum and maintain a sufficient level of academic progress through differentiation. Providing information on notable challenges teachers experience while providing effective differentiation has the potential to drive decisions about effective and supportive professional development. Coaches who are competently trained can encourage teachers to commit to differentiated instruction supported by consistent professional development. Van Geel et al. (2019) argued that practitioners and researchers can design professional development and a comprehensive assessment instrument, enabling them to train, assess, and monitor teaching quality with respect to providing differentiated instruction.

**Rationale and Significance**

After the pandemic closings, students returned to school with a wide variety of academic, social, and emotional needs and adjusting systems and practices to meet those needs hold promise moving forward (Minkos & Gelbar, 2020). National test scores showed that distance learning during the pandemic had a significant impact on student math and reading achievement, resulting in the largest drops in decades and leaving little doubt about its effect on academic progress (Stanford, 2022). Experts have projected it will take, on average, elementary school students a minimum of three years to recover from interrupted learning stemming from the COVID-19 pandemic and school closures (Reilly, 2022).

McConnell et al. (2014) defined differentiated instruction as targeting and consistently instructing to address the difference between a skill at a certain time and the level of skill needed to achieve competence. McConnell et al. (2014) stated that purposeful interventions can prevent and remediate delays in the development of academic skills, leading to accelerated development and growth. Tirado (2021) indicated that learning acceleration, through effective differentiation, is an appropriate strategy to help students recover from learning loss.
Successful educational leadership fosters ideals for differentiated classrooms and uses professional development as a catalyst for change (Tomlinson, 2014). School administrations have a major role in creating a vision and inspiring others to work hard to actualize it (Tomlinson, 2014). Administration encourages teachers to try implementing differentiation despite the complications and challenges they experience, as it is considered part of best practice (Tomlinson, 2017). As the world of education continues to evolve, this research will help teachers move toward differentiated instruction by highlighting their needs to administration holding the power to redefine professional development opportunities. Administration has the authority and responsibility to provide professional development and ongoing support that is necessary for educators to feel confident to take risks and implement an effective plan for differentiation on a consistent basis. Substantial change takes time, especially when the changes are embedded within the implementation of differentiated instruction (Tomlinson, 2014).

**Research Questions**

The overarching question for this study was, *what is the experience of elementary teachers as they implement differentiated instruction with students in their classrooms?*

Three sub-questions guided this study:

1. How do teachers’ beliefs and attitudes about differentiated instruction inform their willingness to make it a priority in their pedagogical routine?
2. What resource materials and guidance do teachers report they need to provide effective differentiated instruction to meet the academic needs of learners?
3. How does professional development play a role in teachers’ self-efficacy to provide students with differentiated instruction?
**Positionality**

Learning is not a one-size-fits-all paradigm. Putting individual student needs at the center of all academic decisions is best practice. As early as my fifth-grade year, as a ten-year old, I recall my own feelings of inadequacy and incompetency, especially in mathematics. I was a motivated, organized, engaged learner, and these feelings about math deeply troubled me. At the time, I did not realize it had little to do with me as a learner. The delivery of instruction coupled with my lack of confidence was what thwarted my success. Math was never a favorite subject, but I perceive that I could have been a better mathematician had my teacher taken into consideration my gaps in understanding numbers and operations. I needed concrete, repetitive, and targeted instruction. Reading and writing were my strengths; when I found math to be challenging in middle school, I wanted to give up. Like it was yesterday, I remember sitting in a class of 25 students where we were all taught in the same way, at the same time, with the same resources. I needed differentiated instruction to help me gain math skills I found challenging, but I thought it was me and that I was not intelligent enough to understand. Now I know that was not true. I had the ability; I just could not access the curriculum in the same way other students could. Those feelings of deficiency as a young student have shaped my positionality as an educator and highlighted the importance of meeting students where they are academically, mentally, and socially to move them forward successfully. Without someone considering the needs of learners, education is merely an activity and not an experience worthy of student time and effort. The educational community provides extensive research on the benefits of differentiated instruction and that despite the complexities involved with implementation, it is an integral part of students accessing curriculum. As an instructional coach, it is my job to support
teachers in a move from one-size-fits-all, whole group instruction, to small group, targeted, and differentiated instruction in the regular education classroom setting.

**Rationale for Methods**

This study used a qualitative methodology employing a narrative research design to gain insight into the art of effective differentiated instruction in the elementary education classroom from the lens of the teacher. I gathered data using a preliminary questionnaire followed by narrative interviews and optional artifacts teachers find necessary to implement differentiated instruction. Additionally, I then segmented and coded for themes using *in vivo* coding and the constant comparative method to use participants’ exact words to label and summarize the text while highlighting the strategies and resources teachers used to deliver successful differentiated instruction to the students in their classrooms. Researchers can present the lived experiences of the participants and provide deeper understanding using features of narrative writing (Creswell & Guetterman, 2019). This methodology allowed me to clarify how the participants were using differentiated instruction in the classroom. In preparing a “restory,” or personal narrative, of teachers implementing differentiated instruction effectively in the classroom, it served to provide a playbook for other teachers to use in their own application and a blueprint for effective professional development for this complicated and multi-faceted teaching strategy. Teachers have experience to share with others and storytelling captures the everyday, normal form of data that colleagues are familiar with and can identify (Creswell & Guetterman, 2019). The participants’ experiences provide a window into instruction, which is essential in explaining the nature of what these teachers are doing on a daily basis. Teachers willing to share their stories of differentiated instruction will provide insight into the types of skills they possess that help them manage the many components and challenges associated with differentiating for students. This
data gathered from elementary teachers who were required to use differentiated instruction in their classrooms was used to inform professional development.

**Limitations**

Narrative research that includes rich, detailed description, ample participant feedback, and attempts to engage the reader with the studied community can be beneficial to both researcher and participants (Carspecken & Saxena, 2016). Because I conducted the study in my own district with fellow colleagues as participants, there were a specific set of ethical considerations that needed to be addressed including informed consent, transparency, confidentiality, results communication, and the power dynamic. In conducting research using a questionnaire, follow-up interviews, and teacher artifacts, I aimed to understand the challenges of providing differentiated instruction as seen through the eyes of those on the frontline, teachers. Misunderstanding the ethical implications of data collection and reporting would have resulted in detrimental consequences that would question the trustworthiness and reliability of this study.

The potential for researcher bias and subjectivity requires the use of strict protocols and procedures for selecting participants. For this reason, educational norms and/or individual biases may cause potential misconceptions and distortions of reality (Johnson et al., 2020). The researcher effectively communicates that the results are not formed by their analysis, but contemplative of the information compiled from the participants and that researcher reflexivity, or recognition of researcher bias, is imperative for the integrity and reliability of data assemblage and interpretation in narrative study (Johnson et al., 2020).

Tensions can arise because teachers telling their stories as participants can get caught between what they are being asked to do by administration and what they are actually doing to provide differentiated instruction for students. Participants were encouraged to self-assess their
differentiation implementation as well as their values and beliefs regarding differentiated instruction. Objectivity and generalizability are also a challenge in narrative inquiry because they heavily rely on storytelling and individual interpretations rather than statistical analysis and this means conclusions are unable to be generalized or empirically substantiated (Ethar, 2023). A solid understanding of context is essential in developing data interpretations because there is a possibility of different understandings of the text depending on the reader.

Asking participants to disclose their personal experience over an extended period requires a sufficient level of trust (Creswell & Guetterman, 2019). Researchers can maintain ethical standards, provide protection for participants, and fortify the overall merit of the research by outlining these considerations. Since I was conducting research about the strategies teachers use to implement differentiated instruction into their daily routine, I wanted to be sure that their voices were the ones that resonate the most. “Restorying” the narrative of the elementary education teacher was the focus of my qualitative research study. The intention was to understand how successful educators perceive the necessities for executing differentiated instruction as part of best practice.

**Informed Consent**

Informed consent was required from each participant in the study. Generally, researchers must provide participants considering engagement in the research with sufficient information to make an educated decision on whether to take part; this is a requirement of informed consent (Crow et al., 2006). Explaining the study’s specific information and its purpose to participants ensured a degree of comfortability with involvement. Validity in qualitative research can be questioned, making it important for researchers to reflect and disclose what the motive is in sharing the narrative (Creswell & Miller, 2000). The success of a narrative research study relies
on a solid foundation of open and honest communication about intentions and expectations between the researcher and potential participants. This communication is critically important and sets the tone for the remainder of the study.

**Confidentiality and Data Security**

Protecting the privacy rights of individuals is essential, and it requires maintaining confidentiality. This protection allows for an authorized person to disclose information in certain contexts, while the information remains protected, and its use maintains confidentiality (Colosi et al., 2019). Beforehand, participants were asked to obscure all identifying information in the documentation they provided for the study. Additionally, audio and/or video recordings, as well as transcripts of interviews, will be kept on a password-protected tech device or in locked file cabinets and will remain there for three years. I asked teachers to choose pseudonyms of their choice to use for identifying them in the research study.

**Transparency**

Communicating openly about the intent and objective of the study to be conducted reassures vulnerability (Merriam & Tisdell, 2015). To help ensure trust in research, a researcher’s values and expectations, and influence should be of utmost concern (Merriam & Tisdell, 2015). Critical for transparency, explaining biases, dispositions, and assumptions regarding the research to be done must be addressed by the researcher (Merriam & Tisdell, 2015). It is paramount to have a mission to speak the truth about the purpose of the research in order to help participants understand their role. When participants understand how sharing their experience supports the research, they can comfortably provide the necessary details to address the problem being studied. In this study, a collaborative eye on the challenges of executing
differentiated instruction and its importance in teaching students conveyed transparency to the reasoning behind the research.

**Power Dynamic**

Participant assistance can establish validity in research (Carspecken & Saxena, 2022). When a researcher encourages participants to get involved in the data analysis, it strengthens the work of ensuring validity, reliability, and trustworthiness. Researchers can facilitate a thorough peer examination from willing participants to scan the raw data and assess whether findings are plausible further deepening the trust (Merriam & Tisdell, 2015). As a result, including participants in the review of data analysis and the summary of findings adds credibility because they can react to the story they helped narrate (Creswell & Miller, 2000). Correspondingly, trustworthiness actively involves the lens of the participants including their impression and review of the study (Creswell & Miller, 2000). Engagement in the collection, organization, and analysis of data gives educators a platform to explain their purpose and role in the research, thus creating an atmosphere of respect and loyalty. Sensitivity shown by the researcher to the representation of participants enhances reliability (Carspecken & Saxena, 2022). Additionally, providing a backdrop of teamwork and support to participants creates an atmosphere of respect, responsibility, and sincerity.

**Results Communication**

When researchers provide an opportunity for participants to collaborate on the findings and then actualize the implications, influence and impact are increased (Merriam & Tisdell, 2015). Studies where the participants are encouraged to designate what of their story will be told contributes to the validity (Carspecken & Saxena, 2022). Using triangulation as a validity procedure and drawing from multiple forms of evidence and not just isolated incidents
strengthens the process and findings (Creswell & Miller, 2000). Triangulation is a powerful strategy for increasing trustworthiness of research and data collection and should include three methods: interviews, observations, and documents to bolster reliability (Merriam & Tisdell, 2015). In order to find convergence and reveal themes, investigating a myriad of sources is best practice in qualitative inquiry (Crewell & Miller, 2000). Additionally, including multifarious interpretations and understandings of participants fortifies trustworthiness. Once stories, opinions, reflections, observations, and perceptions are collected, a thorough review of the evidence is appropriate. People experience the ways they have come to understand certain processes in many ways (Merriam & Tisdell, 2015).

The researcher's values and expectations play a crucial role in shaping the conduct and outcomes of a qualitative research study, making them a matter of great importance (Merriam & Tisdell, 2015). To ensure the integrity of the participants, researcher, and the study, it is essential to establish a strong foundation of transparent and open communication regarding intentions and expectations. Maintaining validity becomes imperative, and the researcher should reflect on and disclose motives for sharing the narrative (Creswell & Miller, 2000). Taking a collaborative approach to address the challenges of implementing differentiated instruction and its significance in teaching students helps convey the rationale behind the research.

Definition of Terms

Scholars associate these terms with this area of research and the research used them throughout this dissertation:

*Differentiated instruction* - shaping instruction to address need as it relates to learning circumstances for individual students; the use of ongoing assessment and flexible grouping to provide appropriate programming based on the strengths and challenges of
students in the classroom (Tomlinson & Tomlinson, 2005).

*Professional development* - to increase proficiency and know-how for educators that works to facilitate individual, school-wide, and/or district-wide improvements for the aim of increasing student success (Woods, 2023).

*Teacher efficacy* - teachers' beliefs in their ability to effectively handle the tasks, obligations, and challenges related to their professional activity as it plays a key role in influencing important academic outcomes (Moosa & Shareefa, 2019).

*Assessment data* - the process of gathering evidence of student learning to inform education-related decisions and supports (Tomlinson & Moon, 2014).

*Curriculum* - the lessons and academic content taught in a school or in a specific course or program (Tomlinson & McTighe, 2006).

*Brick and mortar* - education that occurs at a physical school, as opposed to a virtual or cyber-school environment (Quezada et al., 2020).

*Learning gap* - substantial loss of skills due to reduced daily exercise during virtual instruction or interrupted schooling (Poletti, 2020).

*Remote learning* - instructors teaching live through a video platform and/or providing student software or pre-recorded videos (Carpenter & Dunn, 2020).

*COVID-19* - a severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), the virus that causes COVID-19, spread to nearly all countries of the world in only a few months causing large-scale social disruption, economic loss, and general hardship since its emergence in Wuhan, China, in late 2019 (Van Damme et al., 2020).

*Progress Monitoring* – Student progress monitoring is a practice that helps teachers use student performance data to continually evaluate the effectiveness of their teaching and make more
informed instructional decisions (Safer & Fleichman, 2005).

*Professional Learning Communities (PLCs) –* group of committed educators working collaboratively in an ongoing process resulting in better student achievement (Brown et al., 2018).

*Restory* - reframe the dominating realities of truths presented when tackling a problem of practice, and reconstructing alternative or multiple truths (Lee-Johnson et al., 2023).

**Summary**

Differentiated instruction is a form of teaching in which student need is at the center of instructional decision making. Assessments and progress monitoring are essential parts of successful implementation. Teacher access to professional development they consider to be useful, constructive, and ongoing is critical because of the complexities associated with the application of differentiated instruction.

Within this chapter, I reviewed the purpose, rationale, and the significance of this study. In addition, I provided the research questions with a brief overview. In the next chapter, I will summarize the literature concerning differentiated instruction with a focus on the importance of educational leaders designing effective professional development. In addition, I will explain the conceptual framework informing this study.
Chapter 2: Review of the Literature

Accountability for student outcomes falls on teachers regardless of classroom composition (Goddard & Kim, 2018) and differentiation is grounded in supporting the academic growth of all students in the classroom (Prast et al., 2018). Differentiated instruction, the most complicated to implement, is the optimal approach to providing effective instruction to each of the diverse learners teachers find on their rosters (Valiandes & Neophytou, 2017). Educational leaders have recognized and noted standard practices in the use of differentiated instruction (Whitley et al., 2019). However, there is an absence of differentiation in practice (Robinson et al., 2014). This omittance could be based on educators' opinion of it to be another educational fad that will quickly be displaced with something else (Robinson et al., 2014). There are major differences between a one-dimensional understanding of differentiation and a profound, purposeful understanding that leads to ambitious commitment and continuous adjustment (Dack, 2018). Professional development should include the maximum amount of support and scaffolding because differentiating instruction involves many complicated characteristics, and a change in process requires time, effort, and a consistent routine (Nicolae, 2014).

Differentiated Instruction

When evaluating the research literature for differentiated instruction in the regular education classroom, the complexities of successful implementation emerge with incredible consistency. Professional development facilitates the complicated and time-consuming implementation of differentiated instruction by helping teachers understand what it is and why it is effective (Onyishi et al., 2020). A cohesive, coherent, and comprehensive definition of differentiation is imperative for teachers to begin the process of adding differentiation into their teaching toolbox. Differentiation has been discussed in educational circles for decades, yet
depending on the source, it can look, sound, and feel very different. In this chapter, I will discuss the ways in which consistent, targeted, and meaningful professional development has the potential to provide a pathway to differentiated instruction.

Definition(s) of Differentiated Instruction

Bondie et al. (2019) asserted that teachers widely embrace differentiation, recognizing its logical and empirically supported value, yet articulating or delineating differentiated instruction presents a challenge. Tomlinson (2017), a pioneer in differentiated instruction, uses these phrases to describe differentiation: proactive, more qualitative than quantitative, and rooted in assessment. In addition, she recommends taking varied approaches to content, process, and product, and a blend of whole-class, small group, and one-on-one instruction. Differentiation is a continuous cycle of assessment, targeted instruction, and progress monitoring all based on student need (Tomlinson, 2016). A differentiated approach to learning is designed to fill the gaps between teaching and learning for the purpose of effectively pushing students along on their educational journey (Nicolae, 2014). Vantiegham et al. (2020) described differentiated instruction as a framework of teaching designed to focus on specific academic needs and supplement students’ learning opportunities. A philosophy of responsive teaching, differentiated instruction is designed to maximize the scope of each learner (Dack, 2018). Teachers understand what learners need by monitoring the acquisition of essential skills to inform instruction (Dack, 2018). The job of every teacher is to provide access to valuable education for each student in the classroom regardless of the working definition of differentiation.

Elements of Differentiated Instruction

While many educators can describe elements of differentiated instruction used in their classrooms, there is also a consensus about concerns for full application (Whitley et al., 2019).
Van Geel et al. (2019) stated that implementation includes several parts including: student grouping, materials, assignments, tasks, pace, provided learning time, questions, and classroom activities. I classified these many parts into three main categories: assessment, instruction, and progress monitoring.

**Assessment.** Assessment is a necessary component in educational practices (Stecker et al., 2008). Onyishi et al. (2020) demonstrated that it is essential for teachers to offer students varied ways to demonstrate their learning because assessment drives the instruction. In its many forms, assessment steers differentiated instruction and supplies data about student growth (Robinson et al., 2014). In addition to collecting data formally, teachers can rely on informal observations of students in small groups to determine how needs change over time (Tomlinson, 2014). If the goal is student outcomes, tools for assessment guide instructional decisions using progress monitoring data to determine whether students are progressing at acceptable rates (Stecker et al., 2008). Consequently, successful differentiation relies on teachers collecting data from formative assessments and progress monitoring students to look for acquisition of skills so that groups can be fluid and flexible (Tomlinson, 2017). Therefore, assessment and progress monitoring guides teachers in their understanding of the students in their classrooms (Puzio & Algeo-Nichols, 2020). While there is no exact recipe for differentiation, assessment is the foundation of pedagogical practice and instruction should reflect the student’s prior knowledge (Garrett, 2023).

**Instruction.** Van Geel et al. (2019) emphasized that differentiated instruction relies on meticulously established objectives and comprehensive evaluations of students' performance, advancement, and instructional requirements, coupled with deliberate monitoring prior to, during, and after instruction. The educator consistently reflects on instruction to decipher the
pace and direction of learning objectives appropriate for students (Garrett, 2023). Teachers forming groups based on skill acquisition provides a secure connection between academics and instruction where learning can evolve (Prast et al., 2018). Additionally, teachers can use grouping in strategic and flexible ways that encourage working independently, and in small collaborative groups to emphasize fluidity between homogenous and heterogenous design (Vantieghem et al., 2020). Educators meeting the needs of students through an adjustment of both curriculum and instruction for various groups is advantageous (Dixon et al., 2014). Students working in small group settings based on their needs and interests is considered best practice in education (Garrett, 2023). Deliberate instruction and the reciprocation of ideas between students is a key factor of differentiation in small group learning (Onyishi et al., 2020).

**Progress Monitoring.** Effective differentiation is based on a variety of well-considered goals and the analysis of students’ instructional needs, in combination with continuous monitoring of student progress (Van Geel et al., 2019). Teachers are able to observe gains in skill acquisition using progress monitoring data as a starting point for future instruction and the grouping of students (Garrett, 2023).

In order to gauge student growth and inform instruction, credible and accurate progress monitoring measures need to be reviewed by educators on a consistent basis (Minkos & Gelbar, 2021). Progress monitoring measures that are administered weekly are preferred for instructional decision making (Stecker et al., 2008). This is especially important for elementary school age children gaining access to foundational skills (Minkos & Gelbar, 2021). There is no other way to provide differentiated instruction other than to analyze the needs of each student in the room with formative assessments and then target specific needs through ability grouping and progress monitoring (Prast et al., 2018).
**Role of Teachers in Implementing Differentiated Instruction**

For teachers to meet the needs of all learners, an accurate view of students’ levels of understanding and knowing which instructional strategies and learning activities are appropriate is necessary (Van Geel et al., 2019). Seasoned teachers understand that they need to present students with the same academic objectives, but students will need to learn them in different ways (Tomlinson et al., 2003). The teacher displays flexibility throughout the instructional process and is willing to toggle content levels based on student readiness, interest, and learning preferences (Onyishi et al., 2020). Educators who participate in the differentiated model demonstrate efficacy and strong decision-making skills. In addition, daily instruction that includes differentiation in content, process, product, and environment evidences best practices and equity (Tomlinson, 2014).

**Teacher Efficacy.** The complicated nature of differentiation can lend itself to doubt about effective implementation among educators as it is often messy and tenuous to incorporate into instruction. Teacher efficacy refers to what teachers perceive about their own abilities in providing a differentiated learning experience (Goddard & Kim, 2018). Dixon et al. (2014) stated that teacher efficacy can elevate willingness to differentiate, and a greater number of professional development hours could be positively associated with teacher efficacy. Teachers who are ready to consider implementation of differentiated instruction into the daily classroom routine are also ready for effective professional development to expand their skills to do so (Goddard & Kim, 2018). Accordingly, teachers can identify the most challenging differentiated instruction techniques to highlight in professional development through self-reflection of their own practices (Smets, 2017). Teachers’ use of differentiated instruction practices is strongly embedded in their efficacy, even more so than their ideology about the benefits (Whitley et al., 2019).
**Decision making.** Implementation of differentiated instruction occurs when teachers make informed decisions about the learners in their classrooms (Onyishi et al., 2020). The groundwork for differentiated instruction is in place when teachers prioritize understanding that each child is different and presents with unique academic needs. Students come to school with a wide range of differences including language, culture, and personal interests. These factors and academic benchmarks inform teachers’ decision making in planning instruction for student challenges and/or strengths (Bondie et al. 2019). The previous lessons and student acquisition of pertinent skills determine the learning objectives (Garrett, 2023). Effective teachers observe and analyze the myriad of learning preferences that can be present in a single classroom. After teachers are able to identify the needs of the students in their classrooms using formative and summative data, they can create flexible, homogeneous groupings of students and provide deliberate and targeted instruction based on emerging skills (Park & Datnow, 2017). Van Geel et al. (2019) pointed out that teachers' deliberate and adequate choices concerning instructional approaches and materials are at the core of differentiation, and there is not one strategy that can be applied to differentiate properly. Educators have autonomy when it comes to implementation and the design of differentiated instruction in their classrooms (Goddard & Kim, 2018).

**Equity.** Students bring varied culture, social, and academic experiences to their learning environments (Onyishi et al., 2020). When determining meaningful and appropriate instruction for students, the social construct of equality versus equity comes into play (Lin et al., 2008). Additionally, specific social conditions establish pre-determined personalities in learners who come to school (Bondie et al., 2019). The major goal of educational reform movements is to change the educational structure so that groups of students with diverse races, cultures, languages, and ethnicities all have a chance to achieve together socially and academically (Lin et
Differentiated instruction is critical in order for teachers to provide an equitable learning experience for diversities in the classroom (Onyishi et al., 2020).

**Best Practice.** Educational researchers find differentiated instruction a vital topic because it represents a powerful method for meeting the needs of students (AM et al., 2023). Educational researchers value differentiated instruction and promote it as a way to meet students’ academic needs (Gheyssens et al., 2020). Differentiation has a favorable effect on student achievement, leading to enhanced student engagement, higher academic achievement, and elevated student satisfaction (AM et al., 2023). There are too many differences among students for instruction to the whole class using one style and considering only one level of ability (Garrett, 2023). Learners gain the most academically when educators convert traditional, teacher-centered delivery of instruction to student-centered, differentiated instruction to meet their specific needs (Robinson et al., 2014).

**Impacts of Differentiated Instruction**

Researchers have documented the positive effects of differentiated instruction on student achievement (Pozas et al., 2023). Students learn at varying rates and by assorted methods (Robinson et al., 2014). As a result, they advance when instruction is built around their readiness levels (Onyishi et al., 2020). Therefore, differentiated instruction is a meaningful teaching and learning application that markedly elevates student achievement (Garrett, 2023). Consequently, when teachers recognize the benefits of differentiation, they are more likely to align their efforts to actualize it (Oniyoshi et al., 2020).

**Closing the Academic Gap.** Teachers are motivated to continue using differentiated instruction in their daily routine if they are seeing a progression in student achievement (Valiandes and Neophytou, 2017). As teachers consistently provide differentiation to fill
academic gaps, students continue to progress academically while simultaneously practicing newly introduced skills to maximize learning (Hall & Meyer, 2004). Students of varying abilities benefit when teachers support alternative learning and teaching modalities that appeal to different interests while using different degrees of complexity accordingly (Gaitas et al., 2017). Teaching in a small group setting, personalized for students, leads to student achievement (Garrett, 2023). Differentiation aims for academic growth and, when done correctly and with fidelity, it often achieves success (Tomlinson, 2014).

**Student Engagement.** Teachers and learners can view conversations as scaffolds intended to increase student learning and achievement (Ankrum et al., 2017). Working with students in small groups or one to one offers opportunity for meaningful communication between teacher and student. Students access learning through being intently involved and physically interactive with their surroundings (Nicolae, 2014). When teachers consider that learning can be auditory, kinesthetic, or visual, and when they offer tasks to meet those preferences, they can actualize meaningful learning (Nicolae, 2014). Educators considering a match of students' attempts at learning with the most relevant pedagogy provides various opportunities to interact with the curriculum and maximum student engagement (Nicolae, 2014).

**Aligns with MTSS.** As of 2019, over 25,000 schools in the United States use the Multi-Tiered System of Support (MTSS) framework to design, implement, and evaluate academic systems with the purpose of improving student outcomes (Scott et al., 2019). Without differentiated instruction, students’ specific needs get lost, and learning becomes a one-size-fits-all scenario (Scott et al., 2019). Accessing the curriculum proficiently looks different for each learner, and MTSS addresses the diverse academic challenges of students not making appropriate
academic gains. Additionally, differentiated instruction, which is organically built into MTSS, provides an additional layer of applicability in education.

**Professional Development**

In the push to provide differentiation and foster inclusive classrooms, experts recommend professional development to support teachers in adopting differentiated strategies (Gheyssens et al., 2020). Consistent, quality professional development emphasizes the value of providing differentiation in the classroom and its effect on student progress (Suprayogi et al., 2017). If the district initiates differentiation, then aligning the amount and caliber of professional development being offered would be advantageous (Martin et al., 2019). To plan, initiate, and program for a differentiated learning environment, it is recommended that educational leaders work to prepare teachers sufficiently (Tomlinson et al., 2003).

**Meaningful Professional Development**

For professional development to be effective, it must be meaningful, as teachers generally do not have the luxury of extra time to spend on extraneous district-determined learning. Orchestrating a differentiated classroom is not just about planning for instruction, as there are many reasons that teachers do not make a shift toward differentiation (Valiandes & Neophytou, 2018). Many obstacles complicate the implementation of differentiated instruction, including: (a) class size, (b) equitable grading systems, (c) sufficient planning time, (d) resource shortage for teachers and students, (e) considerable paperwork, and (f) lack of support from administration (Shareefa et al., 2019). In addition, navigating barriers outside of teacher control, managing the daily teacher grind, and finding time to incorporate all that is necessary for effective differentiation is daunting for teachers (Shareefa et al., 2019). These challenges can be alleviated
by educational administration providing creative solutions through professional development that is differentiated, self-reflective, engaging, supportive, ongoing, and collaborative.

**Differentiated Structure.** Educational leaders can design professional development with valuable instruction and reflective opportunities to monitor learning and provide a differentiated learning experience (Van Geel et al., 2019). Chen and Herron (2014) agreed that in an academic setting, teachers just like students possess different learning capabilities. Professional development that includes a variety of activities, pedagogical strategies, resources, and reflection coupled with many opportunities to witness differentiated learning approaches enhances the progression toward a deeper understanding of the model (Dack, 2018). Reinforcing a concerted effort to attempt differentiation in the regular education classroom involves providing a support system with longevity, goal setting, choice, and professional facilitators (Hewitt, 2012). As Martin et al. (2019) suggest that, professional development opportunities are the perfect time to model the benefits of offering choice in differentiated instruction. Facilitating engagement and expanding the learning is achieved by giving teachers a voice regarding the strategies they perceive to be most valuable (Martin et al., 2019). Smets (2017) added that offering a checklist containing the different skills necessary for effective differentiation is one way to provide teachers with a blueprint for maneuvering through the complexity and narrowing down their own specific needs.

**Self-reflective Opportunities.** In professional development for teachers, focusing on differentiated instruction benefits them, but it also requires a critical component of self-reflection. An effective strategy for mastering the art of differentiated instruction is to use a self-reflective approach and secure a commitment to meaningful and effective growth (Smets, 2017; Valiandes & Neophytou, 2017). Educators are more likely to modify philosophies about teaching
and learning when there are frequent cues to audit and assess their own understanding (Dack, 2018). Teachers launching a differentiated classroom are more likely to continue if there are meaningful moments of self-reflection to finetune and perfect this complicated teaching technique (Tomlinson, 2017). To be most effective, self-reflection must span over a lengthy period of time and be structured in some way as to address progress (Postholm, 2018). Teachers engaged in self-reflection are aware of the need to expand their teaching repertoire and cultivate success in their chosen profession (Smets, 2017). This component supports the idea that professional development is best when there is sufficient time to digest and determine the next steps on the differentiated instruction continuum, especially for inexperienced teachers.

**Engaging Format.** A novel way to engage teachers in the process of mastering differentiated instruction is by modeling the intricacies of implementation (Smith & Gillespie, 2023). Effective implementation of differentiated instruction requires professional development to outline what it is, how to put it into practice, how to establish positive relationships with students, and, most importantly, to provide time to observe teachers using it effectively (Nicolae, 2014). Finding creative ways to engage teachers in learning the various strategies associated with effective differentiation while simultaneously managing the chaotic and complicated professional life of a teacher is critical for implementation (Gheyssens et al., 2020).

**Supportive System.** The teacher is the greatest factor in the success of differentiated instruction in the classroom (Tomlinson, 2017). Differentiated instruction is ideology educators are acquainted with and acknowledge; however, they may feel they do not have the resources to implement it effectively (Eller et al., 2019). Engagement and buy-in are encouraged by supporting teachers with implementation and providing them with a map for reaching the diverse needs of students. Additionally, inviting teachers to think critically about the process of
differentiation immerses them in the experience. When the learning includes deep self-reflection, mentoring, prolonged engagement, and a coherent progression, teachers will ultimately be successful in attempts at differentiation for their students (Reid & Risko, 2019).

**Ongoing Support.** One way to invite teachers to consider this comprehensive and complete approach for reaching diverse learners in the classroom is to provide professional development that is ongoing and consistent (Reid & Risko, 2019). School districts organizing ongoing and useful professional development focused on differentiated instruction emphasize the value of and effect on student progress (Suprayogi et al., 2017). Dixon et al. (2014) explained professional development opportunities must not only introduce the topic of differentiation, but they also allow teachers to proactively practice in a workshop setting in which a coach supports acquisition of skills needed to differentiate, assuring some degree of success over time. There are major differences between introductory professional development opportunities for differentiation and a scaffolded, ongoing experience (Smets, 2017). The objective should be to provide a scaffolded experience of differentiated instruction that teachers can use to move along a continuum of knowledge and comfortability. Educators who are provided the time, support, and scaffolding necessary to incorporate differentiated instruction into the daily routine are the most successful at its implementation (Tomlinson et al., 2003).

**Collaborative Engagement.** The usefulness of differentiated instruction is a popular topic of discussion once teachers are afforded the time and resources to attempt implementation (Martin et al., 2019). Reflective dialogue among colleagues in the form of professional learning communities (PLCs) is strongly related to student outcomes (De Neve et al., 2015). The use of PLCs affords teachers, new and experienced, the opportunities to discuss challenges in the classroom with others who truly understand (De Neve et al., 2015). PLCs are based on
collaborative efforts, collective responsibility, shared visions, and reflective dialogue (De Neve et al., 2015). When teachers are able to collaborate on implementation or improvement of challenging approaches to teaching, such as differentiated instruction, the results are positive outcomes for teachers and improved achievement for students (Goddard & Kim, 2018). Successful differentiation requires that teachers reflect on pedagogical approaches and collaborate with colleagues (Goddard & Kim, 2018). A fundamental component of effective professional development is peer discussion (Hewitt, 2012). Providing ample opportunities for learners to engage in discourse with colleagues and share ideas takes the learning experience to the next level (Hewitt, 2012). Teachers agree that collaboration is needed to attempt differentiation in the classroom (Gheyssens et al., 2020). When teachers collaborate with a focus on school improvement, curriculum, instruction, and professional development, they are more likely to incorporate differentiated instruction into daily routines (Goddard & Kim, 2018).

**Essential Components to Consider for Professional Development**

Mastery teaching experiences lead to the ability to make long term instructional change (Goddard & Kim, 2018). Engaging, meaningful and consistent professional development that includes high expectations for implementation supports teachers in their commitment to differentiate (Reid and Risko, 2019). Having opportunities to witness, firsthand, the routines of teachers who are positively implementing differentiated instruction will encourage teachers marginally familiar with the practice to observe the possibilities it has for addressing the divergent learning needs of students (Whitley et al., 2019). To create a more personalized feel, trainers who provide real-world examples of differentiation offer teachers the experience of seeing differentiation in action, with the added opportunity to decipher its use with a professional (Dack, 2018). In addition, effective implementation happens when an educator has a myriad of
instructional and management tools (Garrett, 2023). Furthermore, teachers would benefit from considering the roles that classroom environment, classroom management, and planning play in differentiation and addressing them in professional development discussions.

**Classroom Environment.** Classrooms supporting differentiated routines, such as grouping methods or encouraging choice for various methods and curriculum content, can induce rising levels of chaos and commotion (Vantiegham et al., 2020). As a result, teachers may have misgivings about the benefits of differentiation due to its prerequisite for elevated classroom management skills (Nicolae, 2014). Educators able to support an inclusive and safe learning environment often find success in engaging students in learning. In healthy classroom environments, students are aware of clear, non-negotiable expectations and are taught how to make appropriate choices while working independently (Tomlinson, 2014).

**Classroom Management.** Vantiegham et al. (2020) noted that effective classroom management is an underlying skill necessary for teachers before instruction supporting differentiation for students can be attempted. Start up and wrap up routines must be explicitly taught and modeled for teachers before independent practice can be attempted (Tomlinson, 2014). Addressing the needs of flexible groups while maintaining the learning behaviors of the entire class is a delicate routine for teachers. Subsequently, highly experienced and seasoned teachers find it difficult to manage all that finds its way to their list of responsibilities without the inclusion of differentiation implementation (Dixon et al., 2014). For instance, teachers can provide students with work folders and make checklists of essential skills students check off as they are mastered to keep themselves focused and on task (Tomlinson, 2014).

**Planning.** Putting differentiated instruction into action presents major challenges, but the time and effort are well worth it (Rock et al., 2008). A pivot away from conventional teaching to
a more meaningful learning experience involves deliberate planning for flexible grouping and
efforts by the teacher to build a more responsive classroom (Nicolae, 2014). The teacher creates
small, flexible groups with personalized lessons determined by students’ readiness levels
(Garrett, 2023). Educators able to manage the myriad of skills students need to acquire and ways
to instruct the different learning preferences also prevalent, are the most successful.

**Resources for Effective Professional Development**

Effective professional development does not materialize without a myriad of resources in
place. The support of leadership in terms of funding and time is necessary. Professional
development that utilizes PLCs and instructional coaches is beneficial for teachers to begin the
process of differentiation and to continue a scaffolded journey of successful implementation.
Additionally, a solid understanding and interpretation of what differentiated instruction is, its
benefits and how to implement begins with a collaboration between pre-service teachers,
cooperating teachers and college personnel.

**Leadership.** It is paramount that administration allocates funding for engaging and
meaningful professional development opportunities for teachers (Smith & Gillespie, 2023). Educational leaders understand that successful differentiated instruction implementation is
reason enough for meaningful professional development (Pozas et al., 2023). Finding ways to
include leadership's presence in planning professional development for differentiated instruction
is necessary to signify its complexity and emphasize its importance (Postholm, 2018). School
leaders, policy makers, and district administration would benefit from recognizing the types of
support that teachers need to improve instruction, including protected time and structure for
collaboration, teacher input for professional development topics, and the power to make
decisions about materials and resources (Goddard & Kim, 2018). Embedding continued
Professional development into the contracted workday would be cost-effective (Peterson-Ahmed et al., 2018). Considerations for the time of day, location, and cost for professional development make a difference in the motivation of teachers to attend and without dedicated time to practice and master skills introduced during professional development, no real growth can take place (Peterson-Ahmed et al., 2018; Postholm, 2018).

**Professional Learning Communities.** Modern teaching environments dictate a more collaborative educational model in the form of professional learning communities. A cost-effective solution for incorporating engaging discussions about differentiation includes the use of professional learning committees (Postholm, 2018). Castillo et al., (2022) did a review of 79 studies supporting professional learning and discovered that providing teachers with sustained and targeted professional development through the use of coaches and PLCs amounts to differentiated and purposeful instruction which in turn leads to positive student outcomes. Providing newer teachers with opportunities to discuss data, connect strategy to instruction purposefully and built in support from colleagues is an immeasurable catalyst for implementing differentiation (De Neve et al., 2015).

**Instructional Coach/Content Expert.** Trained, specialized facilitators can provide leadership in professional development, and it may be advantageous to support a coach’s involvement in goal setting and introducing ways to implement differentiation (Gheyssens et al., 2020; Piast et al., 2017). Coaches and mentors are pivotal in providing support and modeling differentiation (Chen & Herron, 2014). Professional development with consistent coaching from specialists in differentiated instruction would offer teachers opportunities to become competent enough to try it themselves. Additionally, instructional coaches can embed professional development in real time, and create a meaningful experience with teachers and their classes.
Furthermore, making good use of instructional coaches/mentors to help clarify the complexity and share knowledge for successful differentiated instruction is advantageous (Piast et al., 2017). The utilization of coaches to provide teachers with an enhanced learning experience and provide extension to the development of differentiation strategies makes sense in the elementary setting for optimal success (Smith & Gillespie, 2023). Using educational professionals and/or instructional coaches as trainers for differentiation can establish an in-house and convenient system for professional development opportunities. Collaboration between teachers and coaches becomes organic when it is considered a characteristic of PLC work.

**Pre-Service Teachers and Coursework.** Introducing differentiation during pre-service learning provides a creative solution for organically incorporating more differentiated instruction into elementary school classrooms with new teachers (Dee, 2010). Classroom management has a purpose in education courses, but differentiated instruction is not as standard, despite the number of exposures needed to effectively differentiate (Peterson-Ahmed et al., 2018). Pre-service teacher preparation often overlooks the roles that diversity, culture, social issues, and ability play in classrooms; however, young teachers should thoroughly examine these characteristics of learners to prepare for what they will encounter once hired (Peterson-Ahmed et al., 2018). Providing pre-service teachers with the essential background in differentiation further prepares them to attempt differentiation in the field (Whitaker & Valtierra, 2018). Continuing this learning would be most effective by placing pre-service teachers in classrooms with teachers who are skilled at differentiation. Pre-service teachers benefit from understanding the various scenarios in which inclusion is expected in the regular education classroom (Dee, 2010). Teacher education coursework that stresses acquisition of both conceptual and practical tools of differentiation and understanding the difference between strategies of implementation and the
elemental principles would be most beneficial (Dack, 2018). There is a need for professors willing to model best practices in differentiated instruction and they would be effective in leading pre-service education college courses (Davis-Duerr, 2015). Teacher prep programs that educate teachers on how to differentiate instruction for mixed-ability classes are valuable (Dixon et al., 2014). Recently, college programming lacks a close examination of the components of differentiated instruction (Peterson-Ahmed et al., 2018). Education courses and professional development are helpful in providing teachers with what is needed to implement differentiated instruction successfully.

**Considerations for Adult Learning.** Just as teachers plan for educating their students, educational leaders would benefit from planning for educating teachers. When facilitators consider factors that support adult learning such as engagement, audience, application, and implementation, they are more likely to meet learning objectives (Leibel et al., 2021). Leibel et al. (2021) added that diversity and variances in adult learners such as background knowledge, experience, skill level and mindset should factor into learning objectives. Additionally, teachers learn best when new content is relevant to their work with guidance from facilitators and supported by continued self-reflection, self-assessment and ongoing application of new knowledge and practices (Trivette et al., 2009).

One-size-fits-all workshops do not offer continuous and comprehensive opportunities to develop pedagogical skills and practices, especially those as complicated as differentiated instruction (Patton et al., 2015). Patton et al. (2015) stated that educational experiences connected with the learner's work and collaboration with like-minded participants lead to improved practice and positive outcomes. Teachers benefit from pedagogy that includes modeling through observing instructional practices in action using videos, demonstration lessons,
and peer observations (Bates & Morgan, 2018). Bates and Morgan (2018) informed that no matter how engaging, the “once and done” workshops are largely ineffective because they do not offer ongoing, sustained support with continued constructive feedback for meaningful learning.

**Conceptual Framework: Universal Design for Learning**

Learning is a complicated process that has generated infinite interpretations, frameworks, and theories on how it can be successfully accomplished (Ertmer & Newby, 2013). The Universal Design for Learning (UDL) conceptual framework is based on three principles related to the cognitive learning process: successful structures reliable for motivation, credited structures essential for accumulating and evaluating information, and critical systems responsible for devising and implementing actions (Sasson & Miedijensky, 2021). From the UDL perspective, the framework’s focus is a change in the learning environment and not on the individual learner (Chita-Tegmark et al., 2012). Rote, repetitive, and regurgitated knowledge has been replaced with thinking critically and using skills to be cooperative learners to consume knowledge (Smith Canter et al., 2017). The UDL conceptual framework secures ideas and theories from brain analysis, cognitive social studies, and learning options to combine them all to meet the needs of students (Smith Canter et al., 2017). UDL is designed to equip diverse learners with connections to the regular education setting (Ok et al., 2016). UDL provides learning for the widest range of students by supporting a reduction in the number of barriers they may face in accessing the learning environment (Griful-Freixenet et al., 2021). Similarly, differentiated instruction is grounded in the understanding that diversity exists in any grouping of students and acquisition to instruction is adapted accordingly (Griful-Freixenet et al., 2021). Together, UDL and differentiated instruction support each other by helping all students not only access the curriculum, but also by adapting it to fit their specific needs (Griful-Freixenet et al., 2021).
Note: This diagram emphasizes the interrelationship and overlap of Universal Design for Learning and Cognitive, Constructive and Behaviorism Learning theories.

The UDL conceptual framework relies on the following instructional practices for success: cooperative and solitary learning, focused instruction, educators’ precise intention of organization and control of oral/written mechanics, all while integrating visual understandings, culminating assignments that support student preference, addressing learning differences, and finally encouraging inquiry and higher-level thinking (Sasson & Miedjiensky, 2021). UDL builds student support by proactively planning lesson goals, using curriculum resources, implementing creative instructional practices, and assigning fair assessments (Ok et al., 2016). Differentiated instruction uses ongoing assessment with adaptations in instruction and flexible
grouping to meet student need based on progress (Griful-Freixenet et al., 2021). UDL involves stimulating student interest and motivation to learn through creative, hands-on, and meaningful instruction and relies on three essential and interconnected principles; representation, engagement, and action/expression to address variability in learning preferences (Courey et al., 2012). Courey (2012) explained that representation of instructional material designed to provide access to a myriad of diverse learners is essential. Engagement promotes self-regulation, maintaining effort and persistence, all while molding purposeful, motivated learners (Sasson & Miedijensky, 2021). Lastly, action and expression support opportunities for students to communicate and confirm their learning (Courey et al., 2012). Action and expression unlock opportunities for executive functioning, communication, and physical action to build deliberate and ambitious learners (Sasson & Miedijensky, 2021). Sasson & Miedijensky (2021) stated that varied designs provide options for comprehension, language, and perception which are all catalysts for shaping resourceful and knowledgeable learners. Once students are engaged and able to access curriculum through UDL, differentiated instruction supports academic progress by creating educational goals and altering the complexity of content to acknowledge diversity in learning (Alsalamah, 2017).

Educational programming should offer numerous ways of creating compatibility with the learning process by promoting alignment with students’ personalities and endorsing their connection with their lived experience (Chita-Tegmark et al., 2012). UDL navigates pedagogical methods that allow learners to display knowledge in a multitude of ways with ample tools while maintaining a graduated level of support as students move toward independence (Zhang et al., 2022). Differentiated instruction integrates initial and ongoing assessments to utilize the resulting data while making decisions about instructional strategies and flexible grouping of students.
(Alsalamah, 2017). This compliments UDL usage of individualized content and methods in accordance with personal learning plans that are crucial for academic acquisition (Reigeluth, 2016). Researchers guided by several cognitive learning theories developed UDL, taking into consideration variability in learning differences (Zhang et al., 2022). The following learning theories, cognitive, constructivist, and behaviorist are intertwined with UDL (See Figure 1).

**Cognitive Learning**

Piaget (1976) informed that cognitive development requires adaptation to environmental demands and that children solicit natural simulation rather than receive it without resistance. Piaget discovered that active exploration reveals a divergence between current representations of knowledge and provides a state of disequilibrium and forces the learner to gain a deeper understanding (Obikwelu & Read, 2012). Similarly, Vygotsky (2004) explained that culture plays a key role in cognitive development and that the interplay of student and society affects learning. The cognitive learning theory emphasizes making meaningful observations and supporting students to order and understand unfamiliar information to current schemata (Ertmer & Newby, 2013). Consequently, incorporating cognitive learning theory ideas into instruction means asking questions to determine a student's current schemata and paying attention to their thinking to uncover clues about how they organize new information (Yilmaz, 2011). As a result, instruction should activate relevant cognitive structure by activating prior knowledge and experience (Reigeluth, 2016). In addition, skill difficulty that is slightly elevated from a student’s present level of ability is also related to cognitive learning theory (Hall et al., 2004).

When examining the complexities of how learning takes place, we must recognize the nuances connected to education. There are many cognitive teaching considerations needed including a diversity of practice options, eliminating repetition, and encouraging learners to self-
regulate the use of appropriate learning strategies based on diverse learning needs (Yilmaz, 2011). Ertmer and Newby (2013) supported the significance of consideration for the thoughts, beliefs, attitudes, and values of learners during the learning process. In addition, Vygotsky (2004) explained that instruction should provide authentic situations in which resolving dilemmas is the goal, finding the instructional level of the student and partnering students of varying ability to support learning. Students need experience collaborating on small teams to develop communication skills and learn from each other (Reigeluth, 2016). Learners benefit by increasing the number and variability of engagement opportunities in assessments (Courey et al., 2012). Student engagement and understanding are critical elements for effective differentiated instruction because engagement attracts the learner to instruction followed by understanding which enables transference to unfamiliar settings and situations (Tomlinson, 2014). Once students consistently gain increased exposure to unfamiliar settings and situations to facilitate understanding, the cognitive learning theory applies.

**Constructive Learning Theory**

Learners are ready to receive knowledge and meaning that comes from a focus on their needs and not teacher instruction (Obikwelu & Read, 2012). Human beings construct meaning as opposed to receiving it by processing knowledge gathered from lived experience to produce an exceptional reality (Ertmer & Newby, 2013). Constructivists posit that scaffolded exploration offers a support system to students as they perform tasks and adapt their thinking to include new skills conducive to their environment (Obikwelu & Read, 2012). Learning that occurs in realistic settings with relevant tasks is critical to the cultivation of learners’ experiences of the world around them (Ertmer & Newby, 2013). Accordingly, a constructivist approach focuses on student generated understandings and social interplay between learners because it recognizes the
diversity of learners in the classroom (Sasso & Miedijensky, 2021). For instance, complex instruction, a strategy that embeds differentiation using small heterogeneous groups and relies on the intellectual strengths and varied talents of each student to collaborate on tasks that are open-ended and include a variety of solutions supports constructivism (Tomlinson, 2014). The constructive learning theory rests on the following techniques for knowledge construction: modeling, reflection, strategy formation, scaffolded exploration, debriefing with peers, and articulation (Obikwelu & Read, 2012). Both students and environmental stimuli are essential because their distinct synergy establishes understanding (Ertmer & Newby, 2013). The Constructive Learning Theory insists students work in a realistic context to explore and experiment with immediate feedback from educators to support models and theories (Obikwelu & Read, 2012). Behaviorism Learning Theory works in tandem with constructivism because together they develop growth through feedback and positive reinforcement.

**Behaviorism Learning Theory**

Behaviorism relies on ongoing feedback and positive reinforcement that encourages growth. In partnership, teacher, and student plan, set goals, monitor progress, and evaluate success (Tomlinson 2014). Learning is based on stimulus-response associations being emphasized using instructional cues, practice, and reinforcement, such as corrective feedback (Ertmer & Newby, 2013). Behaviorism learning theory alone does not account for conceptual change and is missing mental processes or cognitivism that leads to higher level thinking skills. Through the behaviorist belief, the learner is described as susceptible to environmental stimuli as opposed to discovering the environment through active participation. Environmental conditions receive the greatest emphasis with the most critical factor being the arrangement of stimuli and consequences associated with them inside the environment (Ertmer & Newby, 2013). Embedded
instruction is one specific behavioral strategy closely associated with UDL principles because it supports integration of numerous skills for application (Travers, 2022). Additionally, Yilmaz (2011) argued that instruction should apply behaviorism learning theory to reflect the interests, background, and challenges faced by students. Similarly, Ertmer and Newby (2013) emphasized the main goal as equating understanding with building meaning acquired through experience.

Pressing challenges facing U.S. public schools include a push for equitable approaches and policies and a progression toward standards-based reporting with elevated responsibility of student success in the classroom (Smith Canter et al., 2017). My goal, through research and study, was to examine differentiated instruction through a critical lens and with particular emphasis on professional development to make it more obtainable for teachers in addressing the needs of the diverse learners in the classroom. Given the uniqueness of each student, it can be debated that there is no presentation, expression, engagement, or assessment that is best for all learners (Kaimara et al., 2021).

Universal Design for Learning and differentiated instruction are similarly grounded in the idea that a one-size-fits-all mentality is not conducive to success in academics for all students (Kaimara et al., 2021). It is essential, when planning for instruction of a diverse community of learners, to address variability in learning differences by considering the pillars for UDL: representation, engagement, and action/expression. Immediate and corrective feedback and meeting students at their level of understanding while using these theories and the practices associated with them, provides students with support to facilitate growth. The UDL framework, coupled with the learning theories highlighted in this paper, emphasizes flexibility in curriculum that can be presented in multiple formats with the goal being to ensure student achievement by creating accessible and appropriate content for learners with diverse backgrounds, abilities and
learning needs (Courey et al., 2012). Considering the foundations of UDL, Cognitive Learning Theory, Constructive Learning Theory and Behaviorism Learning Theory provides a comprehensive and all-inclusive platform to reach all students with varying learning preferences, social constructs, diverse ethnicities, differing socio-economic statuses, and various rates of academic acquisition.

**Summary**

In this chapter, I summarized the relevant literature on differentiated instruction, professional development, and the roles that teachers and administrators play. I presented my conceptual framework, comprised of Universal Design for Learning, Cognitive Learning Theory, Constructive Learning Theory and Behaviorism Learning Theory and their connections to differentiated instruction. In the next chapter, I communicated my methodology, research design, and data analysis process.
Chapter 3: Methodology

Teachers utilize small, flexible groupings of students to provide targeted instruction based on academic standards and the specific needs of the learner, embodying the philosophy of differentiated instruction. (Tomlinson, 2014). Targeted instruction facilitates optimal academic gain for learners and is the main benefit of differentiated instruction (Van Geel et al., 2019). Given its complexities and challenging characteristics, differentiated instruction is not easy to implement (Gaitas & Martin, 2017). A major component for providing differentiated instruction is teacher efficacy which comes from experience, exposure, and repeated attempts at implementation (Dixon et al., 2014). For this reason, educational leaders recommend professional development to support teachers in their initiation and continued efforts to differentiate (Gheyssens et al., 2020).

I examined the complexities of successful differentiated instruction implementation through the lens of elementary education teachers to build on this research. This study used the collected data to inform professional development for teachers. In this chapter, I provide an overview and rationale for my decision to use narrative interviews for my research. Additionally, I describe the research design and questions, specifically sharing the participants, procedures, instrumentation, data analysis procedures, and limitations.

Personal Narrative Research

This study used qualitative methodology employing a narrative research design to gain insight into the art of effective differentiated instruction in the elementary education classroom from the perspective of the teacher. The focus of narrative approaches to research is to show how an individual organizes notable experiences (Prosek & Gibson, 2021). A major step in the process for narrative research is for the researcher to present the lived experiences of the
participants and to provide deeper understanding using features of narrative writing (Creswell & Guetterman, 2019). Accordingly, personal narrative establishes experience in the form of storytelling that grips the reader who interprets it in the veil of their own knowledge (Lea Gaydos, 2005). A narrative that offers a glimpse into the participants’ experiences is created when researchers choose and reconstruct fragments of interviews and documents (Rodríguez-Dorans & Jacobs, 2020).

Within the educational field, narrative research often engages in the following considerations: (a) an emphasis on teacher knowledge, (b) teacher self-reflection, and (c) teacher voice (Cortazzi, 1994). Decades ago, in the field of education, researchers introduced narrative inquiry to study others and as an opportunity to provide a voice for teachers (Conle, 2000). There are many compelling examples of narrative inquiry that include individuals’ lived experiences as the main data source (Connelly & Clandinin, 1990). Personal narratives spotlight people as the key finding in research, not data or results (Rodríguez-Dorans & Jacobs, 2020). My purpose for narrative interviews was to capture the lived experiences of teachers providing differentiated instruction, including its trials and tribulations, and their perceived challenges and benefits.

In qualitative research, a major objective is to give participants the venue to display the complexity of the topic and their experience as it relates to it (Creswell & Guetterman, 2019). Lived experience and personal narratives are invaluable when a researcher’s intent is to examine a topic with laser focus within its context (Prosek & Gibson, 2021). Narrative research compliments the ambiguity in teaching and respects that teachers, both experienced and novice, hold knowledge crucial for understanding how students learn (Jones, 2019). A narrative approach in education aims to understand a phenomenon from the teacher’s perspective (Prosek
Personal narratives are written to share the thinking and rationale behind a teacher’s past, current, and future decisions (Prosek & Gibson, 2021).

Researchers consider narrative research design an all-encompassing classification for a variety of qualitative practices (Casey, 1995). Narrative inquiry requires collaboration between researcher and participants to follow a process of storytelling and restorying as the research moves forward (Connelly & Clandinin, 1990). Narrative writing constructs a path between participants, researchers, and the reader by conveying lived experiences directly (Rodríguez-Dorans & Jacobs, 2020). Narrative inquiry is paradoxical in that it is personal and social at the same time which makes it meaningful and relevant in qualitative research (Connelly & Clandinin, 1990). Approaches in narrative research value human experience, perceptions, and understandings in an effort to strengthen study outcomes (Prosek & Gibson, 2021).

**Research Questions**

*What is the experience of elementary teachers as they implement differentiated instruction with students in their classrooms?*

Three sub-questions guided the study:

1. How do teachers’ beliefs and attitudes about differentiated instruction inform their willingness to make it a priority in their pedagogical routine?
2. What resource materials and guidance do teachers report they need to provide effective differentiated instruction to meet the academic needs of learners?
3. How does professional development play a role in teachers’ self-efficacy to provide students with differentiated instruction?
Participants

The researcher initially recruited participants from a pool of approximately 200 elementary teachers throughout a mid-Atlantic region state school district using a Qualtrics designed differentiated instruction questionnaire. The goal was a return of 20% for a sample size of 40 participants for the questionnaire. There were a total of 29 who completed the questionnaire. From the questionnaire, a total of 8 participants indicated a willingness to engage in interviews. I used homogeneous sampling to find teachers exhibiting a solid understanding of differentiated instruction. Analysis of answers to questions designed to show the participants’ level of experience, amount of schooling, and propensity for attempting differentiated instruction directed the purposeful sampling. The goal was to find teachers able to provide clarity and a system for the use of differentiation in the classroom. Additionally, I considered grade levels currently taught to distribute participants over grades K through 4. Three teachers stood out as viable candidates based on their knowledge of differentiated instruction and willingness to provide differentiation in their instructional routine. An in-depth profile is provided for each teacher in Chapter 4. To be eligible for consideration in this study, participants needed to be at least 18 years of age, state certified, and employed with tenure by the target school district as a K-5 classroom teacher. Exclusion criteria consisted of teachers who were: (a) long term substitutes, (b) reading or math support specialists, (c) special education teachers, (d) teachers for the unified arts, and (e) this study did not consider uncertified teachers.

Description of the Setting

The setting of this study is a public, suburban elementary school located in the mid-Atlantic region of the United States. The school district serves approximately 12,000 students in grades K-12 with more than 15 schools. Student demographics include over 70% white, 10%
Hispanic, 9% Asian, 5% African American, and 6% multi-racial. Additionally, approximately 12% of students fall under the category of economically disadvantaged, approximately 16% of students receive special education services, and the overall graduation rate stands at 97.5%. This school district employs almost 1,000 teachers, over 50 administrators and 400 support staff.

The school district’s elementary curriculum is based upon the state standards as well as research-based and developmentally appropriate practices. The school district’s academic goals are also supported by flexible grouping, inclusion, integrated curriculum, technology, and diligent progress monitoring. A special clinical teaching team works with students to overcome learning difficulties. The team includes the building reading team, the classroom teacher, school counselor, school psychologist, the special education teacher, and the building principal. Other clinical specialists are available as needed. Students identified as gifted experience a challenging academic curriculum which is enhanced by a variety of enrichment activities and accelerated studies.

**Instrumentation**

In this study I used three instruments that complemented the narrative design of the study. Crafted to provide a broadband view of the district, the Differentiated Instruction Questionnaire captures teachers' perceptions and awareness of differentiated instruction. This step was followed by two sets of individual interviews to determine beliefs, challenges, resources, and needs for professional development through the lens of teachers. Finally, interview participants were encouraged to share documentation and artifacts necessary for differentiation, categorizing them with the Differentiated Instruction Checklist.
Differentiated Instruction Questionnaire

The study began with a questionnaire (see Appendix A) I generated on Qualtrics using my own background knowledge and perceptions of differentiated instruction to get an understanding of how teachers feel about differentiation in their classrooms. I designed the first four questions to gather demographic information, determining teachers' levels of experience, education, certifications, and the grade levels they teach. I followed those with two open-ended questions designed to elicit a definition of differentiated instruction. The next set of five multiple choice questions provided insight into teachers’ comfortability with differentiation, as well as frequency and subject matter that warrants differentiated instruction. The next two questions prompted teachers to consider what student information they use and the length of time it takes to plan for differentiation. Next, the questionnaire required participants to quantify their learning and professional development regarding differentiation with two more questions employing the Likert Scale. Finally, it concluded by inviting in-person interviews with the researcher and offering a link for participants to submit their email addresses.

Interview Protocol

Although there was a set of questions that I referred to for the initial interview (see Appendix B), I asked additional inquiries about differentiation based on teacher replies to deepen understanding and strengthen the relationship between teacher self-reflection and the study's rationale. There were eight guiding questions for the initial interview. They were designed to provide a deeper understanding of the necessary resources and planning needed for implementation of differentiated instruction. The first two questions were related to essential resources and student information for differentiation. The following two questions prompted teachers to explain ways in which they differentiate learning preferences and also cultural,
socioeconomic status, and social/emotional learning differences. The next question isolated information about organization and planning for differentiated instruction. And finally, the last three questions refer to the benefits of differentiation for students and what it looks, sounds, and feels like in the classroom.

The follow-up interview (see Appendix C) posed seven questions for reference designed to elicit information unearthing teacher perceptions-beliefs of differentiation, as well as needs for professional development. This second inquiry was based on initial interview responses that helped to shape the line of questioning. The first question provides understanding about the value of professional development in the acquisition of skills for differentiated instruction. The next two questions aim to determine drawbacks and obstacles for providing differentiated teaching. Following is a question regarding the connections between student academic mastery and differentiation. The remaining three questions revolved around resources, such as instructional coaches, specialists, and PLCs and how teachers could use them to support their efforts to differentiate. Actual initial and follow-up questions were challenging to quantify due to the complexity of differentiated instruction and the myriad of applications (see Appendix C for a summary of content covered in the interview protocol).

**Differentiated Instruction Checklist**

During both interview portions of the study, participants were given the option to share artifacts they find useful in planning and/or implementation of differentiated instruction in their classroom. I designed an evaluation checklist (see Appendix D) for differentiated criteria to categorize provided evidence of differentiated strategies and instruction. The checklist is broken up into six sections including planning, progress monitoring, content, process, products and learning environment. Displayed under each of the six categories are examples of ways to
differentiate that could correlate. The list is in no way exhaustive. The nature of differentiation lends itself to many interpretations, especially for applicable artifacts, teaching strategies and classroom characteristics. Just like both the initial and follow-up interviews, the checklist was a work in progress during the research process in order to capture all that was gleaned from the data. For this reason, the checklist includes a note section so that artifacts shared that are not on the checklist can be added easily.

Figure 2
*Questionnaire, Initial and Follow-Up Interviews with Line of Questioning*

![Diagram](image-url)

*Note:* This figure demonstrates the three opportunities for data collection and the narrowing of focus as the research study advanced. Participants were asked questions relating to resources, planning, implementation, and professional development.

**Procedures**

The following steps outline the procedures used to conduct this research study.

1. I obtained Letters of Support (see Appendix E) from the school district superintendent.
2. I submitted the study to the IRB for approval.
3. After obtaining IRB approval (see Appendix F), I procured email addresses for all elementary teachers (K-5) in the selected school district.
4. I generated an email (see Appendix G) through Qualtrics with personal links to a questionnaire and sent it in late fall to encourage all regular elementary education (K-5) teachers in the school district to engage in the study.

5. I sent a follow-up message through Qualtrics to teachers who had not started or completed the questionnaire one week after the initial email. The questionnaire link remained live for an additional week.

6. I analyzed data from questionnaires using descriptive statistics and constant comparative analysis. I established a codebook utilizing Dedoose software to visually inspect trends and summarize qualitative findings. With the questionnaire, I aimed to secure a broad-based view of differentiated instruction and its functionality in the district.

7. I used purposeful homogeneous sampling to select a pool of two to four interview participants from those who expressed interest and met participation criteria. Additionally, I considered grade level to provide the research study with an equitable portrayal of teacher perspectives spanning from the lowest grades of kindergarten/1st through 2nd/3rd, and finally the upper elementary grades, 4th/5th.

8. Using answers from the questionnaire, I selected three participants who conveyed successful experience in regularly providing differentiated instruction to students. This purposeful sampling ensured access to qualitative data with the potential to inform the design of professional development and meet the needs of teachers for implementation.

9. I sent participants who were selected a follow-up email requesting their sign-up for either an in-person or Zoom interview lasting 45-60 minutes. The date and time were determined through a Doodle Link, and an optional request was made for sharing artifacts they deemed useful in their implementation of differentiated instruction.
10. After participants signed the Informed Consent form (see Appendix H) I recorded both the initial and follow-up interviews for audio only, with cameras off, using a participant-chosen pseudonym. In-person interviews were also recorded for audio only. Recording was necessary to accurately transcribe responses using in vivo coding.

11. I systematically employed constant comparative analysis throughout the interviewing process to consider facets of differentiation that required further clarification. This method involves gathering and sorting data into categories, then collecting additional data and comparing new information with emerging categories (Creswell & Guetterman, 2019).

12. I encouraged teachers who committed to interviews to bring artifacts to share with the researcher that they had used to implement differentiated instruction in their classrooms.

13. I completed an artifact analysis using the Differentiated Instruction Checklist to understand the substance of the object and how it supports differentiation. (Refer to Figure 2 for a graphic representation of procedures.)

**Data Collection Schedule**

The following section includes the data collection schedule that was determined to collect the findings for this research study. In late November, every K-5 teacher in the school district that was the focus for this study received an email containing a brief description of the study and a request to complete a five-to-seven-minute Qualtrics generated questionnaire. A follow-up email was sent one week after the initial email to thank any participants for completing the questionnaire and to remind teachers who did not to consider doing so. Teachers were made aware that the link to the questionnaire would remain live for an additional week into mid-December.
Teachers completing the questionnaire were directed to a final question asking them if they would be interested in a series of interviews with the researcher. Three choices were provided: (a) no, (b) yes, and (c) maybe, I would like more information from the researcher about the study. Participants answering yes or maybe were contacted directly by the researcher to schedule (one) 45–60-minute time slot and/or to answer questions possible participants had and provide more context about the study. Follow-up interviews were scheduled by the participant and the researcher at the conclusion of the initial interviews. Both the initial and follow-up interviews were conducted during the months of December and January. The time commitment for study participants was approximately five to seven minutes for the questionnaire; and if interviews were conducted, it added approximately 90-120 minutes. Total time commitment did not exceed 130 minutes. Interviews took place at the participants’ school setting of choice or Zoom. In addition, when participants elected to be interviewed, they were also given the option to share artifacts that have been helpful to them in the planning and implementation of differentiated instruction. All identifying information was blacked out by the participant or the researcher prior to submission.

All interviews were audio recorded only and without asking for any identifying information. Teachers created their own pseudonyms. Once interviews were completed and throughout the process, the data was transcribed and coded. For study procedures and data collection schedule, see Figure 3. Themes were created and understandings were categorized to support the findings.
Figure 3
Study Procedures and Data Collection Schedule

Note: This figure details the study procedures and provides a timeline for data collection and analysis.

Analysis

Analyzing qualitative data involves many challenging and complicated steps (Church et al., 2019). Analyzing qualitative data requires a solid understanding of ways to make sense of text to respond to the research questions (Creswell & Guetterman, 2019). The qualitative process of data analysis for this research study included transcribing, in vivo coding, and constant comparative analysis.
Coding

The first step in coding is transcription, the process of converting audio recordings into text data (Creswell & Guetterman, 2019). Once transcriptions were complete using Microsoft Word, in vivo coding was used to capture teacher voice, word for word, and to minimize misunderstandings of data. Next, the transcribed text was re-read and sorted into relevant categories called codes (Church et al., 2019). Researchers interpret and analyze data and reach research outcomes through codes (Church et al., 2019). Naturally, adjustable and emerging understandings are a direct result of keeping an open mind and staying close to the data collected (Maher et al., 2018). The main process in qualitative data analysis is coding because it supports questions about the data, categorizes portions of data, and then classifies themes to frame understanding of the topic (Maher et al., 2018). For my research study, an initial round of coding was completed by use of Dedoose software to organize and classify textual data. This process was followed up with a second round of coding to identify emergent themes. A third reading was conducted to determine the most prominent themes that support the research questions for this study. To gain an insight to the themes, code definitions, descriptions and examples see Appendix J.

Content Analysis

Triangulation from the Differentiated Instruction Questionnaire, initial and follow-up interviews and optional artifacts aided in a thorough analysis of the data collected in this research study. A preliminary exploratory analysis of the Differentiated Instruction Questionnaire provided the starting point for content analysis to gain a general understanding of the data to support initial organization. The answers provided from the questionnaire were coded using in-vivo coding and constant comparative analysis to determine teachers appearing to have a deeper
understanding and self-efficacy for implementation of differentiated instruction. Teachers who responded yes to interviews were isolated and their responses analyzed to determine 3 participants appropriate for achieving the goals of this study. Those specific teachers were invited via email to participate in the optional interview(s) with an invitation to share artifacts they use to support their practice of differentiated instruction.

I utilized three phases of coding, -open, axial, and selective- to divide and label segments of text with codes. Axial coding and open coding focus on determining relationships between categories and subcategories. Selective coding aims to develop a theory that explains the topic of study by refining and organizing data into core categories and central themes (Creswell & Guetterman, 2019). Once themes were determined they were organized together to formulate the main ideas of the qualitative findings. An attempt to layer themes from foundational to more sophisticated allows for a more comprehensive analysis (Creswell & Guetterman, 2019).

For my research study, I was interested in finding unexpected themes to support a deeper analysis of the complexities associated with differentiated instruction and how to address them with effective professional development.

**Triangulation**

Triangulation is a procedure that draws from multiple forms of evidence and strengthens the process and findings (Creswell & Miller, 2000). While I conducted my own research using questionnaires, interviews, and optional artifacts, I gathered as much information as I could to understand the challenges of providing differentiated instruction as seen through the eyes of those on the frontline, teachers. Triangulation is a powerful strategy for increasing trustworthiness of research and data collection and should include three methods: questionnaires, interviews, and documents to bolster reliability (Merriam & Tisdell, 2015). Hunting to find
convergence and reveal themes using a myriad of sources is best practice by researchers in qualitative inquiry (Crewell & Miller, 2000). Trustworthiness of the research study is fortified when multiple interpretations and layered understandings of participants’ experiences are included in data collection (Shenton, 2004). The intention of my research was to examine how educators perceive the necessities for implementing differentiation in their educational routine and how that knowledge can be applied to professional development. (See Figure 3 for Triangulation diagram).

**Figure 4**

*Triangulation: Questionnaire, Interviews and Artifacts*

Note: This figure shows the relationship between the three data collecting instruments and how triangulation is applied.
Researcher’s Bias

A researcher’s values and expectations influence the conduct and conclusions of the study and should be of utmost concern (Merriam & Tisdell, 2015). The success of a research study relies on a solid foundation of open and honest communication about intentions and expectations. Credibility can be questioned, making it important for researchers to reflect and disclose what the motive is in sharing the narratives of elementary school teachers (Creswell & Miller, 2000). Critical for trustworthiness, explaining biases, dispositions, and assumptions regarding the research to be done is critical (Merriam & Tisdell, 2015). A collaborative eye on the challenges of executing differentiated instruction and its importance in teaching students conveys transparency to the reasoning behind my research. Including discussion of essential resources and support that would elevate the district’s process and plan of action for professional development would further reinforce the rationale for this research study.

Trustworthiness

Lincoln and Guba (1985) are among the first who developed a set of extensive and detailed criteria for establishing trustworthiness in qualitative research. According to their constructs, trustworthiness in narrative inquiry can be insured by the researcher including four criteria: (a) credibility, (b) transferability, (c) dependability, and (d) confirmability (Lincoln & Guba, 1985). Over time, Lincoln and Guba (1985) were able to create a correlation between validity in quantitative research and trustworthiness in qualitative research. The framework provides the following correlations: (a) credibility relates to confidence in the truth of the findings, (b) transferability supports the applicability of findings in similar contexts, (c) dependability shows consistency in findings and that they could be repeated in subsequent studies, and (d) confirmability determines the extent to which the findings of a study are shaped
by lived experiences shared by participants. In addition, open communication about the intent and objective of the study coupled with actively involving the lens of the participants including their impression and review of the research builds credibility and trustworthiness (Creswell & Miller, 2000, Merriam & Tisdell, 2015).

**Credibility**

When researchers use valid and trustworthy research protocols, the data they collect can be considered credible. Additionally, studies where the participants are encouraged to designate what of their story will be told contributes to trustworthiness (Carspecken & Saxena, 2022). Therefore, credibility in research can be established through participant assistance (Carspecken & Saxena, 2022).

When a researcher encourages participants to get involved in data analysis, the work of ensuring credibility and trustworthiness is strengthened. Encouragement for willing participants to thoroughly examine raw data and assess the plausibility of findings deepens trust (Merriam & Tisdell, 2015). When the researcher involves participants in the review of data and the summary of findings it adds credibility, as they can react to the story they helped narrate (Creswell & Miller, 2000). Providing opportunity for researchers to collaborate with participants to analyze the findings and actualize the implications increases influence and impact (Merriam & Tisdell, 2015).

Lines of questioning derived from data collected from participants previously increases the credibility of the research (Shenton, 2004). Engagement in the collection, organization and analysis of data gives participants a platform to explain their purpose and role in the research, thus creating an atmosphere of respect and loyalty. The focus of my qualitative research study is
to incorporate the full lens of the teacher, the most important aspect of any successful education experience.

**Transferability**

Qualitative findings that are specific to a small number of participants but can be applicable to other situations and populations that are similar are considered transferable (Shenton, 2004). This study was conducted in one suburban school district in a mid-Atlantic region state using only 2-4 participants for data collection. The small sample of teachers who participated in my research limits the degree to which the findings are generalizable: however, the lived experience presented in the narrative scope of this research can be transferable in several applications. Although each narrative is unique, it is still an example within a larger group and the possibility of transferability should not be dismissed (Shenton, 2004). Equally important, teachers all over experiencing similar conditions and support in the implementation of differentiated instruction as those in the study can transfer the findings for this research. Likewise, pre-service teachers and related coursework can benefit from an inclusion of study conclusions. Additionally, educational administration can consider the findings of this research study to inform professional development as well as the roles that instructional coaches and mentors play in the support of both new and experienced teachers.

**Dependability**

Dependability is strengthened when triangulation provides multiple forms of evidence and not just isolated incidents (Creswell & Miller, 2000). Triangulation is a powerful strategy for increasing trustworthiness of research and data collection and can include these three methods: interviews, observations, and documents to bolster reliability (Merriam & Tisdell, 2015). While conducting my own research, I used questionnaires, interviews, and classroom
documentation/abstracts to gather as much information as I could to understand the challenges of providing differentiated instruction as seen through the eyes of those on the frontline, teachers. As a result, investigating a myriad of sources is best practice in qualitative inquiry because researchers hunt to find convergence and reveal themes (Crewell & Miller, 2000).

**Confirmability**

Trustworthiness is fortified by including multifarious interpretations and understandings of participants. Once understandings, perceptions, beliefs, and attitudes were gathered, a thorough review of the evidence was in order. People experience the ways they have come to understand certain processes in many different ways (Merriam & Tisdell, 2015). The intention of my research is to understand how educators perceive the necessities for executing differentiated instruction as part of best practice in the regular education classroom. The researcher enhances reliability by being sensitive to the representation of participants. (Carspecken & Saxena, 2022). Providing a backdrop of teamwork and support to participants influences an atmosphere of trustworthiness, credibility and dependability while creating the restory of a teacher working to implement differentiated instruction to the students in the classroom.

**Summary**

Narrative inquiry and its supplementary support in emphasizing the voice of teachers was the focus for this chapter on methodology. Embedded in Chapter 3 was my rationale for using personal narrative to support deepened understandings of differentiated instruction. Featuring teachers and their needs for differentiated instruction is essential to the purpose of this study. In addition, I included a thorough discussion of instrumentation, analysis and procedures. Triangulation of data using a questionnaire, interviews and teacher artifacts provides a cohesive
connection for the data. Finally, an explanation of the four criteria of credibility, transferability, dependability, and confirmability and how they support trustworthiness was included.
Chapter 4: Results

The focus for this study was to examine the experiences of elementary teachers who implement differentiated instruction for students in their classrooms. Via email, 243 tenured K-5 teachers in one school district received a questionnaire. In all, 29 teachers (11.9%) with varied years of service completed the questionnaire and provided insight into their experience. Out of those 29, 3 agreed to be interviewed. By utilizing the collected data, this study aims to support elementary teachers and encourage educational leaders to construct effective professional development opportunities designed to facilitate the implementation of differentiated instruction by cultivating a deeper understanding of how teachers perceive, apply, and achieve it.

The overarching question for this study was, What is the experience of elementary teachers as they implement differentiated instruction with students in their classrooms? Three sub-questions guided this study:

1. How do teachers’ beliefs and attitudes about differentiated instruction inform their willingness to make it a priority in their pedagogical routine?
2. What resource materials and guidance do teachers report they need to provide effective differentiated instruction to meet the academic needs of learners?
3. How does professional development play a role in teachers’ self-efficacy to provide students with differentiated instruction?

There were three phases of data collection in this study. The first phase involved distributing a 26-item questionnaire (see Appendix A) to elementary teachers in the school district. This phase was followed by two rounds of 30- to 45-minute individual interviews illuminating the voices of three teachers. The initial interview (see Appendix B) allowed the researcher to gain a deep perspective from these three teachers about the intricacies and
complications associated with the implementation of differentiated instruction. The follow-up interview (see Appendix C) focused on identifying the resources and guidance necessary for effective differentiation in the classroom. Additionally, the line of questioning provided opportunities for participants to elaborate on professional development considerations. Finally, the interviewed teachers presented self-selected instructional artifacts that supported their efforts for differentiation in the classroom. The researcher enlisted the use of a self-created checklist (see Appendix D) to quantify how the artifacts were used to support differentiated instruction.

**Questionnaire Respondents’ Profiles**

To gain a perspective of the mindset of the elementary teachers in the studied district and to find teachers willing to interview, the researcher utilized a questionnaire as the initial instrument for data collection. The questionnaire was distributed to a total of 243 tenured kindergarten through fifth-grade teachers in the school district. A total of 29 (11.9%) eligible teachers completed the questionnaire. As shown in Table 1, the demographic characteristics include years of experience, additional certifications outside of elementary education, level of education completed, and grade level currently teaching.
<table>
<thead>
<tr>
<th>Respondent</th>
<th>Years of Experience</th>
<th>Additional Certifications</th>
<th>Level of Education</th>
<th>Grade Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Over 20</td>
<td>Reading Specialist</td>
<td>Master’s</td>
<td>2nd</td>
</tr>
<tr>
<td>2</td>
<td>11-20</td>
<td>Master’s + 60</td>
<td>4th</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>11-20</td>
<td>Master’s + 60</td>
<td>5th</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>11-20</td>
<td>Doctoral Degree</td>
<td>1st</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Over 20</td>
<td>Reading Specialist</td>
<td>Doctoral Degree</td>
<td>4th</td>
</tr>
<tr>
<td>6</td>
<td>Over 20</td>
<td>Early Childhood</td>
<td>Master’s + 60</td>
<td>3rd</td>
</tr>
<tr>
<td>7</td>
<td>Over 20</td>
<td>Master’s + 15</td>
<td>3rd</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>6-10</td>
<td>Master’s + 15</td>
<td>3rd</td>
<td></td>
</tr>
<tr>
<td>9</td>
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<td>Master’s</td>
<td>K</td>
<td></td>
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<td>11-20</td>
<td>Master’s</td>
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<td>4 Year Education</td>
<td>5th</td>
<td></td>
</tr>
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<td>Master’s + 45</td>
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<td></td>
</tr>
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</tr>
<tr>
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<td>Master’s + 15</td>
<td>5th</td>
<td></td>
</tr>
<tr>
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<td>Master’s + 15</td>
<td>4th</td>
<td></td>
</tr>
<tr>
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<td>11-20</td>
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<td>Reading Specialist</td>
<td>Master’s + 30</td>
<td>1st</td>
</tr>
<tr>
<td>19</td>
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<td>4 Year Education</td>
<td>5th</td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>Over 20</td>
<td>Master’s</td>
<td>5th</td>
<td></td>
</tr>
<tr>
<td>21</td>
<td>11-20</td>
<td>Master’s</td>
<td>4th</td>
<td></td>
</tr>
<tr>
<td>22</td>
<td>11-20</td>
<td>Early Childhood</td>
<td>Master’s + 45</td>
<td>4th</td>
</tr>
<tr>
<td>23</td>
<td>Over 20</td>
<td>Special Education, Reading Specialist</td>
<td>Master’s</td>
<td>3rd</td>
</tr>
<tr>
<td>24</td>
<td>6-10</td>
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<td>4th</td>
<td></td>
</tr>
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<td>1-5</td>
<td>Master’s</td>
<td>K</td>
<td></td>
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<td>Master’s</td>
<td>K</td>
<td></td>
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<td>Doctoral Degree</td>
<td>3rd</td>
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<tr>
<td>28</td>
<td>11-20</td>
<td>4 Year Education</td>
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<td>29</td>
<td>6-10</td>
<td>Master’s</td>
<td>3rd</td>
<td></td>
</tr>
</tbody>
</table>

**Note:** This table provides a snapshot of different teachers' profiles based on their years of experience, certifications, highest level of education, and the grade level they are currently teaching.
A close look at the profiles for the questionnaire respondents provides some notable findings. Of the 29 respondents, 23 had over 10 years of experience; of those 23 teachers, 10 of them had 20 years or more. This data appeared to indicate that teachers with at least a decade of teaching were more likely to respond to this questionnaire on differentiated instruction, a complex and complicated topic.

Secondly, the number of additional certifications and higher levels of education provides significant insights. Out of 29 respondents, 12 have additional certifications including reading specialist and or special education. These specialized certifications often have teachers working with students to remediate and close academic gaps which is also the benefit of differentiation. Similarly, 25 of the 29 respondents held at least a master’s degree in addition to a 4-year education degree, with 6 of those respondents elevating their education to a master’s degree + 60 credits or doctoral degree. This information indicates that higher degrees in education lead to increased understanding of the complexities of differentiation, resulting in higher teacher efficacy. Finally, it's worth noting that a majority of respondents, 23 out of 29, currently taught grades 3-5.

**Teachers’ First Thoughts and Definitions for Differentiated Instruction**

Commonly, teachers perceive differentiated instruction as effective; however, defining and describing it proves complicated (Bondie et al., 2019). As a result, differentiation, and the complexities tied to it, lend itself to varied beliefs and attitudes (Bondie et al., 2019). To illustrate teachers’ beliefs and attitudes in the studied district, there were two open-ended responses on the questionnaire. The first one requested teachers to report their first thoughts upon hearing the words, “differentiated instruction” and the other asked teachers to provide their own definition.
Teacher responses to hearing the words “differentiated instruction” offered glimpses into their thinking. Teacher remarks ranged from “a common way of teaching today” and “necessary in the classroom” to “lots of planning time” and “good for kids...a lot of work for teachers.” These reactions seem to indicate that experienced teachers have a robust understanding of differentiation and use it in their classrooms.

A second open-ended question asked respondents to share their definition for differentiated instruction. Teacher-generated definitions of differentiated instruction were varied; however, the survey elicited common words and phrases that prioritize student need as the most important driver. Definitions included: (a) tailoring instruction for individual needs, (b) planning and implementing instruction based on individual needs, (c) altering assignments to meet the needs of the child, and (d) using data to determine individual needs. The respondents perceived that determining student need and providing instruction to match is critical for differentiation.

**Teachers’ Preferred Resources and Student Information for Differentiated Instruction**

Professional development that includes consistent support with specialists as facilitators reinforces teachers’ efforts to incorporate differentiation in the classroom (Hewitt, 2012). Overall, 60% or more of respondents identified instructional coaches, professional learning communities (PLCs), building specialists and district-led professional development as the most helpful resources for supporting the implementation of differentiated instruction in the classroom (see Figure 5).

These resources all come with levels of collaboration that can positively impact the application of implementation and offer a degree of continuity in practice. PLCs meet weekly to analyze student performance, giving teachers a starting point for discussion with instructional coaches and providing interaction with colleagues. Resources that offer engagement and a
reciprocity of collaboration are the most valuable to teachers. Lastly, manuals, book studies and coursework appear to be ancillary for implementation of differentiated instruction. Less than 32% of participants reported that these resources were helpful.

This data indicates that teachers heavily rely on the support of colleagues and district leadership to actualize differentiated instruction in the classroom. Interestingly, education professionals supporting each other in the implementation of differentiation are considered to be most helpful, rather than materials. This observation revealed that teachers prioritize interactions with others over reliance on textbooks for gaining a deeper understanding of how to plan for differentiation. This interaction between educational professionals is an important implication for principals and administration planning professional development opportunities for teachers.

**Figure 5**  
*Resources Helpful in Implementation of Differentiation*

<table>
<thead>
<tr>
<th>Resource</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Instructional Coach</td>
<td>83%</td>
</tr>
<tr>
<td>PLCs</td>
<td>79%</td>
</tr>
<tr>
<td>Reading/Math Specialists</td>
<td>76%</td>
</tr>
<tr>
<td>District-led PD</td>
<td>76%</td>
</tr>
<tr>
<td>Vertical Grade Level Colleagues</td>
<td>62%</td>
</tr>
<tr>
<td>Teacher Manuals</td>
<td>31%</td>
</tr>
<tr>
<td>Book Study</td>
<td>31%</td>
</tr>
<tr>
<td>Independent Study/Class</td>
<td>28%</td>
</tr>
</tbody>
</table>

*Note: This figure establishes what resources teachers identify as most helpful in the implementation of differentiated instruction.*

Specific student information plays a crucial role in supporting teachers as they manage differentiation in their classrooms. Without data collection to enhance understanding of student needs, teachers are making assumptions about academic progress or lack thereof (Minkos & Gelbar, 2020). When it comes to collecting student information for differentiation, informal
assessments received higher ratings from most questionnaire respondents than formal assessments. Figure 6 shows that teachers assert the necessity of specific student information for planning differentiated instruction.

All respondents specified formative assessments as necessary information and 90% of teachers completing the questionnaire also considered classroom observations necessary. This could be because formative assessments and classroom observations are both informal in nature and provide a natural glimpse into understanding the academic challenges students may face. Conversely, less than 34% of respondents specified The Pennsylvania System of School Assessment (PSSA), a high stakes, formal assessment, as necessary. Likewise, report card grades, also a more formal view of student achievement, was considered essential by only 17% of participants. Notably, parental input was specified as integral by 34% of questionnaire respondents.

The data indicates that formative assessments are used more often than summative assessments to drive instruction and monitor students’ progress in the classroom. Questionnaire respondents consider high-stakes testing, report cards, and parental input, but on a much smaller scale. Using a compilation of formative and summative assessments creates a road map of student achievement and helps teachers provide instruction to match their needs. In differentiated classrooms, formative assessments are ongoing and provide a daily analysis for student readiness (Tomlinson, 2014). Teachers use today’s assessment to plan tomorrow’s lesson (Tomlinson, 2014).
Figure 6
Student Information Necessary for Planning Differentiation

Note: This figure displays the student information teachers use to plan for differentiated instruction.

Three Interview Participants

The teachers who agreed to be interviewed for this study collectively possess close to 80 years of experience, offering a wealth of expertise from which to draw as they manage the needs of the students in their classrooms. Additionally, based on answers to the questionnaire, these teachers demonstrate a deep understanding of what it means to differentiate for optimal learning in their classrooms. They are very aware that what may work today may need to be changed for tomorrow. They observe the benefits of differentiated instruction for students who struggle accessing the curriculum, as well as those who need enrichment, and are determined to support student growth regardless. Through conversations with these highly effective teachers, it became clear that the complexities of implementing differentiated instruction can take years to understand and actualize in the elementary classroom. This is a helpful concept for educators and administration to understand. Acquiring the skills to differentiate happens over a long period of time with countless attempts and many occasions of self-reflection.
Throughout their careers, the interviewed teachers have encountered a plethora of students with varied learning differences and multiple levels of understanding. Each experience with a new set of students and opportunities has added to their beliefs and attitudes regarding differentiation. They have a comprehensive awareness of the resources and guidance that best support a differentiated classroom, and subsequently, they can articulate what would benefit teachers during professional development opportunities.

In addition, educators who are able to draw from extended experience have a solid foundation on which to continue layering new understandings of differentiated instruction and the positive impacts it can have on student achievement. This study aims to clarify the implementation of differentiated instruction by highlighting the perspectives of experienced teachers who are actively sharing their insights. Included below is a summary of background information for each participant.

**Kat**

With over two decades of experience as a kindergarten teacher, Kat shared her extensive knowledge and best practices for effective classroom instruction. She possesses a wealth of information on differentiated instruction for young learners and adeptly utilizes support structures. In addition to refining her instructional techniques over the years, she continuously integrates new skills and strategies. Her repertoire for differentiation is vast, and she can quickly adapt to redirect students, as necessary. Kat's interview was the lengthiest among the three participants; we conducted two 50-minute sessions.

**Jenna**

Like Kat, Jenna has taught third grade for 25 years. She prefers to begin her day early before the building is buzzing with teachers and students so there are minimal disruptions to her
planning. Proficient in subject matter and familiar with the thought processes of 8-year-olds, Jenna utilizes differentiated instruction extensively across various contexts throughout the school day. While she relies primarily on her own abilities for differentiation within the classroom, Jenna is aware of the benefits gained from collaborating with colleagues and building specialists outside of the classroom setting.

**Theo**

Theo has over 30 years of experience teaching in the upper elementary grades. In addition to being a fourth-grade teacher, he has taught at the college level and has been involved with numerous educational research projects. He appeared to be reflective in nature and pondered deeply before answering interview questions with confidence. Theo’s love for teaching and his expertise in differentiation was evident.

**Beliefs and Attitudes about Differentiated Instruction**

Teachers' adoption of differentiated instructional practices is deeply rooted in their belief in effectiveness, surpassing even their ideology regarding the advantages (Whitley et al., 2019). Teacher efficacy directly relates to teachers' perceptions of their own capabilities in providing a differentiated learning experience for students (Goddard & Kim, 2018). There are many beliefs and attitudes about differentiated instruction, however, during the interviews with the featured teachers four themes appeared consistently: (a) teachers are flexible and creative with their approaches to supporting students in the classroom (b) teachers are crystal clear about expectations for students in the learning setting (c) when student needs are met, there is consistent growth, and finally, (d) differentiation requires that teachers effectively make a lot of decisions. The following sections answer the first sub-question for this study: How do teachers’ beliefs and attitudes about differentiated instruction inform their willingness to make it a priority
in their pedagogical routine? This sub-question had four themes that emerged: (a) teachers are flexible in their approach to teaching, (b) teachers are proactive in the classroom, (c) teachers support student growth and (d) teachers are decision makers.

**Teachers are Flexible in Their Approach to Teaching**

Teachers manifest flexibility to cope with professional change, such as more diverse student populations and responsibilities (Evers et al., 2016). Data gathered from interviews with Jenna, Theo, and Kat suggest that they possess a multi-layered understanding of differentiation that allows them to meet the varied needs of their students with flexibility. It would be difficult to create a cohesive and all-encompassing blueprint for how these three teachers incorporate flexibility to differentiate instruction for their students daily. Jenna, Kat and Theo discussed scenarios in which they use whole group, small groups, flexible groups, and one to one instruction to reach the diverse needs in their classrooms, sometimes even all in the same day. They use flexibility to meet the academic needs of students and in their collaboration with support staff.

**Grouping Students.** Theo clarified how a whole class lesson on strategies for reading expository text can morph into flexibly grouping smaller clusters of students using a gradual release responsibility model culminating in one-on-one instruction, “Generally, when I’m introducing a strategy for expository text we begin whole group and then we follow a gradual release of responsibility model…I do/we do/you do…let’s work in pairs first and then maybe work on your own” (Theo, Interview 1). This natural progression from whole group to independent practice allows Theo to use flexibility in his interactions with students through several formats multiple times to determine if additional supports are needed.
Every student moves along a continuum of support to eventually prove mastery of a reading strategy called, Fact/Question/Response (FQR) in which students use facts from the text to formulate questions they may have and finally formulate an inference. In a one-on-one reading conference with Theo he determined student mastery, “and then we also give them an opportunity to demonstrate their ability, to do FQR, through one-on-one independent reading conferences” (Theo, Interview 1). This gradual release model enables Theo to fully engage with students to determine their mastery of the FQR strategy, “You have a student who’s a striving reader and somebody who's a strong reader that just isn't creating those ‘I wonder’ questions or connecting fact and question together to create an inference which is really the art of the response” (Theo, Interview 1). It is then necessary to flexibly group those students together, even though they read on different levels, to assist in that specific reading strategy. This type of grouping depends on the formative assessments that Theo used to understand the learners in his class. Based on their mastery of a particular reading strategy, he may decide to group them by mastery of the skill and not the reading level.

Theo quantified this level of support as flexible grouping because it is skill based and not level based, “So then pulling those kids of different readiness levels back for a second shot of instruction with FQR is how the flexible groups work” (Theo, Interview 1). In this fashion, Theo made the quick decision to pull students of different reading levels for a double dose of instruction designed to master a specific skill and not to increase reading level. Through Theo's progression of instruction, from whole group to one-on-one, he can determine if a pivot in the way students were originally grouped for instruction may be necessary by creating skill-based groups rather than leveled groups. Theo’s pivoting provided an example of his flexibility in instructional design.
Flexibility is essential when using formative assessment and classroom observation to determine student needs. Jenna described how this process can look for a math concept, but she noted that sometimes there is a different solution for reaching the needs of her students. Like Theo for the reading strategy, she started with a whole group lesson in math, and depending on the levels of understanding, she pulled small groups to solidify mastery, “For math, I teach everything whole group, and I give everybody the same something; I look at how they did on that, and then I put them into groups from there” (Jenna Interview 1). When some of her students still found the concept challenging, she made note of it so that she could circle back for a second attempt, “I keep a little Post-it note of kids who haven't gotten something still” (Jenna Interview 1). If, after a formative assessment a few days later, more clarification is needed, Jenna contacts the parents to share any looming misconceptions. “There are times when I'll inform the parents that they [children] haven't mastered the concept and I will provide a grade later on, or something like that. I refuse to give them a grade until they've learned it” (Jenna Interview 1). This is perceived as best practice because it puts the emphasis on mastery learning and not grading procedures.

Aides for Intervention. In kindergarten, grouping is easier to navigate, specifically because there is a teacher aide to reinforce student practice; however, student progress is still the objective. Kat expressed that she wants her students to be successful in accessing the curriculum (Kat Interview 1). In order to provide access, she enlisted support staff, such as teachers’ aides, building specialists and the instructional coach, to help reach the unique learning differences in her classroom (Kat Interview 1). Kat explained that she prioritized the errors that the learners in her classroom were making and designated the two or three who need the most support for forming letters and the aide took them for a brief practice session in the hallway, “Sometimes it
[this practice] is using a whiteboard and marker, sometimes crayons or pencils on paper and sometimes it is a sand tray, but the goal is the same. They practice writing their names over and over” (Kat Interview 1). Similar to Jenna and Theo, Kat showed flexibility in her approach to addressing the needs of her students based on formative assessments. The use of teachers’ aides and other support staff will be further discussed in the Guidance and Resources section.

During the interviews conducted in the classrooms of these three teachers, it became evident that their classroom communities were distinctly organized for various forms of instruction. All three teachers had a kidney table to pull students for small groups, they all had carpets for students to sit on in front of the smartboards for whole-group instruction, and each teacher had a student desk right next to their desk to use for one-on-one instruction or conferencing. Although there were no signs designating these spaces for specific activities, the space was clearly utilized for a variety of grouping structures. Jenna, Theo, and Kat employed available resources flexibly, including aides and parents, to differentiate instruction for each student.

*Teachers are Proactive in the Classroom*

Proactively building positive relationships with students sets the stage for learning to occur (Downing et al., 2005). Kat, Jenna, and Theo are three teachers who run differentiated classrooms centered around a management style that is proactive to minimize undesirable behavior in the classroom learning environment. They provide parameters and non-negotiable expectations for students that support positive learning environments. From their interviews, there is evidence that they start at the beginning of the year establishing clear expectations proactively. Theo, Kat, and Jenna can then concentrate on facilitating student learning rather than managing unfavorable behavior in their classrooms. When their students understand what their
role is and the expectations these teachers have for them, staying focused on their learning becomes their objective.

**Student Expectations.** In being proactive, educators provide clear and easily understandable expectations for students, ensuring they can comply with them without difficulty. In Jenna’s classroom, students are expected to show their thinking while completing computations in math. “I insist on them showing me work, even if they did it on an erasable whiteboard” (Jenna Interview 2). She explained how the expectation of showing work supports her differentiation process, “I must see the origin of the mistake. That's all. Then I know where I need to focus my instruction to support a student’s learning” (Jenna Interview 2). Jenna proactively set the expectation for students showing their work and then she can follow through with interventions based on student mastery. Jenna clarified that her decisions for instruction can be dependent on the class work of each student. Using this quick and efficient informal assessment eliminates the guesswork about what misunderstandings a student may have about a specific skill or strategy, and it allows corrective measures to be productive and effective.

Requiring proof of thinking enables educators to provide follow-up differentiation. Also, this type of formative assessment supports questionnaire data relating to the student information necessary for planning differentiated instruction.

When students understand the teacher’s expectations for classroom operations, it provides boundaries for learners. Theo demonstrated how he proactively managed these expectations at the very beginning of the year by explaining, “You've got to set the tone for the class at the beginning of the year. When you set the parameters early and kids know what the expectations are, you make them crystal clear; your classroom runs relatively smoothly” (Theo,
Interview 1). A classroom that runs smoothly is one where teachers can concentrate on helping students learn rather than managing unfavorable behaviors.

Expectations for students can also be outlined in classwork opportunities as shown in Figure 7. This is an example of a learning contract that Theo designed for his students. He used this for an English Language Arts project to engage his students and support a self-directed learning experience. Included in the contract are many opportunities for his students to be engaged and guide their own learning using a high interest topic such as football and the National Football League (NFL). Upon comparison to the Differentiated Checklist (See Appendix D) there are several characteristics of differentiation included in this learning contract designed by Theo.

Theo used this project to gain a sense of students' understanding for an essential math standard, graphing, however, also included are numerous tasks to engage learners and give them opportunities to share their mathematical knowledge and thinking, either background or newly acquired, with football as the commonality. Theo mentioned during interviews that the boys in his class were very interested in football, specifically the Philadelphia Eagles, thus the reason he designed this contract to include the team as the focus (Theo, Interview 1).

There are many chances for students to demonstrate understanding that are also included on the Differentiated Checklist. Theo gives them choices that include independent research, use of student selected supplemental resources, and multiple texts. The initial tasks include demonstrating understanding of key math learning targets such as stem and leaf plots and a creation of a map with a corresponding legend. Additionally, there are components of the contract asking for summarization of video and article media. At the same time, students are able
to work on research skills and persuasive writing skills which are also learning targets for this grade level.

Theo provided multiple ways for students to present their learning and determine due date timelines. Theo requested that these considerations be discussed between student and teacher. Moreover, there is a degree of importance emphasized by the inclusion of signatures required from students, their parent(s), and the teacher. The addition of this feature helps students and parents understand the magnitude of the contract and the accountability students hold for setting academic goals and completing the work.

Finally, through the submission of the finished products, Theo has many options for monitoring student progress, effort, and understanding. Given that students are driving the learning with continued check-ins, Theo is provided with multiple opportunities to guide anyone needing support along the way. This is an example of a multi-faceted learning possibility designed to support students in need of extension, as well as interventions because of the many levels of engagement it includes.
**CROSS-CURRICULAR CONTRACT: FOOTBALL**

1. Create a stem and leaf plot for points scored by teams in the NFC vs. teams in the AFC.

2. Examine the quarterback ratings for three starting quarterbacks from last week’s games. Record the name of the quarterback and his QB Rating. How is this determined? Is there a specific mathematical formula or a combination of formulas used to determine this? Explain.

3. Create a line plot for the number of wins for each of the teams in the NFL.

4. Create a football card for an NFL Player. Make sure to include important statistics on the back of the card.

5. List three scenarios when you would have your team use a two point conversion after scoring a touchdown.

6. Create a map with a legend for the area around Lincoln Financial Field.

7. Write a new law to protect quarterbacks from “late hits.”

8. Listen to Nick Sirianni’s press conference after a game. Summarize the contents.

9. Read a sports article (source of the article to be approved by Mr. Smith) about football. What is the writer’s point of view? Who’s point of view may differ from this and how may it differ?

10. Research an occupation with the Philadelphia EAGLES Organization. Describe the job and explain how that person may use math in his/her job.

   **Student’s Signature**

   **Parent’s Signature**

   **Teacher’s Signature**

   **Due date to be determined based on mutual consideration of the student, along with Mr. Smith.**

**Note:** This figure represents a learning contract designed to support varied educational preferences for students in a differentiated learning environment.
**Class Expectations.** In Kat’s kindergarten classroom, being proactive meant integrating a classroom community approach. Kat enlisted her students to remind their classmates of her expectations. Kat shared how students learned to understand her expectations of kindergarten coloring by helping each other, “When students finish an activity, they have to share with somebody at their table, and they are responsible for reminding each other what kindergarten coloring means.” Kat reinforced her thinking by recalling for students the right questions to ask each other to provoke reflection on their work, “There are expectations because you can't just have a person floating. What is he standing on? Something so they have to think… did I meet the expectations? (Kat Interview 1). Insisting that students meet expectations for coloring is essential, Kat clarified, “This supports student understanding of print and that letters are formed with deliberate marks and deliberate formation (Kat Interview 1). Kat was able to proactively set expectations for her classroom community and relied on her students to support her efforts as they followed her request for kindergarten coloring. Even if she was busy working with another group of students, she could rely on other students to hold each other accountable for the classroom expectations she had already set.

Figure 8 is an example of an academic modification that supports Kat’s expectations for letter forming that all students in Kat’s kindergarten class are given. It is a strip that is laminated and placed on each child’s desk for reference. Kat encouraged her students to use it whenever they are completing a writing activity. Her expectation is that students will use this to help them form letters, spell words, and learn color names.

The letters are coupled with key words which are pictures of objects that begin with the letter, and finally sound. The letter cards teach and reinforce the alphabetic principle by connecting the letters to the sound resulting in letter to sound correspondence. When students
learn to write their names and use inventive spelling, Kat expected that they would use this letter chart as a guide, just as she has taught them to during phonics-based lessons. This modification gives students a resource, other than their teacher, when completing writing tasks in the classroom.

As it relates to the Differentiated Instruction Checklist (see Appendix D), it provides scaffolded or tiered support and graphic representation to reinforce the direct instruction provided by the teacher. Kat included these letter strips in each of her writing stations and centers in the classroom. Students always have access to it to support their classwork. In this way, the expectation for forming letters correctly that Kat insists upon is evident.

Figure 8  
Letter Strip

Note: This figure is an example of a modification used for the entire class to enforce proper letter formation.

Expectations are critical for proactively helping students understand who they are as learners and how they fit into the classroom community. Jenna, Kat, and Theo found ways to support a positive classroom community by insisting on certain expectations. Differentiated classrooms are designed with specific student expectations in mind. They can be related to behavior, connections with peers, or completing work. Jenna, Theo, and Kat anticipated that students would learn and grow academically in their classrooms by proactively setting expectations for students.
Teachers Support Student Growth

Teachers who differentiate instruction often make the connection that the intention is to support students’ academic success. Differentiation does not mean only meeting the needs of struggling learners but also those learners who excel. Additionally, differentiation is not only about success in academics, but also about identifying and mitigating social emotional factors that may be interfering with success in academics. Kat, Jenna, and Theo supported students with those social emotional factors that are unrelated to academics but could interfere with learning.

Social Emotional Well Being. A student who is hungry or dealing with uncomfortable emotions often needs that addressed before substantial learning can take place. Children who are focused on social emotional factors are unlikely to be able to focus on learning at the same time. Theo, Jenna, and Kat often found ways to discover what specific challenges students had and determined a hierarchy to prioritize them. Jenna framed the thinking around determining why a student could not acquire a skill in this way, “Are they not getting it because they don't understand, or they didn't have breakfast, or they had a fight with somebody? I try to think where their head is when they’re not getting something I am trying to teach” (Jenna Interview 2). This is an example of how Jenna considered social-emotional concerns that could interfere with a student’s academic learning and cause a disconnect to her efforts to support acquisition of a skill. She expressed that those social emotional needs may need to be met first before applying instruction to facilitate student growth.

Intervention/Enrichment. Jenna, Kat, and Theo have found ways to manage students struggling with a skill, but they have also found ways to support the student who is exceeding academic expectations and could benefit from enrichment. They have concentrated on differentiating for all students, including those working above grade level and have found
creative ways to extend student learning, too. Theo described how he introduced an activity to meet the varied levels of understanding for decimals:

“We're going to use playing cards to compare decimals in the tenths and hundredths, but if we want to bump this up a notch, we can add a column for thousandths and could even add two columns for whole numbers as well. Whatever you feel comfortable” (Theo, Interview 1).

This is an example of how Theo utilized a basic activity appropriate for both struggling learners and exceeding learners. Theo was committed to reaching both ends of the learning spectrum with one activity.

Figure 9 is also an example of Theo attempting to meet the varied needs of students, but with a focus on an understanding of fractions. This activity example portrays an effort to address the students who show a deep understanding of the required learning targets and need an extension of thinking. Theo engaged higher levels of understanding by providing more difficult and challenging problems for students to try. Just as Theo included varied degrees of reasoning with decimals, he accomplishes the same task with fractions.

A look at this assignment through the Differentiated Instruction Checklist (see Appendix D) shows that several characteristics of differentiation are included. It is a tiered activity due to its level of difficulty and an alternative assignment choice for a student who may need a challenge. It could be used for groups of students or learning teams with similar needs. Simultaneously, it might work to support scaffolded thinking amongst students who would benefit from a teacher modeling the thinking necessary to be able to solve challenging problems. Also, students could use it for independent work while other students are given additional instruction on the required standards for fractions. Theo encouraged his students to move along
the academic continuum by providing opportunities such as these to keep students engaged, and also working with students excelling to incorporate practice in critical thinking skills.

**Figure 9**
*Fractions Challenge Problems*

<table>
<thead>
<tr>
<th>Fractions Challenge Problems</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Of the 36 students in Dr. Duskin’s class, 2/3 are girls and 5/6 of the class passes the last Math Test. The same number of boys and girls didn't pass the test. How many boys passed the test?</td>
</tr>
<tr>
<td>2. Mrs. Harper invests an amount of money in such a way that if the stock goes up for 6 months, then she doubles her money. However, if it goes down for 1 month, she loses 2/3 of it. Here is the scenario as it unfolded: It went up for 6 months, then down one month, and down a second month before it went up for 6 months, down 1 month, and then finally up for the last 6 months. What fractional part of Mrs. Harper’s money is remaining?</td>
</tr>
<tr>
<td>3. The mile run is one of the most popular events in track and field (you will actually be practicing for the mile run in Phys Ed. Class later this year in preparation for the 4th and 5th grade track meet). A mile is equal to 1,760 yards. In the Olympics, the distances are in meters and the nearest distance to the mile is the 1,500 meter event. One meter equals approximately 1 yard + 1/12 of a yard + 1/100 of a yard. Using this as an exact measure, then how many more yards is a mile than 1,500 meters?</td>
</tr>
</tbody>
</table>

*Note:* This figure is an example of an assignment used to challenge students who have shown a need for more challenging content to expand their understanding of fractions.

**Occupational Support.** Kat revealed that kindergarten teachers often manage student growth related to occupational needs such as handwriting. She spent much of her time in the beginning of the school year providing support for students who showed difficulty using writing tools (Kat Interview 2). For the youngest students, this deficit can be an obstacle to forming
letters correctly or determining their dominant hand. Kat explained, “I differentiate even with handwriting” (Kat Interview 2). Kat helped determine ways to support a student’s growth by applying interventions for choosing a dominant hand to write with. In her classroom, students have done what she referred to as “belly writing” in which they lay on the floor with clipboards, pencils, and paper to write sentences. She shared her experience with one child who had not chosen his dominant writing hand, “he would switch his pencil between hands and there's something called the midline. You're not supposed to do that. That means his left and right brain aren't working together” (Kat Interview 2). By applying this harmless intervention, Kat steered the child to his dominant hand and then worked on practice to formulate his letters. What Kat has described is occupational therapy support, and although not academic in nature, it does require a differentiated approach. Like Jenna making efforts to understand social emotional needs before addressing academic needs, Kat determined that choosing a dominant hand should be addressed prior to learning to formulate letters. They both were able to determine interventions needed in chronological steps to facilitate student academic success.

Identifying the diverse needs of students requires time and patience on the part of the teacher, especially for a skill that may not be formally assessed. Jenna, Kat, and Theo differentiate instruction to help students feel supported in their learning journeys. Assessing academic needs is part of their work, but additionally these teachers considered what needs were not being met that could possibly create obstacles for academic success and made finding ways to manage those needs a priority too.

_Teachers are Decision Makers_

Teachers often make decisions about how best to support student achievement. Each day can provide situations where teachers must consider what to do next to provide the best
interventions for their students. Theo, Jenna, and Kat make decisions about interventions, how to group students, and what course of action may be needed to meet their specific needs.

Decisions, Decisions, Decisions. Kat expressed that decision making about what is best for her students begins the minute she arrives at school and continues until the last minute of her workday (Kat Interview 1). She noted that she is determined to support the needs of her students by making decisions continually. Specifically, she explained that there are no breaks for a kindergarten teacher, “Well, it's non-stop” (Kat Interview 1). Because there are twenty students dependent on her all at the same time for a myriad of reasons, she has made decisions one after the other, often with little time between each.

As a result, Kat is often watching her students to make sure that each moment they have what they need to be efficient learners. Some students need a hula hoop around them as they sit on the rug to control their fidgeting while others need a squish ball to keep their hands out of their mouths (Kat Interview 1). Kat considered herself a “card shark” in these moments, “I call it being a card shark. It's like, this is your card. This is your card. This is your card. So, it's multitasking 24/7 with kindergarten, it really is” (Kat Interview 1). A card shark must remain focused during long card games and wait for the right moments to make their moves; in the same way, this kindergarten teacher needs patience, focus and quick thinking to manage a classroom of 20 energetic young children.

Doubting Decisions. Kat provided supports to students as they arose in the classroom and demonstrated multi-tasking during instructional time. She articulated that she made decisions to support a safe classroom community with a focus on learning. Students with occupational needs may find traditional classrooms challenging. It is often difficult for students to concentrate when they are distracted by themselves or other students. Kat acknowledged that students who
are distracted in the classroom may not be experiencing optimal learning, “It is challenging sometimes because they should be doing some multi-sensory things non-stop to help them focus” (Kat Interview 2). And even when Kat had made decisions and put supports in motion, she second guessed herself. She explained how that feels, “you always question yourself. Oh my God. Is this the right environment for him? So, you do question yourself for things like that,” (Kat Interview 2). Her self-reflection included wondering if she is sufficiently supporting students with diagnosed learning differences, “Kids who have ADHD, I mean, you always know there's too much stimuli. OK, maybe how can I bring it down, I mean. It's. Yeah. I mean, there's a lot to think about” (Kat, Interview 2). The perceived feeling of doubt and thinking she is not making the right decisions to support her students is difficult, but she realized that considering their best interest is always part of her decision-making process, “You always want to make sure you're doing it [making the right decision], but you can't do it all. You just try your best. It's hard.” (Kat Interview 2). Sometimes teachers’ decisions are based on preparedness and supplying a quick remedy for the good of the group. Distracted students can cause the rest of the class to become distracted because they need interventions to stay on task. Oftentimes those interventions involve the teacher stopping her teaching to address the distracted child and supporting their return to the task.

Sometimes a behavior modification chart is determined by educational staff to be an effective way to manage undesirable classroom conduct. Figure 10 is an example of a check in and check out behavior modification for one of Kat’s kindergarten students. It is broken into the different parts of the day and the student can earn points for desirable behaviors relating to safety, respect and responsibility. The goal of eight out of twelve total points is clearly stated, as is the reward for meeting the objective. Kat created the reward with the interests of the child in
mind and art with a choice of medium is what this particular student sees as valuable (Kat Interview 2).

In relation to the Differentiated Instruction Checklist (see Appendix D), this behavior modification chart included goal setting, checking in and checking out, and teacher feedback. Additionally, daily parent signatures are required to include them in this intervention and to keep them aware of progress toward the goal.

Figure 10

Daily Check In Check Out

<table>
<thead>
<tr>
<th>Goals</th>
<th>Morning</th>
<th>Specials</th>
<th>Afternoon</th>
</tr>
</thead>
<tbody>
<tr>
<td>Safety: Did I keep my hands and feet to myself with less than three reminders?</td>
<td>0 1 2</td>
<td>0 1 2</td>
<td>0 1 2</td>
</tr>
<tr>
<td>Respect and Responsibility: Did I participate during rug activities with less than three reminders? During poetry and Heggarty lessons</td>
<td>0 1 2</td>
<td>0 1 2</td>
<td>0 1 2</td>
</tr>
<tr>
<td>Staff Member Initials Parent initials at the end of the week.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Reward is extra ART TIME with different materials of his choosing for the week.

Note: This figure is an example of a differentiated behavior modification plan that supports the student during various times of the school day in providing expectations and a point system for earning a specially designed reward.

**New Class New Decisions.** Teachers often exercise ongoing reflection and a willingness to try new things to find what works best to meet student needs and use that as a basis for their decision making. Elementary teachers usually have a group of students for one school year before the students move on to the next grade level. Theo discussed how adding in new ideas for
teaching and learning really depends on the group of new students coming in each year, “Every year there's always something new. That does not mean I'm replacing stuff that's really good. It really depends on the kids you have in front of you. Each class is different” (Theo, Interview 1). Theo decided what teaching resources he would use based on the students in his class.

Resource Management. Theo also made decisions about what assessments would be used for grades in his grade book. He revealed why every assessment is not counted as a grade, “Formative assessments…if your kids are on target, we don't count all of them in the grade book” (Theo, Interview 1). When students can prove they have mastered a concept on a formative assessment, the teacher has received the information needed to move on and a grade for that assignment may not be necessary. Several examples have been provided showing how these teachers have relied on formative assessments being used to drive their decision making and subsequent instruction.

Matching materials to students is a skill teachers who differentiate try to learn. There are situations when the decision may become about the way a program addresses the student thinking necessary to acquire a certain skill or strategy. Jenna spoke of a newer math program versus an older one that the district uses and the decisions she has made about which one best supports her student’s learning, “They may need something a little bit more broken down. I'll go back to an old textbook that was more algorithm based and if that doesn't work, I find something in another old program that breaks it down really nicely” (Jenna Interview 1). Her perception about knowing what resources would best meet the needs of her students is apparent.

Subsequently, she spoke candidly about making the decisions to save older resources, “I'm glad I have held on to all of the math programs we have used. I just try to decide which one makes the most sense for them [students] based on their learning needs” (Jenna Interview 1). Jenna
recognized that in some cases those higher-level thinking skills are difficult to access because students may also need time to master the basics, “Some of them are not ready for critical thinking but need to acquire basic computation skills” (Jenna Interview 1). Jenna has made conclusions regarding the supports that are necessary for her students to acquire math computational skills. Decision making can be related to many aspects of teaching, but the examples that were presented in the data support that Jenna, Theo, and Kat made decisions based on student growth and achievement.

Jenna, Theo, and Kat have navigated through unique situations and draw from their own experience to make academic decisions for the students in their classrooms. It is evident that these differentiators are flexible, supportive, proactive and reflective decision makers while managing student learning differences.

**Guidance and Resources with Differentiated Instruction**

Specific guidance and resources can be the catalyst for teachers considering a differentiated learning environment. Opportunities for practice that is ongoing and scaffolded elevates the success of implementation (Smets, 2017). Building specialists and colleagues modeling the intricacies of differentiated instruction is one way to engage teachers in the understanding of effective implementation (Smith & Gillespie, 2023). Professional development opportunities, district-led or teacher driven, that focus on how to put differentiated instruction into practice with opportunities for collaboration with colleagues reap the most benefit for teachers and students alike (Nicolae, 2014). Educators seek guidance and resources for making differentiation a daily pedagogical experience for students.

The narratives for the three teachers featured in this study share the following understandings regarding ways of embedding guidance and resources when implementing
differentiated instruction: (a) effectively use building supports for instruction, (b) incorporation of collaboration with building specialists and colleagues, (c) expect effective leadership, and (d) dedicated time to learn. The teacher narratives presented in this study outline some ways they incorporate guidance from building staff and resources at their disposal. The following sections answer the second sub-question for this study: What resource materials and guidance do teachers report they need to provide effective differentiated instruction to meet the academic needs of learners? This sub-question had three themes that emerged: (a) teachers utilize building supports, (b) teachers collaborate with building colleagues, (c) teachers value strong leadership and (d) teachers want time.

**Teachers Utilize Building Supports**

Building support staff including building specialists, instructional coaches and teachers’ aides can be very instrumental in increasing the effectiveness of a differentiated learning environment. They can offer push-in support and take a small group of students to practice a skill. Similarly, they can pull students out of the classroom to provide interventions for learners who need an extra push to acquire new understandings for specific learning targets.

**Instructional Coaches.** Theo discussed his partnership during writer’s workshop, the portion of the literacy block dedicated to writing, with his instructional coach, “I have the instructional coach come into my classroom for writing workshop” (Theo, Interview 1). Theo and the instructional coach can work in tandem to support students during instructional time. The instructional coach is a welcome and consistent support that he can count on to help him reach the diverse writing needs for his students. He also shared his disbelief of why teachers do not utilize her support more, “And I say to her every year that I don’t understand why teachers don’t take advantage of her. I don't understand it” (Theo, Interview 1). He shared his perception of
what may keep a teacher from utilizing this valuable resource, “Everybody has flaws. I think people don't want other people to see their flaws” (Theo, Interview 1). Theo shared how he is not worried about others seeing his shortcomings and the help he received is more important, “My flaws, they're here. Whatever. Now, come on. Listen, I'll take any extra help I can get!” (Theo, Interview 1). Theo’s experience and comfortability in inviting a colleague to his classroom to add value to the writing workshop is one way his students may benefit from this added support. Theo demonstrated through his partnership with the instructional coach, that the support he has received from her pushing into his writers’ workshop is valuable.

Likewise, Kat reviewed how a math coach supported her. Her school utilizes an intervention system called Multi-Tiered System of Supports (MTSS) to pull data for a student that a teacher is concerned about due to lack of progress and to determine what supports, if any, are appropriate to aid in academic success. The support system is handled by a case manager who helps the classroom teacher write a goal for the student and then monitors the goal for progress. Kat felt it was necessary to acquire information about the capability of one of her students prior to meeting with the MTSS team about the acquisition of a math skill, “Our math coach comes in on Wednesdays and I just do centers so she can get a feel too. Then when I bring them [students] up for MTSS she knows why and that way we can start setting some smaller goals” (Kat, Interview 2). By offering an opportunity for the math coach to observe the student and collect data with formative assessments and classroom observations prior to a meeting, Kat has ensured that a valuable and efficient conversation regarding the need for specific programming is the starting point for the MTSS team. With the amount of experience Kat has and knowing how the MTSS system operates, she is able to consolidate efforts and report on
aspects of the learner’s challenges with a second opinion from the coach so valuable time that can be used to support the student is not wasted.

**Equitable Support.** Jenna discussed the necessity of providing math interventionists similar to reading specialists, “More than one math support person would be great. I think. I don’t know why math isn't as much of a priority as reading (Jenna, Interview 2)”. Recognizing that math instruction, like reading instruction, is an important part of educating a child and often builds on previous skills to master new ones, not having that extra support and expertise in closing gaps is seen as missed opportunity by Jenna.

**Grade Level Colleagues.** Building specialists are valuable in meeting the needs of students, but so are grade level partners. Jenna went on to explain how her grade level team supports each other and student learning in creative ways. She provided clarification for the situation, “One of the third-grade teachers is having trouble with one girl who refuses to write. For her, she won't write anything.” (Jenna Interview 1). This is an unfortunate situation because teachers know that they are responsible for engaging students in academic tasks; however, there are times when students are unable to comply with requests for work and managing that can be difficult. Jenna shares how she supported her grade partner, as well as the student, by offering a change in writing environment, “She will come down to my room maybe just for a different environment” (Jenna Interview 1). Jenna explained the reasoning behind this solution, “You know, we just want the kids to succeed” (Jenna Interview 1). It is about helping a student to be successful. She explained that this is an intervention that can easily be applied with little to no impact on the schedule, “And so if we're all doing the same thing already, even if it's like a day or two apart, they're not going to be missing anything if they're in a different classroom doing the same thing” (Jenna, Interview 1). The objective of facilitating student success was important to
Jenna, and she thought about ways to provide student support that was not necessarily the way things have always been done. Jenna stepped in to support her grade level partner because she could.

*Teachers Collaborate with Building Colleagues*

Collaboration to promote understanding about how to implement differentiation is beneficial for teachers. Educators enhance pedagogical understanding and abilities through collaborative activities integrated into their workday. (Nguyen and Ng, 2020). Building specialists often facilitate collaboration with colleagues to support students in achieving their educational objectives (Rojo-Ramos et al., 2021).

**PLC Meetings.** Teachers who use PLCs to discuss student achievement are more likely to be effective in addressing the needs of students because they use this time to listen to the ideas of grade level partners and work towards a common objective. Theo talked about the effectiveness of PLCs, but only if they are utilized, “Teachers can collaborate through an effectively run PLC. They really can. But in order for that to happen, people have to kind of let go of their pride” (Theo, Interview 2). Full disclosure of data and student progress can be uncomfortable for some teachers, especially if there is evidence of little growth. At the same time, the discussions that ensue between grade level colleagues during PLCs is where a change in instructional approach could originate culminating in student progress. Theo shared that the collaboration between teachers during a PLC meeting is effective; however, vulnerability is sometimes just a part of the process. Theo’s discussion of the benefits of PLCs provided clarity about their perceived value.

**Grade Level Team Meetings.** Grade level team meetings, unlike PLCs, are not always about student progress, yet they are perceived by teachers as valuable for collaboration, planning,
and the management of clerical chores. Jenna talked about how her team supported each other by each member completing tasks to save time for the others. “We support each other very well by…I mean we lessen each other's loads a lot” (Jenna, Interview 1). Teams that divide the daily tasks that teachers handle, such as copying, gain time to spend on instructional planning and differentiation. This one characteristic of grade level collaboration can impact teachers and students by prioritizing efforts to meet students' needs.

**Teachers Observing Teachers.** Kat shared that running an open-door policy in her classroom for colleagues to come and observe differentiation in action, provided opportunities for teachers to help each other through the complexities (Kat Interview 2). She considered how teachers connecting with other teachers to facilitate a collective understanding of differentiated instruction can be either encouraged or discouraged depending on the culture of the building, “If you need help, I'm thinking, yeah… come see me. Can I come to see you? And I think that's the level of comfort some teachers don't have. And why is that? Is it the building? Is it you?” (Kat, Interview 2). When teachers share capabilities for constructing a differentiated learning environment and are inclined to let colleagues experience that learning firsthand, there can be an exchange of ideas on how to differentiate. That collaboration is often vital for growth because it facilitates learning for teachers. When teachers can enhance their practice, it often benefits students.

**District Level Meetings.** District level meetings support teacher growth and provide a larger forum for teachers to have an exchange of ideas with teachers in other buildings who are often managing the same instructional initiatives. Kat valued collaboration and provided insight on how educational leaders can support teamwork and facilitate those connections with district grade level meetings, “Well, I think we need more time to collaborate. I think that would build
support for us in the district” (Kat Interview 2). She continued explaining how for her, peer to peer collaboration is functional and enjoyable, “I mean, sometimes you're more likely to ask for help when you're with your peers. I mean, we used to love doing that like, ‘Hey, we have one meeting at another kindergarten room. Let's all meet there” (Kat Interview 2). Kat elaborated on how one building level team meeting could morph into a meeting of all district kindergarten teachers monthly as it used to be done, “Let's go meet at this school one month.’ I remember we did like monthly meetings, and you'd go after school” (Kat Interview 2). What Kat has shared is a willingness that teachers have for supporting each other and providing valuable collaboration time during district level meetings.

**Collaboration for Differentiation.** Regardless of the quantity of and timing of meetings, Kat discussed the value it held for her personal learning and idea gathering, “But I think I learned more from going to different people's classrooms too, like how they set up or oh, I like that idea. And, well, how do you do that for handwriting?” (Kat Interview 2). Kat named this type of teacher-to-teacher support appropriately, “I think that's collaboration for differentiation” (Kat, Interview 2). Collaboration for differentiation emphasizes a collective responsibility among educators to create supportive learning environments where every student can achieve. Educational leaders are in a unique position to not only support but encourage teachers to observe other teachers and to create an atmosphere where that practice is normalized. Likewise, fostering a relationship between grade level colleagues by facilitating opportunities for them to collaborate before, during and after the school day would be helpful. It could send a message that district expectations include “collaboration for differentiation.”
**Teachers Value Strong Leadership**

Effective educational leadership can take many forms, but sometimes it begins with principals and their awareness of what is happening in their buildings and what supports may be needed for their teachers. Principals who are interested in building culture, have empathy for the demands teachers face, and can direct teachers to make decisions about their own learning are perceived as serving their educational community well.

**Survey or Not to Survey.** Theo shared that the culture in each school often determines the mindset for teacher facilitated learning (Theo Interview 2). He felt that an effective move for principals is to differentiate for teachers much like teachers differentiate for students (Theo Interview 2). He suggested one way to do that would be to use a survey. “Knowing the needs in their building. Right. Or knowing the needs of the teachers in their building or putting out a survey” (Theo Interview 2). As he made the suggestion however, he thought about the validity of a survey, “Sometimes people aren't really honest though in a survey. They're going to put what they think you want to hear, or you're just going to put something down for the sake of putting it down” (Theo Interview 2). Theo went on to explain that building culture played an integral part in highlighting what teachers need, “But you know, I think it all starts with the culture in your own building, and we all know, you know, each building has a different culture” (Theo, Interview 2). Surveys can be effective if the responses given are based on truth and honesty. If the survey answers do not convey the respondent's feelings, then those responses can be perceived as invalid. The building culture is perceived to be at the core of honest survey completion. If teachers can trust that what they respond with in the survey will be seriously considered by administration, they are more likely to answer with honesty.
**Principal as Leader.** Theo, Kat, and Jenna share a commonality in their perception of a principal having a dedicated role to support a positive culture for teacher learning in their buildings. A principal that facilitates improvement in pedagogical practice to meet the academic needs of students is most likely admired by their staff, especially if the practices are practical and attainable. Kat supported principal involvement contingent on their knowledge of the building, “I think we value principals who know what teachers go through” (Kat, Interview 2).

**Teacher Autonomy.** Effective principals also facilitate leadership among teachers. The principal plays a role in giving teachers autonomy in determining what they would like to focus on. Theo suggested surveys, but Jenna discussed the sponsorship of a building-based book study. “Our principal set up building-based professional development and we [teachers] got to guide it and we [teachers] did the book studies and she bought the books for us and all the mentor texts. That really helped a lot” (Jenna, Interview 2). When teachers are trusted by administration to manage their own learning, the stronger ones often rise to leader status. They often speak for the group because they have been recognized by colleagues as advocates for the staff. Principals could use teacher leaders to their benefit to support differentiation and student achievement.

**Teachers Want Time**

Teachers rely on time allocated to effectively manage their responsibilities and cultivate an enriching learning environment. They strive to deepen their understanding of individual students, recognizing the importance of individualized approaches to education. This often requires time for observation, reflection, and adaptation. Furthermore, educators work to strengthen their self-efficacy in implementing differentiated instruction techniques, catering to diverse student needs, and maximizing learning outcomes. Attempts to do this demand dedicated time for professional development, collaboration, and self-reflection.
**Time to Collaborate.** Time to collaborate with grade level colleagues is valuable. Kat clarified, “Give us time. Professional development is collaboration. We don't have that anymore. We don't get a day where all the kindergarten teachers can go and meet, you know?”, (Kat, Interview 2). Kat expressed that having time to collaborate with teachers facing some of the same issues is valuable because there can often be an exchange of ideas, strategies, and support for each other. Teachers who can spend dedicated time sharing ideas and strategies for supporting student achievement build their capacity for making effectual changes in their instructional practices.

**Time to Work with Students.** Teachers want time to meet the needs of students more efficiently. A challenging schedule for an elementary school teacher leaves little time to provide extra help to students who may need it. Jenna explained, “You can't take their recess and as an elementary teacher you're teaching something all day long. It's not like you have a free period where they can come in and you can give them some extra help”, (Jenna, Interview 2). It is somewhat difficult to provide extra help for students outside of content time because students are just as busy as teachers during their school day. When students are not with their teacher, they may be either in a unified arts special, at lunch or recess, or with a specialist/therapist as designated by their Individual Education Plan (IEP). The extent to which teachers can offer extra support for students is determined by the time remaining, which is often sparse. This can be problematic for teachers trying to find creative ways to meet with students to close academic gaps. That leaves before or after the school day for teachers to meet with students and this time is often saved for the many meetings teachers are expected to attend.

**Time to Just Think.** Time for self-reflection and to ask questions facilitates changes in instructional practices and a movement towards effective differentiation (Tomlinson, 2017).
Sometimes teachers need time to think. Time to think about their next steps for reaching the learners in their classrooms and how they will make that happen. Theo summed it up this way, “I think where to start? I think what to do? And I think how to manage the time?” (Theo, Interview 2). These are questions that require time. Teachers often engage in self-reflection about where students are academically. They need to think about the best ways to reach students and how to fit it all in.

**Time to Prioritize.** Sometimes there is just not enough time to manage the many facets of a functioning classroom environment. This can be challenging for some teachers. Teachers may have a hard time accepting that they can’t do it all in one day, one week, or even one month. There are times when a teacher could benefit from accepting that it is difficult to fit it all in. Kat clarified the feeling of not getting it all done, “So you can't do it all, you just do the best you can and whatever you can do to get them [students] to meet their end of the year goals” (Kat, Interview 2). It may have taken Kat decades to realize this. Newer teachers at the beginning of their career will likely find this understanding hard to reconcile with.

**Extra Time.** Extra time to get clerical work done would be beneficial for most people, but especially teachers. Theo discussed how the day-to-day teacher tasks can get in the way “As a teacher, what would save me time? Oh my gosh. If I had somebody to do my copies” (Theo, Interview 1). Menial tasks take time, and this is what Theo referred to, but he also discussed how teachers may inadvertently thwart their own time management, “What would save me time? If I used my time more effectively, like during my planning periods. I feel like I do, but I could still get better at it, you know?” (Theo, Interview 1). Theo clarified his role in using time effectively and how that time passed rather quickly, “So for example, today, it was really productive to where my planning period was up before I knew it” (Theo, Interview 1). Even when teachers
have a plan for utilizing their contracted planning time, there can be unexpected interruptions that come up. Theo explained, “I sort of had a game plan for every planning period, but then sometimes we get interruptions. You know, like in the morning” (Theo, Interview 1). Theo referred to having a game plan to complete his to do list, but then got interrupted to do something else. Unfortunately, that does not mean that Theo is absolved of those other tasks, it means he must fit them in somewhere else. Theo continued by explaining that when this is the case, he often makes use of time after school. “So, it's best for me to kind of like stay after school. People are gone. You can really get a lot done.” (Theo, Interview 1). Theo articulated how uninterrupted work time, specifically when he is alone in his building, can be very productive.

Time to collaborate, time to support student needs through planning, and time to reflect on how to fit it all in are often requests heard from teachers. When teachers can use time wisely and effectively it is beneficial. When teachers are afforded time to accommodate and respond to the needs of their students, the perception is that they will use it with purpose. But sometimes teachers find themselves working outside of school hours because there just was not enough time during the school day.

**Professional Development and Differentiated Instruction**

Educators perceive district-led professional development as the most effective approach for reaching teachers and supporting their instructional practices in the classroom. Opportunities that include choices for pedagogical routines, resources and self-reflection are the most effective (Dack, 2018). Professional development planning that is driven by teachers’ requests and ideas is most effective at expanding their learning (Martin et al., 2019). Jenna, Theo, and Kat shared considerations for providing effective, essential, and supportive professional development opportunities.
Teachers rely on specific resources to build their knowledge and understanding of the intricacies associated with the implementation of differentiated instruction. Guidance through staff collaboration and professional development supports teachers in their implementation of differentiated instruction (Rise & Renzulli, 2018). Utilizing reflective dialogue amongst colleagues offers teachers opportunities to work through the challenges of differentiation with others who understand the difficulties associated with it (De Neve et al., 2015). Teachers rely on collaboration with building support staff and other colleagues to finetune their understanding of differentiated instruction. The predominant themes that emerged from the data regarding teacher efficacy and professional development were: (a) teachers value continuity in messaging from district administration about initiatives, as well as follow through on professional development opportunities, (b) consideration for classroom management and its prominent placement on professional development agendas, (c) a focus on goal setting for students and teachers, and (d) continuous and effective support for new teachers. The following sections answer the third sub-question for this study: How does professional development play a role in teachers’ self-efficacy to provide students with differentiated instruction? This sub-question had three themes that emerged: (a) teachers value continuity, (b) teachers prioritize classroom management, and (c) teaching relies on goal setting.

**Teachers Value Continuity**

Just as students thrive when they understand the expectations within their learning environment, teachers similarly appreciate a consistent message from their administrators. Teachers prefer to be aligned with the same standards for instructional practices and resources. This continuity of message not only fosters a sense of coherence within the educational community but also provides teachers with the support they need to carry out their instructional
duties. When administrators and teachers are on the same page regarding expectations and approaches, it creates a conducive environment for professional growth and student success.

**Consistent District Messaging.** Kat shared her perception of an absence of continuity in communication from district leaders, “Sometimes there's no continuity of message. And we all hear something different” (Kat Interview 2). She continued by explaining that ambiguous directives and action from administrative personnel can be problematic, “When a supervisor and a principal say something, but another administrator does another, you hear different things and think, oh well…,” (Kat, Interview 2). Kat clarified what it is like to misunderstand or completely miss the point of district directives. This can be somewhat awkward especially if a teacher is discussing a directive erroneously. The perception Kat provided is that this type of miscommunication is common and causes confusion that could be erased with consistent messaging.

**Extended, Ongoing Professional Development Opportunities.** Administration could deliver district initiatives and then offer a plan based on continuity and longevity for engaging teachers in meaningful learning. When professional development opportunities are designed to extend learning from one workshop to the next, continuity in understanding and adapting instructional practice is a focus. Follow-up opportunities that include revisiting the learning from previous occasions sends a message that this is important. Theo shared his thinking about district-led professional development, “Too many times teachers attend district-led professional development that is helpful but then loses its effect because there is no follow-up. I do think there's another way to differentiate” (Theo Interview 2). He continued, “Here's my problem with professional development, OK. I love professional development. But there's never follow up and that's the biggest criticism of professional development.” (Theo Interview 2). His consideration
for the power of professional development provided understanding of his frustration. District-led professional development could be significant in the procurement of differentiated instruction strategies. Theo presented a solution to the discontinuity in learning opportunities for teachers:

“So, you go to a great professional development session, and you want to, you know, implement these ideas as soon as you go back to your classroom. But there should then be a period of, OK, well, we're going to get back together in a month or in six weeks, and we're going to see what worked, what didn't work and what we can refine” (Theo, Interview 2).

Theo defined the necessity for follow-up opportunities that create a culture of growth and refinement of practice. When teachers get that chance to look back and ponder over their skills, as well as student data, they can make adjustments to foster improvements in their instructional practices. Over time and many applications real change can be actualized.

**Teacher-Led Professional Development.** Teachers value professional development that includes an agenda they helped to create. Jenna describes one such opportunity her principal provided for her grade level team to work together to address their needs for professional development, “Last year, we were given time from our principal, this 1/2 day, which was great, to look at our new math program and see what we wanted to continue doing and what we didn't” (Jenna Interview 2). That time is recognized as so valuable by Jenna and her grade level team because they were able to work on what they felt should be their focus. The message of autonomy in professional development choice often helps teachers feel invested in their learning. Jenna went on to explain how teacher created agendas for PLC meetings benefited the team, “We do PLC, probably not the way other people do it, but we do, we talk about student progress, what we're teaching and how we're teaching it all throughout the week” (Jenna Interview 2). Teachers
appreciate being given the opportunity to make decisions about how they will spend dedicated professional development time. They benefit from managing how that time will be spent because it is then meaningful and significant to them.

Jenna, Theo, and Kat shared perceived incongruities they believe exist within district initiatives and messaging from administration. When teachers are given the opportunity to manage agendas, determine professional development topics to be covered with continuity, and support each other in PLC meetings, it is perceived as valuable.

**Teachers Prioritize Classroom Management**

Teachers who lack solid classroom management skills risk ineffective differentiation in the classroom (Vantiegham et al., 2020). Jenna, Kat, and Theo endorsed classroom management and acknowledge its magnitude in delivering differentiated instruction to their students. Given its importance, professional development centered on classroom management would be beneficial. As previously mentioned, proactivity is perceived by teachers as playing a crucial role in classroom management. Establishing clear expectations for students during instructional time frequently enables teachers to offer small group differentiated instruction, thereby promoting optimal learning opportunities.

**Classroom Management is Everything.** Kat shared her understanding for the need of effective classroom management in no uncertain terms, “Oh, I think it's everything. If you don’t have classroom management, you can't teach anything,” (Kat, Interview 2). Kat equated classroom management with teaching in a way that showed she can’t have one without the other. Similarly, Theo provided understanding that without classroom management, valuable instructional opportunities and student learning could be sacrificed, “And so you know, if you have that good classroom management your kids are going to learn. If you don't, you’ve got
wasted instructional time going on and going on a lot” (Theo, Interview 2). Theo connected wasted instructional time with the absence of classroom management, much like Kat did.

**Classroom Management is Good for Students.** Theo discussed how he saw classroom management manifesting for new teachers, “You learn how to manage a class whether it's by default or you know, through your own introspection (Theo, Interview 2). Theo’s introspection led to an understanding about how young students think, “You learn how to manage a classroom and you learn that all kids want to have limits whether you're teaching in suburbia, in an urban area, or whether you're teaching in a rural area, kids are kids. You know?” (Theo, Interview 2). Theo, Kat, and Jenna support the notion that effective classroom management supports learning environments that incorporate boundaries and limits. They perceive that students benefit from classroom management because it facilitates respect and responsibility for classroom learning goals.

**Active Engagement.** Jenna’s classroom management included a focus on making sure students have meaningful tasks to complete, “I just try to give them enough activities to do so that they don’t have the time to talk,” (Jenna Interview 2). She continued by discussing how students need practice with classroom expectations and that most of her students come to understand what she wants, “I would say 75% of the kids get it after the first month or two because our whole first month is practicing sitting and working quietly while I talk to kids” (Jenna Interview 2). At the same time, there are always students who may need a little more support and even then it can still be a challenge, “But then there's others that are just incapable of it, so it's not that they haven't learned it, they just aren't able to do so,” (Jenna, Interview 2). Jenna shared that keeping students actively engaged in tasks supports her classroom
management. In addition, she made it clear that there could be students who will need constant reminders.

Both Figures 11 and 12 are examples of ways that Jenna used to keep her students engaged in their independent learning. While she is working with students in small groups, she is able to provide learning opportunities and engagement in academic tasks for other students by utilizing these reading group menus. The classroom is being managed in a way that supports Jenna’s small reading groups and the individual learning targets for students working independently simultaneously. Students are provided with a step-by-step map on what to do while Jenna is supporting differentiated learning in her small group instruction.

As these menus compare to the characteristics on the Differentiated Instruction Checklist (see Appendix D), there are opportunities for independent work, choice of reading materials, open-ended tasks, and response journals. In addition, Jenna allows her students choice in where they do independent work and supports their decisions to find a place that is comfortable and productive to complete the tasks outlined in the menus (Jenna Interview 1).
### Figure 11
Sleepy Hollow Sleepover Menu

<table>
<thead>
<tr>
<th>Monday</th>
<th>Tuesday</th>
<th>Wednesday</th>
<th>Thursday</th>
<th>Friday</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Read chapters 1-3.</strong></td>
<td><strong>Read chapters 4-5.</strong></td>
<td><strong>Read chapter 6-7.</strong></td>
<td><strong>Read chapters 8-10.</strong></td>
<td><strong>Read chapter 11-12.</strong></td>
</tr>
<tr>
<td><strong>Reading Response:</strong></td>
<td><strong>Schoology Response:</strong></td>
<td><strong>Schoology Response:</strong></td>
<td><strong>Schoology Response:</strong></td>
<td><strong>Reading Response:</strong></td>
</tr>
<tr>
<td>Create your own scary</td>
<td>How would you feel</td>
<td>Who do you think set</td>
<td>How do you think they</td>
<td>Complete the Picture</td>
</tr>
<tr>
<td>haunted hayride.</td>
<td>about having to stay</td>
<td>the hay wagons on fire</td>
<td>are going to get</td>
<td>Walk activity in your</td>
</tr>
<tr>
<td>Make sure you have</td>
<td>out in the woods all</td>
<td>and slashed the police</td>
<td>out of the hole in the</td>
<td>group's basket.</td>
</tr>
<tr>
<td>at least 3 details</td>
<td>night? Why would</td>
<td>car's tires? Why do</td>
<td>barn floor?</td>
<td></td>
</tr>
<tr>
<td>about what people</td>
<td>you feel that way?</td>
<td>you think they did it?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>will see.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Reading Activity:</strong></td>
<td><strong>Reading Activity:</strong></td>
<td><strong>Reading Activity:</strong></td>
<td><strong>Reading Activity:</strong></td>
<td><strong>Reading Activity:</strong></td>
</tr>
<tr>
<td>Do the Pumpkin to</td>
<td>Do “Jack of the</td>
<td>Do Spooky Riddles</td>
<td>Read “Halloween</td>
<td>Read “Trick or Treat”</td>
</tr>
<tr>
<td>Carve activity.</td>
<td>Lantern” and answer</td>
<td>activity.</td>
<td>History and Origin”</td>
<td>and answer the</td>
</tr>
<tr>
<td></td>
<td>the questions.</td>
<td></td>
<td>and answer the</td>
<td>questions.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>questions.</td>
<td></td>
</tr>
<tr>
<td><strong>Independent Reading:</strong></td>
<td><strong>Independent Reading:</strong></td>
<td><strong>Independent Reading:</strong></td>
<td><strong>Independent Reading:</strong></td>
<td><strong>Independent Reading:</strong></td>
</tr>
<tr>
<td>Read from your “Just</td>
<td>Read from your “Just</td>
<td>Read from your “Just</td>
<td>Read from your “Just</td>
<td>Read from your “Just</td>
</tr>
</tbody>
</table>

Note: This figure is one example of a menu of activities students engage in to support reading progress and growth.
Administration supporting teachers with professional development opportunities to address effective classroom management is a priority for also implementing differentiated instruction. Professional development opportunities that focus on classroom management support differentiation because without the management piece, instructional time could be sacrificed.

**Teaching Relies on Goal Setting**

An effective differentiated classroom relies on well-considered goals and monitoring student progress on a consistent basis (Stecker et al., 2008). Jenna, Theo, and Kat utilize goal setting in their instruction. They engage students in personal goal setting and in this way, students remain at the center of instruction. Teachers can guide the way and help learners understand the benefits of using goals to monitor progress and eventually mastery.
Formal Student Goal Setting. Theo explained why he involved students in goal setting, “I think goal setting by students is important because it's a metacognitive process, so it helps them to realize what they need to improve upon,” (Theo Interview 2). This is one example of how Theo supported student involvement in their instructional journey. He continued sharing examples of how student goal setting began with a teacher/student conference in reading, “We do a lot of independent reading conferencing early in the school year, and so we can look at you know, kids who have fluency goals or kids who have comprehension goals” (Theo Interview 2). By using student data as the basis for goal setting, Theo helped the reader determine what needs to work on. Theo shared what that conversation with a student could look like, “We could say, you know, we're in reading, do you think you need to improve? Well, I need to improve with my number of words per minute” (Theo Interview 2). In this example, the student decided reading fluency would be the goal focus, but Theo was there to guide the student, “OK, so that's a goal. So right we’re at 80 words per minute. Let's see if we can get to ninety words per minute. OK. And work on that” (Theo Interview 2). The goal setting that Theo incorporated into this instructional scenario is student driven, however, Theo helped the student arrive at a goal that is appropriate.

Informal Student Goal Setting. Another way that Theo embedded student goal setting into instruction was by encouraging students to be reflective on their stamina for reading independently. Theo explained how he held students accountable for reading goals, “I will say to students, I want you to take two bookmarks. Put one where you left off yesterday and the other where you hope to be by the end of today's independent reading. Set a goal for yourself that way” (Theo Interview 2). In this way, Theo handed control of the goal to the students. They were in control of setting the goal, monitoring the goal, and reaching the goal. Although there is no
formal progress monitoring included, there is a degree of accountability for the student by having a visual to reference with the bookmark.

Theo continued, explaining that the length of time given to reach a goal helped to determine the type of goal, “So goals can be something as simple as that, or they could be more long range (Theo, Interview 2). Students setting personal goals, with direction from the teacher, holds value. When teachers engage students in conversations and self-reflection about their own progress monitoring, it benefits the student and the teacher. The goal is set and being monitored, but it is not managed by the teacher. The student can meet with the teacher periodically to review the goal, and this helps to keep the student accountable.

**Long Term Goal Setting.** When parents were concerned about students reaching grade level benchmarks, Kat helped them understand that progress can be extended over an entire school year and even into the next. Kat explained how to address parent concerns for their child not being promoted to the next grade level, “When parents say, like my gosh, are they going to fail kindergarten? I'm like, no, we're sending them to first grade because they continue to make progress” (Kat Interview 2). Kat reassured parents that making progress is part of the goal. As long as a student continues to make progress and move towards mastery of grade level content, there is little reason for concern about retention. She continued by discussing how mastery is the end goal, but lack of progress is what really causes concern, “It's when they don't make any progress, that is when we're worried” (Kat Interview 2). Kat addressed parental concerns, but also helped them to realize that learning is a process. It takes time for students to master grade level benchmarks sometimes. Regardless of the time it takes, educators are monitoring progress along the way. Kat went on to explain how monitoring student progress supports differentiation, “So I feel like, if they're making progress then that's differentiation and whatever we've been
doing is working. Yeah, but when they stop making progress, that's when it's like, Oh, no!” (Kat Interview 2). This is an example of how Kat used progress monitoring to support instructional goals for differentiation. There is a continuum for the student to travel with check-ins along the way to monitor progress. Lack of student progress is reason for concern, so constant monitoring is essential in this process.

**Setting vs. Monitoring the Goal.** Autonomy for teachers in goal setting is critical for managing the goal. Jenna provided some insight on how the person setting the goal should probably also be the person monitoring the goal otherwise it could be problematic, “Well, if I set the goal, I think it's a good one, but when somebody else sets a goal for themselves and it involves me doing something to monitor the goal that's when it's a problem (Jenna Interview 2). Jenna pointed out that goal setting is valuable, however, continuity between setting the goal and monitoring the goal should be the objective. She resumed, “I know the district insists on improvement and that everybody has to have a goal, but when the principal shares their goal and you need to do X, Y and Z to help, that's time consuming because that isn't my only goal” (Jenna Interview 2). Teachers often recognize the value of goal setting and the reasons for progress monitoring. Jenna describes the benefit of the teacher being involved in setting the goal, especially if they will have responsibility in monitoring the goal. Goal setting and progress monitoring are effective ways to manage student success, especially when the goal is generated by the teacher who will also oversee progression.

**New Teachers Require Continuous Support.** New teachers come into the profession often with limited experience being in front of students and managing a classroom. The myriad of responsibilities that teachers hold is often not realized until they are thrust into the middle of
supervising a classroom at the same time. Continued and meaningful professional development would benefit all teachers, but especially new ones.

One concern that new teachers often have is how to secure support for students who are just not making the progress one would expect in the classroom. They may feel as though they have tried everything; however, there is often a series of steps that teachers must follow before extra support can be put into place for the student. Kat shared this dialogue about new teachers being unaware of the protocol for getting supports for students, “New teachers say, I just tried. I already tried everything” (Kat Interview 2). New teachers may not realize that trying everything includes keeping a record of a student’s progress, or lack thereof. Then they have to be told to keep a record of a goal and provide data to support a lack of progress. Kat clarified, “Now you got to put it to a paper and pencil task like you know, and 70% or better, alright” (Kat Interview 2). It would have been helpful had there been a protocol for mentoring the new teacher to help them gain an understanding of this process. Kat continued to share the disappointment in this realization for new teachers, “You know, and it's like uh, so I mean it's frustrating. I think it's frustrating for a lot of new teachers that they don't know” (Kat Interview 2). Had the new teachers known how the system works, they could have been keeping a record all along. Kat recommended including this information in a mentoring program designed to support new teachers, but also to provide this sort of guidance and assistance for an extended period of time, “So I think you know the mentor program that the district has… sometimes I think it should last longer than just a year. That would be helpful” (Kat, Interview 2). Grade level meetings and PLCs could also support this work, but an extra level of professional development that gathers new teachers together to collaborate and engage in discourse about student progress and the protocols to follow would also be beneficial.
**Differentiation for Differentiation.** Small group instruction is at the core of differentiated instruction. Creating groups of students with similar academic needs and levels of understanding often supports learning and academic progress. Theo talked about teachers planning for small group instruction for the first time when they have their own classrooms, “I think when they start working in small groups, they realize the power of it” (Theo Interview 2).

Theo’s input and experience supports the research that small group instruction is beneficial to students. Sometimes it might just take teachers experiencing the progress students can make with small group, targeted instruction firsthand that will make the difference in doing it or not. Theo added how teachers may not have received that sort of instruction in their course work at the college level and that making assumptions that they have is not prudent, “We can't assume that they’ve had any kind of instruction or background in their methods courses at the university level, you know?” (Theo Interview 2). This is a perception worth thinking through.

New teachers would benefit from professional development designed to support differentiation through small groups. When assumptions by administration are made that teachers have the background and training to implement differentiated instruction, professional development to address it may not be considered. Theo explained that each student teacher comes to the classroom with varied backgrounds, “It all depends, you know, like I’ve had student teachers all with different experiences in their classes, you know. So, we can't assume that they come in with that knowledge,” (Theo Interview 2). Educational leaders can support implementation of differentiation in a myriad of ways. It can be building level, district level and individually, but an emphasis on its importance is where the shift can start.

Theo suggested utilizing teachers as the models for differentiation to help new teachers navigate the nuances of implementation, “But they can kind of you know through our modeling
begin to figure out like how we go about it [small group instruction]” (Theo, Interview 2). New teachers are expected to reach diverse learners in their classrooms and professional development opportunities that utilize experienced teachers to model and support them would be beneficial.

**Differentiated Instruction Takes Time.** The time it takes to master differentiated instruction can be different for each teacher because it is a complicated teaching philosophy. Teachers may become impatient with the amount of time it may take to feel comfortable with it. New teachers may discover that it extends over weeks, months, even years to implement effectively. Jenna discussed the mindset new teachers may have regarding completing everything all at once and that more experienced teachers can provide guidance and support for keeping their expectations attainable, “I think that is the kind of support we need to give more teachers, these new teachers that think they have to get it all done, it's OK (Jenna Interview 2). It makes sense to enlist more experienced teachers to help new teachers negotiate that perceived feeling of inadequacy. More than likely they have already been through it, or maybe are still going through it and can support each other in recognizing it is difficult to fit it all in. Jenna continued, “It's all right if it doesn't get done and I can help you do it if you need, but it's alright to not get it done for once” (Jenna Interview 2). Experienced teachers adding that level of support would be beneficial for a newer teacher. Mentor teachers perceivably can give permission to leave some tasks unfinished, such as grading papers especially once it has been reviewed to see if an intervention is necessary. Jenna supported that idea with this, “Or don't grade those papers. Just put them in the recycling bin. They did it. You kind of glanced over it and got what you needed from it so get rid of it” (Jenna, Interview 2). Jenna recognized the feelings of inadequacy teachers may have as they relate to leaving tasks incomplete or not finding the time to grade every assignment.
Part of professional development and mentoring is helping new teachers understand that sometimes they make decisions that benefit students, and at the same time, they will make decisions to preserve their time. Experienced teachers are instrumental in reinforcing that there is so much to be done at any given time and prioritizing tasks is essential because doing it all is impossible.

Chapter 4 summarized the questionnaire data, interview transcriptions and teacher presented artifacts used to differentiate in their classrooms. In Chapter 5, a discussion of the results is presented, as well as a connection to the theoretical framework and implications for future research.
Chapter 5: Discussion

This qualitative narrative study examined how three elementary school teachers implemented differentiated instruction in their classrooms. With the findings from this study, I aim to provide teachers and educational leaders with information on what is helpful in supporting a purposefully orchestrated, differentiated learning environment to facilitate student success. Furthermore, educators can utilize these findings to design professional development opportunities that assist in implementing differentiated instruction in the classroom. In this chapter, I consolidate, discuss, and analyze the findings of this study and provide limitations and implications for future educational research.

Summary of the Study

This study occurred within a single public school district located in the mid-Atlantic region of the United States, focusing primarily on K-5 teachers. The research methodology involved administering a questionnaire, followed by interviewing three teachers who implement differentiation techniques in their classrooms. Furthermore, the interviewed teachers contributed a range of artifacts they utilize for differentiation within their classrooms.

I collected qualitative data to answer the main research question for this study: *What is the experience of elementary teachers as they implement differentiated instruction with students in their classrooms?* I initiated data collection with a questionnaire related to differentiated instruction practices in which 29 tenured elementary education teachers completed. The questionnaire provided a broad understanding of the K-5 teachers’ beliefs and attitudes about differentiation and aided in the selection of three teachers who regularly use differentiation in their classrooms. These teachers participated in two 45–60 minute interviews over several weeks.
to gain a deeper understanding of the complexities and nuances of implementing differentiated instruction regularly.

Three elementary classroom teachers, representing kindergarten, third, and fourth grades, voiced the many complex components of differentiated instruction and articulated the supports necessary for its inclusion in their pedagogical routine. I listened, transcribed, interpreted their responses, and used in vivo coding to identify themes for what teachers need from in district-led professional development opportunities to implement differentiated instruction successfully.

To support the main research question, I employed the following lines of inquiry: (a) exploring beliefs and attitudes regarding differentiated instruction, (b) investigating the guidance and resources required for differentiated instruction, and (c) examining the perceived characteristics of effective professional development opportunities aimed at implementing differentiated instruction.

**Application of Conceptual Framework to Findings**

The conceptual framework (see Figure 1) for this study culminated in a merger of four theories: (a) cognitive learning theory, (b) constructive learning theory, (c) behaviorism learning theory, and finally (d) Universal Design for Learning (UDL). My interpretation through a comprehensive lens incorporates learning as a fusion of overlapping and integrated approaches associated with the four theories listed above. The diagram (see Figure 1) provides a visual for the reader to understand the combination of the three theories with UDL and its three characteristics for engrossed learners: representation, engagement, and action/expression.
Figure 13
Conceptual Framework

Note: This diagram emphasizes the interrelationship and overlap of Universal Design for Learning and Cognitive, Constructive and Behaviorism Learning theories.

UDL is an all-encompassing foundation from which teachers can build to adjust the curriculum and its presentation to support the unique characteristics of learners. From the UDL perspective, the emphasis of the framework lies in altering the curriculum rather than concentrating on individual learners (Chita-Tegmark et al., 2012). UDL and differentiated instruction mutually support each other by enabling all students to access the curriculum and adapting it to fit their specific needs (Griful-Freixenet et al., 2021). When teachers effectively plan instruction for a diverse community of learners, it is essential to address variability in learning differences by actively considering the pillars for UDL: representation, engagement, and action/expression. Variability in teachers’ learning can be addressed in similar ways.
Piaget (1976), through his cognitive learning theory, proposed that children learn by actively adapting to their surroundings, rather than simply absorbing information. Students in differentiated classrooms are likely to be exposed to interactions with each other and their teachers that facilitate the exchange of ideas and critical thinking to formulate foundations for higher level learning. Piaget observed that when young students explore and interact with their environment, they encounter new ideas that challenge their existing understanding, motivating them to learn more deeply (Obikwelu & Read, 2012). The cognitive learning theory supports placing students in adapted learning environments and engaging them in academic activities crafted to match their current level of understanding and foster further growth.

To uncover clues about how students organize new information, teachers can incorporate cognitive learning theory ideas into instruction by asking questions to determine a learner's current schemata and paying attention to their thinking (Yilmaz, 2011). Students and educators collaborate to diversify educational experiences. The teachers interviewed for this study discussed how their own learning of how to differentiate is similar to the constructs for the cognitive learning theory. These three educators expressed their preference to learn in their teaching environment from building specialists, educational leaders, and colleagues rather than by absorbing information from materials or lectures. This type of learning facilitates an exchange of ideas and creative thinking between teachers and support that is directly related to the students in the classrooms of teachers.

The constructive learning theory rests on the following techniques for knowledge construction: modeling, reflection, strategy formation, scaffolded exploration, debriefing with peers, and articulation (Obikwelu & Read, 2012). The basis for this learning theory is that students assimilate into the learning environment and then are able to focus on the challenges
they face in learning with support from their teacher. Students are more likely to derive meaning when the instructional emphasis is placed on addressing their academic needs (Obikwel u & Read, 2012). Instead of being mere recipients, learners actively construct meaning by processing knowledge acquired through lived experiences, thus forming a distinct understanding of reality (Ert mer & Newby, 2013). Similarly, these three teachers noted they learn from professional development opportunities that empower them to navigate their own implementation of differentiation, enabling them to monitor their challenges and growth with support from instructional specialists and colleagues.

The Behaviorism Learning Theory utilizes continuous feedback and positive reinforcement to foster development. Collaboratively, educators and learners establish objectives, monitor progress, and assess acquisition of curriculum (Tomlinson, 2014). Learning is centered around reinforcing stimulus-response connections through instructional prompts, rehearsal, and reinforcement, culminating in corrective feedback (Ertmer & Newby, 2013). The three teachers featured in this study discussed appreciating corrective feedback from educational professionals that aligned with their goals and progress. These teachers noted that establishing a collaborative partnership founded on support, positive reinforcement, and respect is advantageous for teachers striving to implement differentiated instruction in their classrooms.

This study aimed to decipher what teachers need to effectively differentiate for the students in their classrooms. The data collected supports that the complicated nature of implementing differentiated instruction requires professional development opportunities that scaffold teacher learning in some of the same ways that student learning is scaffolded in the classroom. My goal, through research and study, was to examine differentiated instruction through a critical lens and with particular emphasis on professional development to make it more
obtainable for teachers in addressing the needs of the diverse learners in the classroom. For optimal understanding of differentiated instruction and its implementation by teachers, it is necessary to provide varied approaches to presentation, expression, and engagement. Considering the foundations of UDL, Cognitive Learning Theory, Constructivist Learning Theory, and Behaviorism Learning Theory offers a thorough and inclusive framework for addressing the needs of all students, including teachers. A consideration for the diverse learning characteristics of teachers including, social contexts, levels of education, years of experience for teachers and the various configurations of support from building specialists and educational leadership that can be applied, supports teacher learning in professional development.

**Discussion of Results**

From the questionnaire data and teacher interviews analyzed in this study, five principle discoveries emerged concerning teachers’ inclinations regarding learning and implementing differentiated instruction. There are working environment characteristics and professional development topics teachers recommend should be in place. They include the following: (a) collaboration with other educational professionals, (b) autonomy for instructional decision making, (c) classroom management skills, (d) effective leadership, and (e) ongoing, targeted professional development opportunities.

**Teachers Want to Learn from Other Educational Professionals**

Throughout interviews with the three teachers highlighted in this study, collaboration with colleagues emerged as a recurring theme. All three teachers provided examples of collaborating with reading and math specialists, instructional coaches, and fellow colleagues. Yuen (2023) regarded collaboration among teachers as crucial not only for implementing differentiation practices but also for effective planning. A collective approach to addressing
students’ academic needs integrates the expertise and efforts of multiple stakeholders, supporting teachers in managing learning differences within elementary classrooms. Teachers find it helpful to connect with colleagues to discuss instructional practice and student achievement, perceiving value in the process. (De Neve & Devos, 2017).

Furthermore, based on data collected in the questionnaire, teachers seek support from instructional coaches, PLCs, and building specialists to bolster their differentiated efforts because they find them most helpful in understanding what teachers are trying to do to meet student needs in the classroom (see Figure 5). This relationship may be a result of the continuous collaborative opportunities available when colleagues work together in the same building on a daily basis. Consequently, teachers have the ability to ask questions and seek advice from coaches and specialists, which can offer quick fixes to instructional queries. When educators have the opportunity to work together, teaching efficacy, as well as personal and professional growth occurs. (Goddard & Kim, 2018).

In the study, Kat and Theo explained how they utilize building staff to support their instructional practices and address the specific needs of students in their classrooms. Theo appreciated the assistance of the instructional coach in co-teaching during his writers’ workshop. Meanwhile, Kat assigned a teacher’s aide to lead small groups for skill practice and invited building specialists to observe students in her classroom whom she thought could benefit from additional levels of intervention. Similarly, Jenna spoke often about the ways her grade level team assisted each other by reviewing student data and planning together to support academic success, as well as sharing clerical responsibilities. To this end, teachers who engage in collaborative work with colleagues often improve their instructional practices especially
observing classroom teaching, exchanging ideas and suggestions with other educators, and enlisting support from coaches and mentors (Bellibas et al., 2020).

Within the school setting, teachers are able to utilize relationships with colleagues to facilitate their own learning about differentiation and meeting the diverse needs of the students in their classrooms. In education, prioritizing the importance of dedicated time for discourse related to differentiation, instructional practices, and student achievement emphasizes the purpose. Educators can reap the benefits of professional development opportunities designed to provide content-specific time for collaboration (Andrews-Larson et al., 2017). All three study participants reported value in engaging in professional development designed to support students and maximize their learning outcomes through collaboration with building specialists. This type of collegial work was regarded as an integral resource and point of guidance for teachers.

**Teachers Appreciate Autonomy in Instructional Decisions**

Teachers implement differentiated instruction by making informed decisions about the learners in their classrooms (Onyishi et al., 2020). During the interviews for this study, teachers discussed how they effectively make decisions to support learning in their classrooms. Examples included grouping students for direct instruction, skill building, and aligning with their interests. This critical aspect of teaching is a daily occurrence for teachers, with the perception that autonomy to execute instructional decisions is imperative for effectiveness. Educators value leadership that supports their abilities to make and execute decisions regarding student success (Van Geel, 2022). Teachers like Kat, Theo, and Jenna make decisions several times a day about how to best serve students and prioritize their academic success in their work. Teachers who possess a vast knowledge of instructional strategies and find ease in articulating how that informs their instruction make the most significant teaching decisions, both planned and spontaneously.
With the years of experience that Kat, Theo and Jenna hold individually and collectively, their instructional repertoire is sizable allowing them to plan for differentiation and pivot quickly as needed in the classroom. Kat provided numerous examples of how she was able to manage occupational therapy needs, behavioral needs and academic needs in the span of one morning in the same classroom. Jenna determined whether students would need added interventions in math based on student independent practice during the lessons. Also in math, Theo found ways to elevate learning for successful students by modifying a decimal activity. All three teachers were able to identify the needs of students and issue modifications effectively to actualize academic progress.

Teachers regularly make decisions throughout the day, as decision-making is essential to teaching (Griffith & Lacina, 2018). Kat, Theo, and Jenna are the primary decision makers in their classroom and determine what happens in the moment, during the day or over a unit of study. They recognize the individual strengths and needs of their students and sometimes parents of those students, in their classes and what course of action they will use to address them. They make decisions about how to manage a myriad of needs that arise in their classrooms. Jenna found creative ways to support a student resistant to writing by giving her some choice: Theo found ways to include informal goal setting into instruction, and Kat resolved questioning from parents about retention.

Teachers provide encouragement, motivational support, and scaffolded learning opportunities all in an attempt to help students recognize their learning capabilities (Griffith & Lacina, 2018) Jenna, Kat and Theo are teachers who have found numerous ways to interact with students to create a classroom community based on informed decision making. Their beliefs and
attitudes about differentiation compels them to gain a deep understanding of the learners in their classrooms and to be creative in their approaches to meet their needs.

**Classroom Management Supports Effective Differentiated Instruction Implementation**

Before attempting instruction supporting differentiation for students, teachers need to acquire effective classroom management skills (Vantiegham et al., 2020). Jenna, Theo, and Kat identified that successful classroom management is a foundational characteristic of differentiated instruction. During their interviews, they provided numerous examples of ways to set expectations for learning spaces, keep students engaged in tasks, and hold them accountable for their academic progress. High-quality teaching that facilitates optimal student learning is indicated by establishing a well-managed and organized classroom early in the school year (Marder et al., 2023). At the start of the year, Theo prioritized his classroom management, providing required boundaries for students and demonstrating how a productive learning environment looks in action. Jenna discussed ways to keep students engaged and involved in the learning process with meaningful assignments to complete and very little time to go off task. Kat shared classroom management strategies that rely on students creating a community of learners dedicated to supporting each other and keeping each other accountable for Kat’s expectations.

When learning is immersive and meaningful, classroom management is more about cultivating a growth mindset coupled with experiences for students to engage in optimal learning situations and less about preventing mismanaged behavior (Wallace et al., 2020). Theo offered examples of how he challenges students who have mastered essential learning targets and provides remediation for those who have not, using the same set of materials. This instructional strategy optimizes the time he has for planning, simplifies explanations for classroom activities, and frees Theo to circulate the room and get an understanding for what supports students need.
for follow-up instruction. A teacher who is able to minimize undesirable classroom behaviors is also able to dedicate instructional time to address the academic needs of students (Marder et al., 2023). Jenna, Kat, and Theo are able to spend time engaging students in instructional activity because they share a commonality of strong classroom management allowing them to focus on the academic needs of their students and not behavioral interruptions. All three teachers discussed the necessity of including classroom management topics into professional development opportunities for both new and seasoned teachers.

**Teachers Value Effective Leadership**

As educational leaders, school principals actively negotiate many aspects of their buildings, including curriculum, finance, and instruction. This comprehensive role highlights the critical need for them to demonstrate a deep understanding of best practices in pedagogy (Chitpin, 2021). Based on interview input from Jenna, Kat, and Theo, teachers value leadership that consistently convey similar messages aligned with district initiatives. All three teachers provided feedback on the necessity of continuity in the district and building initiatives. Theo discussed building culture and its effect on surveys. He made the point that some teachers are not honest in completing surveys and this renders them invaluable. However, when teachers perceive that administration values their feedback and utilizes it to manifest positive change, it makes a difference.

The data specifically conveyed that mismatched messages from administration can affect the day-to-day functionality of teaching. Educational leadership is fundamental to social interactions between teachers because district and building goals inform teachers, boost support for their efforts, and shield them from peripheral distractions (Goddard & Kim, 2018). The data
supports that Theo, Jenna, and Kat value continuity in communication because it helps them to prioritize instructional materials, strategies, and initiatives together.

Jenna, Kat, and Theo discussed the necessity for principals to clarify the administration’s vision for each elementary building. This clarity creates a cohesive and balanced understanding for teachers about expectations and district initiatives. There is a direct correlation between instructional leadership, differentiated instruction, and community of practice because the principal can provide clarity and fortify understanding (Goddard & Kim, 2018). Additionally, a principal’s firsthand involvement in representing school goals and observing instruction contributes to a learning environment that motivates teachers to share wisdom and collaborate on practice (Bellibas, 2020). Theo, Jenna, and Kat voiced the necessity of continuity in message about instructional initiatives to support collaboration between colleagues and to provide common ground for educators in guidance from administration and also professional development opportunities.

**Teachers Desire Ongoing Professional Development Opportunities**

Professional development that focuses on integrating understanding strategy and providing multiple opportunities to apply new learning over an extended period is the most constructive (Van Geel et al., 2022). Over time and repeated exposures, teachers develop a deeper understanding of best practices in education. Like learning most new skills, time to practice and work through the challenges makes acquisition attainable. The data from interviews reflected insight on the benefits of ongoing and continuous professional development. Theo, Jenna, and Kat supported the opportunity to refine their instructional practice through professional development. Additionally, they articulated that being connected with grade-level
colleagues to reflect, practice, and enhance their routines would be advantageous for all teachers, but especially new ones learning to negotiate the demands associated with teaching.

Kat, Jenna, and Theo referenced teachers’ time limitations during interviews, highlighting the imperative for providing educators with multiple opportunities to gain deeper understandings of differentiated practices through classroom observations and professional development workshops (Van Geel et al., 2022). Teachers who may be short on time value many opportunities to reflect on and engage in differentiation strategies, which are essential for implementation. Kat, Theo, and Jenna discussed how in their experience, they have learned about the intricacies of differentiation in multiple ways, including PLCs, observing other teachers, and professional development opportunities. Jenna, Kat, and Theo each expressed that professional development without multiple opportunities to practice differentiated instructional strategies does not support efforts to use it effectively. Professional development opportunities are successful when they provide a focus on content, active learning, and an integration of skills with a prolonged timeline to support reflective practices (Bellibas, 2020). By providing opportunities for reflection, collaboration, and adjustment, administration communicates a unified message about the importance of instructional strategy, especially differentiation.

Limitations

This study had some limitations, specifically in terms of researcher bias, methodology, analysis, and generalizability.

Researcher Bias

Being an educator working within the district where the study was conducted, I had the potential of skewing the data. To minimize this concern, I designed the questionnaire to be completed with complete anonymity to preserve privacy. Only teachers interested in moving to
the next step of interviews were asked to provide their names and work email addresses. Additionally, as a district employee, I have unrestricted knowledge about the expectations and initiatives that are encouraged regarding differentiation. This knowledge, coupled with my own views of differentiated instruction and its complexities in implementing had to be sequestered in conducting interviews and coding data. I was careful to not use my own experience as a basis for evaluating and analyzing the data collected in the questionnaire and interviews by using in vivo coding and relying on the actual words of participants to clarify their meaning.

Before the interview began, I informed willing participants that their responses would remain anonymous, I would use pseudonyms, and their participation would not impact their academic standing or employment within the school district. Details on how their identities would be protected during the entire study were provided to them. The interviews took place either before or after school hours. Each of the three interviewed teachers had the opportunity to provide their own pseudonyms; however, they all declined, so I chose one for each of them.

Methodology

There were two considerable limitations in terms of methodology in this study: sample size and the inclusion of mostly participants with highly elevated experience. The sample size was limited with only 29 out of 243 teachers completing the questionnaire. Additionally, upon close evaluation of participant characteristics there was a very large contingency of respondents with more than 10 years of teaching. A total of 23 respondents had more than 10 or more years of experience and a total of 20 out of the 23 had more than 20 years of experience. Also, the questionnaire was emailed to only teachers with tenure which is defined by the district as teachers having at least three years of consecutive and satisfactory reviews. In the future I would consider including full-time, hired teachers without tenure, as well as long-term substitutes.
Furthermore, the interview data came from three teachers who each had over two decades of experience. In the future, I would aim to interview several teachers with less experience to compare their perspectives on differentiation with the more experienced teachers.

**Analysis**

While I conducted my own research using questionnaires, interviews, and optional artifacts, I gathered as much information as I could to understand the challenges of providing differentiated instruction as seen through the eyes of elementary teachers. In terms of analysis, a possible limitation for this study was not capturing the voices of teachers as they intended and not reporting their perspectives and insights accurately. To minimize this limitation, the three study participants who interviewed were given the opportunity to review their transcripts for authenticity and accuracy. In this study, member checking was utilized to confirm authenticity and intention with the participants. Additionally, the timing of my data collection and interviews were conducted over a span of three weeks. In the future, I would consider lengthening the timing between interviews and including a professional development element for participants to engage in implementation of differentiated instruction with reporting in intervals between sessions. I could facilitate deeper analysis over a longer period of time with teacher practice and reporting, allowing for a more comprehensive understanding of differentiated instruction and its implementation. This approach aligns with the principles of longitudinal research, which involves collecting data from the same participants over an extended period. Instead of conducting interviews in rapid succession, spacing them out with practice and reflection in between allows researchers to observe how factors evolve and interact over time, providing valuable insights into the dynamics of implementing differentiated instruction.
**Generalizability**

This study only explored the experiences of three educators in one school district setting, and thus, this study is not generalizable beyond these three teachers in this specific research site. However, when the voices of these teachers are considered in relation to the findings from other studies of differentiation in elementary school settings, this study can contribute to building context and expanded understanding of differentiated instruction.

**Implications for Future Research**

This study examined the perceptions of 29 questionnaire respondents and the experiences of three teachers with decades of expertise in their field. Although this data was extremely effective in providing information related to differentiated instruction, it was by no means comprehensive. For future studies, I would be interested in gaining perspectives from teachers with far less experience and/or different grade levels to balance the data and provide a wider scope of understanding. Teachers with less experience may add an additional level to the complicated nature of differentiation and what specific supports they feel necessary for implementation.

One of the emergent themes in this study highlights the benefits of incorporating collaborative characteristics into professional development opportunities. In the future, an entirely new study could be to elevate the voices of building specialists and instructional coaches to provide an additional layer of discernment of the complexities of differentiated instruction and possibly practical solutions for navigating them. For the same reason, I would contemplate the inclusion of principals and administrators as their voices would clarify the expectations that educational leaders have about reaching the diverse needs of students in the classroom.
Additionally, a new study could focus on student voices to understand their experiences with differentiated learning environments and how it affects their engagement in educational tasks and academic performance. Student voices are equally as important as teacher voices in understanding the implications of differentiation in the classroom, and they have a unique lens with which to analyze the advantages of differentiated instruction. Including this perspective and understanding could be extremely powerful in providing a foundation for implementation.

Additionally, adding a component for monitoring academic progress could be a focus, however, engagement and motivation for learning could be evaluated as well to understand the impacts on students in a differentiated learning environment.

**Implications for Educational Practice**

While designing professional development opportunities for differentiated instruction, teachers and administrators might want to contemplate the many considerations included in this study. Based on interview data, there were several areas for administrators to consider, but the main topics uncovered included ongoing and continuous district-led professional development dedicated to differentiation, but also classroom management, progress monitoring, and collaboration with grade level colleagues and building specialists to determine specific interventions for students. Efforts by administration to incorporate these educational elements consistently and over time would be instrumental in supporting the implementation of differentiated instruction by teachers.

A recurring theme that emerged from data analysis was that teachers would like to participate in professional development that is ongoing. The participants discussed during interviews that professional development that provides support for one instructional strategy over an extended period of time is appreciated by teachers, and they value time to self-reflect and
Professional development opportunities that connect colleagues over time to review student data and instructional practice solidify teachers’ investment in their process.

Additionally, these teachers voiced that they want to see administration consider their learning needs when designing professional development opportunities. Educators often have to experiment with new programs and resources, but still want to compare them with older ones. Simultaneously, teachers spend time evaluating data to understand their students and their needs better and determine new ways of teaching the same standards to ensure access for every learner.

When educators are treated to a differentiated learning environment and given options tailored to their needs, they are more likely to be successful in acquiring new teaching strategies and/or perfecting the ones they are already trying.

Administration can further support teachers by ensuring consistency and cohesion in messaging across all school buildings. Teachers value clarity regarding district initiatives that are uniformly applied to every teacher, regardless of their school building. Clarity and transparency in district messaging for use of materials, resources, and educational goals reduces confusion and provides an alignment of efforts. When teachers can focus on the execution of the district goal versus deciphering the expectations, their time is used efficiently and effectively.

Summary

Teaching, much like learning, is a complicated and multi-layered undertaking with countless implications and outcomes. The differences in learning that necessitate specific and targeted interventions for students can also relate to teacher learning. Differences in background knowledge and expectations highlight the importance of assessing teachers' understanding of differentiated instruction before determining the topics, duration, and sustainability for training
workshops, thereby tailoring the content to their specific needs. The best practices recognized for reaching diverse learners in the classroom can also be attributed to teachers. Some teachers require more support than others as they navigate all aspects of a differentiated learning environment.

Education for students and teachers alike requires a differentiated approach to address the layers of learning represented. If we could find creative ways to align teacher training with the differentiated instructional methodologies expected of them in the classroom, it could lead to significant progress in education. This approach fosters a solid framework for both teachers and students, encouraging growth and learning at all levels. With this foundational shift, we can aspire to achieve remarkable outcomes in education, empowering both teachers and students to thrive.
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Appendix A: Differentiated Instruction Questionnaire

1. How many years of experience do you have in education? Please choose the length of time that pertains to you.
   - a. 1-5
   - b. 6-10
   - c. 11-20
   - d. over 20

2. What certifications do you hold: Please select all that apply.
   - a. Elementary
   - b. Secondary
   - c. Special Education
   - d. Reading Specialist
   - e. Other

   If other, please list: _____________________________________________

3. What is the highest level of education you hold? Please select one.
   - 4-year education degree
   - Master’s (+15,30,45,60)
   - 2nd Masters
   - Doctorate
   - Other

   If other, please list: _____________________________________________

4. Grade levels currently teaching. Select all that apply.
   - K
   - 1
   - 2
   - 3
   - 4
   - 5
5. Please share the first thought that comes to mind when you hear the words differentiated instruction. (open-ended)

6. Please define differentiated instruction in your own words (open-ended)

7. I believe that DI should be provided to students.
   - strongly disagree.
   - disagree
   - neither disagree/agree
   - agree
   - strongly agree

8. Please list your comfortability in providing DI in the classroom on a scale of 1-5. 1 being not comfortable at all and 5 being extremely comfortable.
   - 1
   - 2
   - 3
   - 4
   - 5

9. Please list frequency of providing DI in your classroom
   - daily
   - weekly
   - Monthly
   - Less than once a month

10. Subject matter you feel requires differentiated instruction. Please select all that apply.
    - reading
    - writing
    - math
    - Other: _________________________________________________________

11. I believe consistency in professional development is essential for effective implementation of differentiated instruction.
    - strongly disagree
• disagree
• neither disagree/agree
• agree
• strongly agree

12. Resources necessary to provide effective differentiated instruction in the classroom (rank on importance)
   
   • regular professional development opportunities
   • technology
   • student textbooks
   • having a mentor/coach
   • professional learning committee grade level teams
   • academic programs/units of study
   • book study
   • independent study/class

13. How did you learn how to implement differentiated instruction in the classroom? (Select all that apply)
   
   • book study
   • professional development
   • mentor/coach
   • conference
   • college level classes
   • observing other teachers
   • PLCs
   • Other: ____________________________________________

14. What student information is essential in planning for differentiated instruction? Check all that apply.
   
   • State Testing Data
   • District Benchmarks
   • DRA/TC reading levels
- Acadience scores
- Previous grades
- Parent Input
- Formal assessments
- Informal assessments
- Previous teacher input
- Behavior
- Ability to focus
- Classroom observations
- Work Ethic

15. How long does it take to plan for differentiated instruction in one subject area for one unit of study?
   - f. over 5 hours
   - g. 4 hours
   - h. 3 hours
   - i. 2 hours
   - j. 1 hour
   - k. less than 1 hour

16. Would you be interested in discussing your practices for differentiated instruction?
   - Yes
   - No

17. Would you be willing to share materials you have used that support the effective implementation of differentiated instruction with the researcher?
   - Yes
   - No

*For participants choosing yes, a link to a separate Qualtrics survey where they can add their email will be provided. This will allow the researcher to collect contact information for those interested in interviews that is separate from their survey responses.

All participants will end with the message below:
Thank you for completing this questionnaire. If you have indicated interest in interviewing with the researcher, you may be contacted by the researcher to schedule.
Appendix B: Initial Interview Protocol

The interview questions will include, but not be limited to what is stated below. Follow-up questions will be used as necessary to obtain detailed responses. In vivo codes will develop from the precise language and phrasing of participants during the interview. To establish final themes, the primary investigator plans to utilize constant comparative analysis to compare responses from both initial and follow-up interviews. Member checking, to increase validity, will be offered to interview participants at the conclusion of the study, before a final draft of the dissertation is submitted.

Interview Protocol:

“Thank you so much for agreeing to meet with me today. [Reintroduce myself and state my role.] I hope to gather a bit more information about your use of differentiated instruction in the classroom. I would like to ask your permission to record this session and review the consent form with you. If you agree to be recorded on the Zoom platform, please say “yes,” and then I will start recording. Should you choose not to be recorded, please exit the Zoom room. Please remember, you may skip any question that makes you feel uncomfortable, and you may stop participating at any time. [Wait 30 seconds and then begin recording.] Here is the consent form I originally sent to you via email. [Share the consent form on the screen and review it.] Do you have any questions?” [Respond to any questions.]

Once all questions have been asked, or 60 minutes have passed, I will book the second interview with the participant. Then, I will again thank each participant for engaging in the interview and answer any of their follow-up questions. After the second interview, all data have been collected.
<table>
<thead>
<tr>
<th>Interview</th>
<th>Prompting Questions</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initial Interview</td>
<td>What resources/artifacts help you in the implementation of effective differentiated instruction to meet the academic needs of the learners in your classroom?</td>
<td>Obtain perspective from educators on the necessities of planning for differentiated instruction.</td>
</tr>
<tr>
<td>(60 minutes)</td>
<td>What specific student information is needed to plan for differentiation? Why is this information important? Where does this information come from?</td>
<td></td>
</tr>
<tr>
<td>In person or over Zoom, one</td>
<td>How could you utilize support staff, such as instructional coaches/specialists, in your implementation of differentiated instruction?</td>
<td></td>
</tr>
<tr>
<td>to one</td>
<td>In what ways do you address the myriad of learning, cultural, socioeconomic, and social/emotional differences your students carry through differentiated instruction in the classroom setting? And how often?</td>
<td></td>
</tr>
<tr>
<td></td>
<td>In what ways can teachers support each other in the implementation of differentiated instruction?</td>
<td></td>
</tr>
<tr>
<td></td>
<td>What resources do you use to help you organize and plan for differentiated instruction in your classroom?</td>
<td></td>
</tr>
<tr>
<td></td>
<td>In the questionnaire, you indicated that consistency in professional development is essential for effective implementation of differentiated instruction. Can you explain what this looks like?</td>
<td></td>
</tr>
</tbody>
</table>
Appendix C: Follow-Up Interview Protocol

The interview questions will include, but not be limited to what is stated below. Follow-up questions will be used as necessary to obtain detailed responses. In vivo codes will develop from the precise language and phrasing of participants during the interview. To establish final themes, the primary investigator plans to utilize constant comparative analysis to compare responses from both initial and follow-up interviews. Member checking, to increase validity, will be offered to interview participants at the conclusion of the study, before a final draft of the dissertation is submitted.

Interview Protocol:

“Thank you so much for agreeing to meet with me today. [Reintroduce myself and state my role.] I hope to gather a bit more information about your use of differentiated instruction in the classroom. I would like to ask your permission to record this session and review the consent form with you. If you agree to be recorded on the Zoom platform, please say “yes,” and then I will start recording. Should you choose not to be recorded, please exit the Zoom room. Please remember, you may skip any question that makes you feel uncomfortable, and you may stop participating at any time. [Wait 30 seconds and then begin recording.] Here is the consent form I originally sent to you via email. [Share the consent form on the screen and review it.] Do you have any questions?” [Respond to any questions.]

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<table>
<thead>
<tr>
<th>Interview</th>
<th>Prompting Questions</th>
<th>Purpose</th>
</tr>
</thead>
</table>
| Follow-Up Interview (60 minutes)  
In person or over Zoom, one to one | Has professional development played a role in your willingness to provide students with differentiated instruction in all subject areas? Please explain.  
What would I see in your classroom that signifies differentiated learning? Why?  
How do you see students benefiting from differentiated instruction in the classroom?  
What are the drawbacks, if any, associated with differentiated instruction?  
What obstacles do teachers face when trying to implement differentiated instruction?  
What connections, if any, do you see between mastery learning and differentiated instruction?  
In the questionnaire, you indicated that differentiated instruction is effective in meeting the needs of your students. Could you explain why you feel the way that you do? | Obtain perspective from educators upon reflection of the implementation of differentiation in the classroom. |
# Appendix D: Differentiated Instruction Checklist

## Differentiated Instruction Checklist

<table>
<thead>
<tr>
<th>Planning</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>□ Flexible grouping</td>
<td>□ Tier 2 and 3 goals</td>
</tr>
<tr>
<td>□ Homogeneous grouping</td>
<td>□ Exit Tickets</td>
</tr>
<tr>
<td>□ Randomized groups</td>
<td>□ Anecdotal records</td>
</tr>
<tr>
<td>□ Pairs/Triads/Quads</td>
<td>□ Formative assessment</td>
</tr>
<tr>
<td></td>
<td>□ Summative assessment</td>
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<td></td>
<td>□ Report card grades</td>
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<table>
<thead>
<tr>
<th>Content</th>
<th>Process</th>
</tr>
</thead>
<tbody>
<tr>
<td>□ Skill-based mini lessons</td>
<td>□ Multiple tests and resources</td>
</tr>
<tr>
<td>□ Interest-based mini lessons</td>
<td>□ Choice of reading materials</td>
</tr>
<tr>
<td>□ Independent study or research</td>
<td>□ Acceleration/varied pacing</td>
</tr>
<tr>
<td>□ Supplementary materials</td>
<td>□ Varied graphic organizers to support learning</td>
</tr>
<tr>
<td>□ Choice of learning extensions</td>
<td>□ Learning contracts</td>
</tr>
<tr>
<td>□ Individualized tasks/agendas</td>
<td>□ Options for homework activities</td>
</tr>
<tr>
<td>□ Pre/Post Tests</td>
<td>□ Open-ended tasks</td>
</tr>
<tr>
<td>□ Response journals</td>
<td>□ Varied deadlines according to time needed</td>
</tr>
<tr>
<td>□ Learning stations/centers</td>
<td>□ Choice of learning activities</td>
</tr>
<tr>
<td>□ Teacher Feedback</td>
<td></td>
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<tr>
<td>□ Multiple texts</td>
<td></td>
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<tr>
<td>□ Learning contracts</td>
<td></td>
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<td>□ Choice boards</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Products</th>
<th>Learning Environment</th>
</tr>
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<tbody>
<tr>
<td>□ Tiered activities</td>
<td>□ Learning teams</td>
</tr>
<tr>
<td>□ Journal menus</td>
<td>□ Flexible grouping</td>
</tr>
<tr>
<td>□ Individual rubrics for assessment</td>
<td>□ Small-group instruction</td>
</tr>
<tr>
<td>□ Alternative assignment choices</td>
<td>□ Options for independent work</td>
</tr>
<tr>
<td>□ Independent projects</td>
<td>□ Peer mentors</td>
</tr>
<tr>
<td></td>
<td>□ Readiness grouping</td>
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<tr>
<td></td>
<td>□ Goal setting with students</td>
</tr>
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<td></td>
<td>□ Check in/Check out</td>
</tr>
<tr>
<td></td>
<td>□ Varied entry points</td>
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<tr>
<td></td>
<td>□ Flexible seating</td>
</tr>
</tbody>
</table>

Notes:
Appendix E: District Letter of Support

May 15, 2023

West Chester University
Graduate Studies
Institutional Review Board
West Chester, PA 19380

To Whom it May Concern,

I, [Name], Substitute Superintendent of the [School District], grant permission to Suzanne Fanelle to complete research regarding Differentiated Instruction: A Study Focusing on the Voices of Elementary Teachers, in accordance with IRB approval and school district policies.

I have been advised of the scope of the research and how data will be collected. I also understand that all information to be gathered will be collected in a confidential and appropriate manner. I understand permission is contingent upon approval from West Chester University’s Institutional Review Board. The research will take place between September and December 2023. Participation in the survey is voluntary and includes district staff teaching grades K-5.

As educators we promote life-long learning for our students and [School District] plans to give Ms. Fanelle their support through the research phase and overall completion of her studies. We look forward to reviewing and learning from her completed work.
Appendix F: IRB Approval

Aug 4, 2023 11:12:12 AM EDT

To: Suzanne Fanelle
Col of Education & Social Work, Literacy

Re: Expedited Review - Initial - IRB-FY2023-356 Differentiated Instruction: A Qualitative Study Focusing on the Voices of Elementary Teachers and Their Needs

Dear Suzanne Fanelle:

Thank you for your submitted application to the West Chester University Institutional Review Board. Since it was deemed expedited, it was required that two reviewers evaluated the submission. We have had the opportunity to review your application and have rendered the decision below for Differentiated Instruction: A Qualitative Study Focusing on the Voices of Elementary Teachers and Their Needs.

Decision: Approved

Selected Category: 6. Collection of data from voice, video, digital, or image recordings made for research purposes.
7. Research on individual or group characteristics or behavior (including, but not limited to, research on perception, cognition, motivation, identity, language, communication, cultural beliefs or practices, and social behavior) or research employing survey, interview, oral history, focus group, program evaluation, human factors evaluation, or quality assurance methodologies. (NOTE: Some research in this category may be exempt from the HHS regulations for the protection of human subjects. 45 CFR 46.101(j)(2) and (b)(3). This listing refers only to research that is not exempt.)

Sincerely,
West Chester University Institutional Review Board

IORG#: IORG0004242
IRB#: IRB00005030
FWA#: FWA00014155
Appendix G: Recruitment Email

Hello K-5 Teachers!

My name is Suzanne Fanelle and I am the instructional coach. Please consider participating in my research study focused on differentiated instruction. Your invaluable insight and experience will play a crucial role in understanding this teaching practice. Your voices are the ones that matter most! I am looking for educators to complete a short (5-7 minute) survey, with the opportunity to be included in two follow-up interviews. You will find the link to the questionnaire below included with more information about my study. Participation in this study is optional and no identifying information will be shared.

- The time commitment for study participants is approximately 5-7 minutes for the questionnaire. There is an option to go on to interviews, but only if the participant elects to do so. With your consent, (2) interviews for 45-60 minutes would be conducted. The total time of participation does not exceed 130 minutes.
- Interviews will be conducted either in person or on Zoom (depending on the participant’s preference) between December and mid-January.
- In addition, if participants elect to be interviewed, they will be given the option to share resources that are helpful to them in implementing differentiated instruction in the classroom. All identifying information will be obfuscated before submission to the researcher.

Thank you for your consideration! Please use the link below to access the short questionnaire. The link will remain open through December 11, 2023.

*This study has been approved by the West Chester University Institutional Review Board, protocol IRB-FY2023-356

Enjoy the day!

Sincerely,

Suzanne Fanelle

Follow this link to the Survey:
$://Surveystart?d=Take the Survey}
Appendix H: Informed Consent

Project Title: Differentiated Instruction: A Narrative Research Study Focusing on the Voices of Elementary Teachers

Investigator(s): Suzanne Fanelle; Heather Schugar

Project Overview: With the goal of identifying specific strategies and needs in the implementation of differentiated instruction, the researcher aims to gain a deeper understanding of what resources and supports teachers use in order to provide effective and meaningful professional development opportunities.

Participation in this research project is voluntary and is being done by Suzanne Fanelle as part of their Doctoral Dissertation to:

Determine what types of professional development and with what frequency would help teachers to implement differentiated instruction in the elementary classroom.

Your participation will take about 10 minutes to complete this questionnaire. Should you consider engaging in interviews with the researcher, another 120 minutes of your time will be requested.

1. Complete questionnaire
2. OPTIONAL: Sign up to participate in two interviews with the researcher,
3. OPTIONAL: Provide copies of teacher/classroom artifacts that support differentiated instruction
4. ENCOURAGED: Engage in member checking once findings have been determined by invitation from the researcher.

There is a minimal risk and if you experience discomfort for any reason related to this study, you are free to withdraw with no consequences.

Findings and implications of this study will be shared, however no identifying information will be included.
Benefits include teacher voices being prominent in effective ways to reach the diverse learners in their classrooms through differentiated instruction which can be used to develop meaningful professional development. This research will help students with diversified needs in the classroom be provided instruction that is based on specific supports likely to result in academic success.

The research project is being done by Suzanne Fanelle as part of her Doctoral Dissertation to determine what types of professional development and with what frequency would help teachers to implement differentiated instruction in the elementary classroom. If you would like to take part, West Chester University requires that you agree and sign this consent form.

You may ask Suzanne Fanelle any questions to help you understand this study. If you do not want to be a part of this study, it will not affect any services from West Chester University nor [blank]. If you choose to be a part of this study, you have the right to change your mind and stop being a part of the study at any time.

What is the purpose of this study?

- Determine what teachers do to implement successful differentiated instruction in the elementary classroom and use that to align professional development topics for the future.

If you decide to be a part of this study, you will be asked to do the following:

- Complete questionnaire
- OPTIONAL: Sign up to participate in an interview with the researcher
- OPTIONAL: Provide copies of classroom artifacts that support differentiated instruction
- ENCOURAGED: Engage in member checking once findings have been determined by invitation from the researcher
• This study will take 10-130 min of your time depending on the level of engagement in completing the questionnaire and participation in interviews with the researcher.

**Are there any experimental medical treatments?**

• No

**Is there any risk to me?**

Possible risks or sources of discomfort include:

• Psychological risks include the production of negative affective states such as anxiety, depression, guilt, shock, and loss of self-esteem and altered behavior.

• In all research involving human subjects, confidentiality of identifiable information is presumed and must be maintained unless the investigator obtains the express permission of the subject to do otherwise. Subjects have the right to be protected against injury or illegal invasions of their privacy and to preservation of their personal dignity. The more sensitive the research material, the greater the care that must be exercised in obtaining, handling, and storing data. In order to minimize the risk for loss of confidentiality, investigators should only collect personal information that is absolutely essential to the research activity. If personal data must be collected, it should be coded as early in the activity as possible and securely stored so that only the investigator and authorized staff may access it. Identities of individual subjects must never be released without the express consent of the subject. In addition, if an investigator wishes to use data for a purpose other than the one for which it was originally collected and the data are still identifiable (e.g. a code list for the data still exists), the investigator may need to obtain consent from the subjects for the new use of the data.

• If you experience discomfort for any reason related to this study, you are free to withdraw with no consequences.
• Findings and implications of this study will be shared; however, no identifying information will be included.

• If you experience discomfort, you have the right to withdraw at any time.

Is there any benefit to me?

• Benefits to you may include: Your voice in the details of providing differentiated instruction successfully in the classroom which will be the basis for creating effective professional development designed to help teachers reach the diverse learners in their classrooms.

• Other benefits may include students with diversified needs in the classroom are supported and provided with instruction that is based on their specific needs.

How will you protect my privacy?

• The session will be recorded.

• Your records will be private. Only Suzanne Fanelle, Heather Schugar, and the IRB will have access to your name and responses.

• Your name will not be used in any reports.

• Records will be stored:
  • Password Protected File/Computer
  • Any clarifying information included in classroom artifacts will be obscured by the participant and the researcher.
  • Records will be destroyed Three Years After Study Completion

Do I get paid to take part in this study?

• No

Who do I contact in case of research related injury?
For any questions with this study, contact:

- **Primary Investigator:** Suzanne Fanelle at [Contact Information]
- **Faculty Sponsor:** Heather Schugar at [Contact Information]

**What will you do with my Identifiable Information/Biospecimens?**

- Not applicable.

For any questions about your rights in this research study, contact the ORSP at 610-436-3557.

I, ______________________________ (your name), have read this form and I understand the statements in this form. I know that if I am uncomfortable with this study, I can stop at any time. I know that it is not possible to know all possible risks in a study, and I think that reasonable safety measures have been taken to decrease any risk. The Qualtrics survey will collect identifying information only for those participants interested in engaging in interviews. Interviews will be audio recorded, however, Zoom recordings will be done with no camera and only a black screen with participant self-selected pseudonym.

_________________________________    Date:________________
Subject/Participant Signature

_________________________________    Date:________________
Witness Signature
### Appendix J: Codebook

<table>
<thead>
<tr>
<th>Theme</th>
<th>Code Definition</th>
<th>Code Description</th>
<th>Code Applied</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attitudes and Beliefs</td>
<td>Discussion of how classroom management applies to differentiation.</td>
<td>This code provides clarity for the necessity of managing a classroom with varying academic and social levels.</td>
<td>Classroom management</td>
<td>When you have kids at this end and kids at this end and kids in the middle, it makes for a more active classroom. That's what my experience has been.</td>
</tr>
<tr>
<td>Attitudes and Beliefs</td>
<td>Discussion of how goal setting applies to student academic success.</td>
<td>How goals can be set by students</td>
<td>Goal setting</td>
<td>We also talked about, you know, kind of, you know, being a good kid watcher. Looking at things like body language and students expression and, you know, really being able to kind of read the room.</td>
</tr>
<tr>
<td>Attitudes and Beliefs</td>
<td>Discussion of how teachers may choose to manage different groups of students</td>
<td>This code provides insight into the ways teachers manage different groupings of students</td>
<td>Flexibility in grouping</td>
<td>Well, I need to improve with my number of words per minute. OK, so that's a goal. So right we’re at 80 words per minute. Let's see if we can get to 90 words per minute. OK. And work on that.</td>
</tr>
<tr>
<td>Attitudes and Beliefs</td>
<td>Discussion of how decision making can affect the supports students receive</td>
<td>This code explores how added supports for students can be inequitable.</td>
<td>building supports</td>
<td>They have different activities too. I'm at the table a lot with a lot of kids. If I'm not with kids, I'm walking around checking in with individual kids.</td>
</tr>
</tbody>
</table>


<table>
<thead>
<tr>
<th>Attitudes and Beliefs</th>
<th>Discussion of how to reach the needs for all students</th>
<th>This code provides insight on how managing extension students is complicated</th>
<th>small group instruction</th>
<th>But there's always somebody who falls through the cracks. I would definitely say the kids that fall on the higher level really do just end up playing prodigy with everything. I think they're fine with that, but I'm not challenging them the way a gifted teacher would because I just don't have those materials.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attitudes and Beliefs</td>
<td>Discussion of the ways teachers support each other</td>
<td>This code displays the value in being able to work together as a team and support the needs of colleagues</td>
<td>Grade Level Teams</td>
<td>We support each other very well by well, I mean we lessen each others loads a lot.</td>
</tr>
<tr>
<td>Attitudes and Beliefs</td>
<td>Discussion of how to support new teachers</td>
<td>This code shows how experienced teachers show new teachers the way through a demanding career</td>
<td>Support for new teachers</td>
<td>These new teachers think they have to get it all done, but it's OK if it doesn't get done and I can help you do it if you need to, but it's alright to not get it done for once.</td>
</tr>
<tr>
<td>Attitudes and Beliefs</td>
<td>Discussion of lack of time teachers have</td>
<td>This code makes shows how a teacher's schedule is packed and it is difficult to do it all in one day</td>
<td>Lack of time</td>
<td>So you can't do it all, you just do the best you can and whatever you can do to get them to meet their end of the year goals.</td>
</tr>
<tr>
<td>Attitudes and Beliefs</td>
<td>Discussion of lack of time teachers have</td>
<td>This code makes shows how a teacher's schedule is packed and it is difficult to do it all in one day</td>
<td>Lack of time</td>
<td>I really feel like that's another reason why I'm still here, is I I leave everything behind when I go home. You can't take all of that home, and if it doesn't get done, it doesn't get done.</td>
</tr>
<tr>
<td>Attitudes and Beliefs</td>
<td>Discussion of the difference between progress and mastery</td>
<td>This code helps clarify what progress monitoring really means as related to academic achievement</td>
<td>Progress Monitoring</td>
<td></td>
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<tr>
<td>And you know what? And when parents say, like my gosh, are they gonna fail kindergarten? I'm like, no, we're sending them to 1st grade because they continue to make progress.</td>
<td></td>
<td></td>
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</tr>
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</table>

<table>
<thead>
<tr>
<th>Attitudes and Beliefs</th>
<th>Discussion of the many ways teachers have to manage the essential learning targets for their students</th>
<th>This code helps understand the myriad of decisions teachers are making daily</th>
<th>Decision making</th>
</tr>
</thead>
<tbody>
<tr>
<td>But it's just kind of planning ahead, looking at and thinking. I mean I think about it too like what can I do? OK, what are we going to put in that center today? OK, what's going to be put in this one? Like what are the easy ones going to look like? What can I do that's going to help them? What do they need? That group needs more rhyming. I'll throw that in there. You just got to kind of, I mean, I have all these different games, but which skills do students need more help with?</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Attitudes and Beliefs</th>
<th>Discussion of the topics teachers need to think about for differentiation</th>
<th>This code provides clarity for the importance of grade level team collaboration</th>
<th>Teacher Collaboration</th>
</tr>
</thead>
<tbody>
<tr>
<td>OK, you collaborate with your team and a lot of times we do. I mean I have 16 kids that qualified for reading support and you guys had one! So you know I had to figure that o.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Attitudes and Beliefs</th>
<th>Discussion of the way building support staff collaborate for student learning</th>
<th>This code provides evidence for the way educational support staff collaborate to meet the needs of students</th>
<th>Building Specialist resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>They say it's five, but they can't then write a five. They don't know what a 5 looks like. So I pull them over. They're trying to do that independently and then we actually have, like our math coach, comes in on Wednesdays. And I just do some centers like this. So where she can get a feel too. So that way we can start setting some smaller goals</td>
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</tr>
<tr>
<td>Attitudes and Beliefs</td>
<td>Discussion of how teacher's aides can support student learning</td>
<td>This code exemplifies the ways that teacher's aides work with students based on what teachers see as their needs</td>
<td>Building Specialist resources</td>
</tr>
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</tr>
<tr>
<td>Attitudes and Beliefs</td>
<td>Discussion of how informal assessments provide answers to what skills students need more work on</td>
<td>This code provides evidence for how teachers use formative assessments to guide instruction</td>
<td>Math-Differentiation</td>
</tr>
<tr>
<td>Attitudes and Beliefs</td>
<td>Discussion of how grade level partners work together to support the needs of their students</td>
<td>This code provided clarity for how grade level teams can provide an element of SEL in their approaches to meeting student needs</td>
<td>Grade Level Teams, Social Emotional Teaching</td>
</tr>
<tr>
<td>Attitudes and Beliefs</td>
<td>Discussion of the ways teachers have to consider ways to provide access to curriculum for their students</td>
<td>This code helps clarify that not all material can be presented in a differentiated matter</td>
<td>small group vs. whole group instruction</td>
</tr>
<tr>
<td>Attitudes and Beliefs</td>
<td>Discussion of how teachers plan for differentiated instruction</td>
<td>This code shows how teachers tackle the components of differentiation</td>
<td>Planning for Differentiation</td>
</tr>
<tr>
<td>Attitudes and Beliefs</td>
<td>Discussion of ways to gather data informally to guide instruction</td>
<td>This code supports understanding the effectiveness of formative assessments and observing learning related behaviors of students</td>
<td>Formative assessment</td>
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<td>Well, I think if they become really good kid watchers, they can kind of begin to manage what to look for. Right? I think if they start off slowly, they can begin to learn to manage the piece. How do I go about it? You know, and then as far as the time management piece, you know if they have the good classroom management already in place, then they can pull groups and set the parameters and it should not be an issue. But the class management piece is huge.</td>
<td></td>
</tr>
<tr>
<td>Resources and Guidance</td>
<td>Discussion of how teachers use formative assessment to guide instruction</td>
<td>This code relates to the ways that teachers use formative assessments and student observations to guide instruction for students not meeting academic objectives</td>
<td>Formative Assessment</td>
</tr>
<tr>
<td></td>
<td></td>
<td>So generally, when I’m introducing a strategy for expository text into a whole group format and then we follow along the gradual release of responsibility model...I do/we do/you do...let’s work in pairs first and then maybe work on your own. So then pulling those kids of different readiness levels back for a second shot of instruction with FQR. So that's how the flexible groups work.</td>
<td></td>
</tr>
<tr>
<td>Resources and Guidance</td>
<td>Discussion relating to the ways teachers use small group instruction to gain an understanding of their learners</td>
<td>This code exemplifies the ways that teachers create flexible groups to support different forms of instruction as students make progress</td>
<td>Student progress, flexible grouping</td>
</tr>
<tr>
<td></td>
<td></td>
<td>A lot of it's the thinking about cause a lot of it's more on the spot kinds of things, except for like, you know, except for when we're looking at small reading group instruction. Then, you know, we have our groups for that novel or whatever. Those groups can change. But when it's more flexible grouping it's not as formalized.</td>
<td></td>
</tr>
<tr>
<td>Resources and Guidance</td>
<td>Discussion of how teachers manage small groups for maximum student progress</td>
<td>This code shows how teachers group students to support acquisition of reading skills</td>
<td>small group instruction</td>
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</tr>
<tr>
<td>Resources and Guidance</td>
<td>Discussion of how multiple resources support student understanding of math skills</td>
<td>This code shows how teachers are able to address the needs of students by using multiple resources to gain an understanding of their academic strengths and challenges</td>
<td>Resource adaptation, reliance on older resources</td>
</tr>
<tr>
<td>Resources and Guidance</td>
<td>Discussion of how goal setting needs to be initiated by the teacher</td>
<td>This code helps gain an understanding of why teachers setting and monitoring student goals is imperative.</td>
<td>Goal setting</td>
</tr>
<tr>
<td>Resources and Guidance</td>
<td>Discussion of how students can mask what they understand and don't</td>
<td>This code displays the thinking teachers use for identifying students with substantial gaps, but are good at hiding it</td>
<td>Student Information</td>
</tr>
<tr>
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</tr>
<tr>
<td>Resources and Guidance</td>
<td>Discussion of how building support staff work together to meet the needs of students</td>
<td>This code shows how the classroom teacher and math specialist collaborate to meet students and address academic needs</td>
<td>Building Specialist resources</td>
</tr>
<tr>
<td>Resources and Guidance</td>
<td>Discussion of teachers share and tweak resources to meet their needs</td>
<td>This code depicts ways teachers support each other with resources they can change to make their own</td>
<td>Grade Level Teams</td>
</tr>
<tr>
<td>Resources and Guidance</td>
<td>Discussion of the importance of small group and the way it is used all year</td>
<td>This code provides understanding of how small group instruction is expected to run all year long in order to provide adequate differentiation for all students</td>
<td>Planning for Differentiation</td>
</tr>
<tr>
<td>Resources and Guidance</td>
<td>Discussion of how formative assessments are a resource for planning differentiation</td>
<td>This code shows how teachers use observation to support their instructional decisions for students</td>
<td>Decision making by teachers, Flexibility in grouping, Student Information, Strategies for making decisions about instruction for students</td>
</tr>
<tr>
<td>------------------------</td>
<td>-----------------------------------------------------------------------------------</td>
<td>-----------------------------------------------------------------------------------------------</td>
<td>---------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Resources and Guidance</td>
<td>Decision making by teachers, Flexibility in grouping, Student directed differentiation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Resources and Guidance</td>
<td>Discussion of the ways look at differentiating for students</td>
<td>This code provides clarity for the ways that small group instruction address specific needs of students based on skill acquisition OR level</td>
<td>Flexibility in grouping</td>
</tr>
<tr>
<td>Resources and Guidance</td>
<td>Discussion of maximizing instruction while covering all required content in a grade level</td>
<td>This code provides understanding to how to maximize time and efforts while also covering content in more than one subject</td>
<td>Time to differentiate</td>
</tr>
<tr>
<td>Resources and Guidance</td>
<td>Discussion of how student interest is a consideration for differentiation</td>
<td>This code exemplifies how teachers use interest to reach their reluctant and struggling students</td>
<td>Student directed differentiation</td>
</tr>
<tr>
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<td>--------------------------------------------------------------------------------</td>
<td>---------------------------------------------------------------------------------</td>
<td>---------------------------------</td>
</tr>
<tr>
<td>Resources and Guidance</td>
<td>Discussion of how teachers consider relatable resources for supporting reading instruction</td>
<td>This code provides information on how to engage students in literature that supports rich discussions and differentiated learning</td>
<td>Student Interests</td>
</tr>
<tr>
<td>Resources and Guidance</td>
<td>Discussion of resources that can be used to gain baselines for student understanding</td>
<td>This code supplies guidance on where teachers can gain information about students to determine where to start with differentiated instruction</td>
<td>Student Information</td>
</tr>
</tbody>
</table>
| Resources and Guidance | Discussion of how assessment can look different for varied content and to support the academic success of all learners | This code depicts how teachers can use content areas for project based learning and to provide multiple opportunities for students to succeed | Role of Assessments | if they want to demonstrate their knowledge, so one of the things I say to parents on open house night is I don't really test a lot of science and social studies. I feel like our kids get tested enough. So it's a lot of performance based kinds of things. So that all kids have an opportunity to be successful.

| Resources and Guidance | Discussion of how to support new teachers in their implementation of differentiated instruction | This code supports the understanding that seasoned teachers are a critical support for new teachers coming in and guiding their implementation of differentiation | Support for new teachers | We have an LTS in one of our fourth grade classrooms. We're going to sit down next week and go over novels that she can use for small group. Because she's like, I don't know what novels we use. And I said, well, think about the ones we used last year. But I have other ones too, and let's talk about the structure of your group. Run it the same way that we ran it last year. You know where you meet with two groups. So, you know, I think she's like a little nervous to kind of do that on her own, but she's going to. Try and that's a good day.

<p>| Resources and Guidance | Discussion of how each year there are always new resources and ways to find guidance in differentiated instruction | This code helps us understand that teaching is constantly evolving and there are new resources and guidance to consider each year | Resource adaptation | Every year. There's always something new. There's always something new. That doesn't mean I'm replacing stuff that's really good. It really. Depends on the. Kids you have in front of you too. Each class is different. |</p>
<table>
<thead>
<tr>
<th>Resources and Guidance</th>
<th>Discussion of giving student choice in writing topics to support differentiation and engagement</th>
<th>This code shows how teachers can provide choice in writing topics to support student engagement, but also provide instruction on writing strategies for the different genres</th>
<th>Student directed differentiation</th>
<th>You know, I really feel like the writing workshop model is way to go with writing. Choice leads to voice. I can't even tell you like, because they have choice and what they're writing about, you know, so we did narrative writing that we did information right now we're back to narrative because there's so much of an element of choice. It just kind of naturally flows that way. Now do some kids really struggle at certain times? Yes. Do you kind of have to navigate that? Yeah, you do. But for the most part, the kids are pretty motivated.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professional Development</td>
<td>Discussion about how educational professionals providing PD is helpful.</td>
<td>This code discusses the how educational professionals are valued in PD opportunities, especially those who are experts in their field of interest</td>
<td>Leadership PD</td>
<td>Well, I think early on in my career I was really interested when we had an OT, Mary Dugan, that the district hired as a consult and she'd come into all the buildings from the IU and the things she would do with the kids too, I kind of took that to differentiate, like their handwriting, all the different strategies.</td>
</tr>
<tr>
<td>Professional Development</td>
<td>Discussion of highly specialized PD opportunities to support understanding of how learning takes place in the brain of a child</td>
<td>This code explains the significance of gaining an understanding of how the brain works and the value that holds in understanding learners</td>
<td>Leadership PD</td>
<td>I think the ones that helped me to differentiate then would be definitely the occupational therapy, the brain development and a basic reading program about how kids learn the systematic sequence of reading.</td>
</tr>
<tr>
<td>Professional Development</td>
<td>Discussion of PD being meaningful and full of connections to the classroom</td>
<td>This code provides understanding for what meaningful PD looks like and that this is what teachers expect</td>
<td>Characteristics of valued professional development</td>
<td>But you know the district. I always just say I do think PD is important, but it's gotta be meaningful for us too. You got make connections to it. You just can't throw something out there.</td>
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<tr>
<td>Professional Development</td>
<td>Discussion of pre-service teacher coursework and the not making assumptions about new teacher skills</td>
<td>This code shares an understanding about not making assumptions about new teachers and what knowledge they come in with related to DI</td>
<td>Support for new teachers</td>
<td>I think when they start working in small groups, they realize the power of it. I think really by doing because we can't assume that they've had any kind of instruction or background in their methods courses at the university level, you know. So we can't assume that they come in with that knowledge, but they can kind of, you know through our modeling begin to figure out like how we go about it.</td>
</tr>
<tr>
<td>Professional Development</td>
<td>Discussion of providing choice in PD opportunities</td>
<td>This code provides an understanding that choice is appreciated in PD opportunities</td>
<td>Characteristics of valued professional development</td>
<td>100%. And I think we've done that in the district through the menus and stuff.</td>
</tr>
<tr>
<td>Professional Development</td>
<td>Discussion of why PD needs to be long term and include follow up opportunity</td>
<td>This code makes it clear why PD needs to include follow-up for reflection and refinement</td>
<td>Characteristics of valued professional development, Distinct Led Professional Development, Follow Up</td>
<td>I do think there's another way to differentiate. I think you take your topic areas. Here's my problem with professional development, OK. I love professional development. But there's never follow up and that's the biggest criticism of professional development.</td>
</tr>
<tr>
<td>Professional Development</td>
<td>Discussion of how PD can come in stages so that teachers are provided smaller loads of information to digest and try</td>
<td>This code makes a great argument for scaffolding PD opportunities so that teachers can try strategies in the classroom and then collaborate with colleagues over time to refine</td>
<td>Follow Up, Teacher led Professional Development</td>
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<tr>
<td>Professional Development</td>
<td>Discussion of how leadership is a major part of what PD opportunities are provided and why</td>
<td>This code makes it clear that principals that have a solid understanding of what the teachers in their buildings can work to offer PD that is specific to teachers' needs</td>
<td>Role of the Principal</td>
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<tr>
<td>Professional Development</td>
<td>Discussion of the role of reflection in PD</td>
<td>This code makes an argument for why PD with opportunities for reflection is so important, especially for new teachers</td>
<td>Characteristics of valued professional development, Pre-Service Professional Development</td>
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<td></td>
<td>OK, so I think in order to have really good differentiation, you have to be really reflective upon your teaching practices. Yeah, teacher reflection is so important that we try to get our preservice teachers to really reflect upon their practices. You know.</td>
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It's the follow up. So even with text dependent analysis like I've done TDA. I've done TDA workshops here, but it's always been a one and done. But I've always said the next step is we have to teach people how to teach kids to analyze. And then after that, how to get that analytical thinking in writing, you know? So that piece is huge. I feel like a lot of staff developments are one and done. Yeah, and that's unfortunate.

Knowing the needs in their building. Right. Or knowing the needs of the teachers in their building or putting out a survey. Sometimes people aren't real honest though in a survey. They're going to put what they think you want to hear or you're just going to put something down for the sake of putting it down. But you know, I think it all starts with the culture in your own building, and we all know, you know, each building has a different culture.
<table>
<thead>
<tr>
<th>Professional Development</th>
<th>Discussion of the power of autonomy in PD for teachers</th>
<th>This code shows the power that autonomy gives teachers when they are in control of their own learning</th>
<th>Teacher led Professional Development</th>
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<td></td>
<td>Last year, we were given time from our principal which was great. With this 1/2 day to look at our new program and see what we wanted to continue doing, what we didn't. So we cut out a couple of the lessons so. We have last year's slides that we've just adjusted for this year for math and on Thursdays we do PLC. We do PLC, probably not the way other people do it, but we do, we talk about. What we're teaching and how we're teaching it all throughout the week.</td>
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<th>Professional Development</th>
<th>Discussion of collaboration and its role in PD</th>
<th>This code supports the understanding that teacher collaboration is very effective in PD opportunities</th>
<th>Teacher led Professional Development, Teacher Collaboration</th>
</tr>
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<td></td>
<td>I mean, I always love how if I could offer something that would help benefit teachers, sure, I'll share and that's how we've been doing professional development.</td>
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<th>This code supports the understanding that teacher collaboration is very effective in PD opportunities</th>
<th>Time, Teacher Collaboration, Grade Level Teams</th>
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<td></td>
<td>And also give us time. Professional development is collaboration. We don't have that anymore. We don't get a day where all the kindergarten teachers can go and meet, you know?</td>
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<table>
<thead>
<tr>
<th>Professional Development</th>
<th>Discussion of the necessity for follow-up opportunities to provide meaningful PD</th>
<th>This code provides clarity for the necessity of having long term PD with many opportunities to follow up and refine differentiated practices</th>
<th>Teacher Collaboration, Teacher led Professional Development, Follow Up, Follow through, Summer PD Op</th>
<th>So over the years when we used to get together as kindergarten teachers, I felt like we got a new program we were able to talk about it, share our frustrations. Hey, I even remember when they said, hey, each kindergarten teacher, you’re each going to take a little theme and see what you can come up with, and then we’ll meet again and share, I remember doing that years ago. And I think that helps us learn new things too. So offering summer classes is not the only thing I think they need to do, adding something throughout the school year to build and support teachers professionally so they can differentiate.</th>
</tr>
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<tr>
<td>Professional Development</td>
<td>Discussion of the role of collaboration and how it supports the implementation of DI</td>
<td>This code makes an argument for the importance of teacher collaboration in the implementation of DI</td>
<td>Teacher led professional development</td>
<td>I know the big the big push was always like, OK, you collaborate with your team and a lot of times we do. And like I know, say, the first grade team right now. I mean they do everything together. You walk in there during math, they’re on the exact same lesson.</td>
</tr>
<tr>
<td>Professional Development</td>
<td>Discussion of the value of breakout sessions in PD</td>
<td>This code provides an understanding of how more learning takes place in small groups than in large masses of people and how PD should be modeled after that</td>
<td>Distirct Led Professional Development</td>
<td>divide and conquer. Right? You can reach more people in your small group than you can in your large masses of how many ever 4th grade teachers you have.</td>
</tr>
<tr>
<td>Professional Development</td>
<td>Discussion of professionals being solicited to provide PD that aligns to programming purchased</td>
<td>This code helps create an understanding of the value of including professionals associated with the programming purchased in PD opportunities</td>
<td>Distinct Led Professional Development, Leadership PD</td>
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<td>I know the district offered that a little bit with Project Read. When Helen Conahan Detray came in, I loved that when they paid for a program and they followed through. She would come to each building and meet with K-2 teachers, and then three to five teachers, and really worked with us and followed through for the entire year. And I think she even came back another time. So I always found like, those in-service, those PD definitely were more helpful because it guided you through the whole program. Now it feels like they just throw it at you to figure it out and say if you have a question, let us know.</td>
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<th>Professional Development</th>
<th>Discussion of the necessity for teacher engagement in PD</th>
<th>This code makes it clear that teachers need to be given opportunities to learn constantly to keep them engaged in implementation of DI</th>
<th>Independent research and study, Distinct Led Professional Development, SQ3: Professional Development and DI, Self propelled PD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teachers need to constantly, you know, be engaged with professional development opportunities, whether it's those that are provided for them or those that they seek out themselves. You know, so absolutely.</td>
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<tr>
<td>Professional Development</td>
<td>Discussion of the role of leadership and their responsibility for making it clear that PD is essential</td>
<td>This code explains why leadership and administration need to provide clarity on the importance of PD and the expectation they have for teachers to be engaged in the opportunities provided</td>
<td>Role of the Principal, Distinct Led Professional Development</td>
</tr>
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