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## Teachers' Perceptions of Their Roles in Blended Learning Environments

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Teachers' Perceptions of Their Roles in Blended Learning Environments

A Dissertation

Submitted to the Graduate Faculty of the  
University of New Orleans  
in partial fulfillment of the  
requirements for the degree of

Doctor of Philosophy  
in  
Educational Administration

by

Sabrina Pence

B.S.F.S., Georgetown University, 2002  
M, Ed., Louisiana State University, 2005

December 2022

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## Abstract

Schools are widely implementing blended learning, defined as a combination of face to face instruction and computer-assisted instruction, to increase student achievement. Given that the computer is taking on a component of instruction, there is some evidence that the role of the teacher is changing. The purpose of this study is to understand the perceptions of primary teachers about their role and possible role change in a blended learning environment. A qualitative study using transcendental phenomenology was conducted among a group of primary teachers who teach reading and math in grades K-4. Role theory was applied to illuminate whether the role of teachers has changed and whether the role was more or less intense. The findings of the study show that teacher roles are indeed changing in a blended learning environment. Teachers are using student learning data differently to target their instruction, creating new ways to motivate students as independent learners engaged in computer-based learning, and planning their lessons differently. The findings of this study did not show role de-intensification, given that teachers are doing more and new work with the new information about students and their learning from the software. The results of this study can be used to inform the construction of pre-service teacher training, as well as teacher professional development in schools so that teachers have the tools they need to be successful in this new type of classroom.

*Keywords:* blended learning, teacher role, primary teachers, role intensification

# **CHAPTER 1**

## **Introduction**

### **Blended Learning**

Blended learning, an approach to learning that combines face to face instruction and computer-based instruction, is one approach that schools are using to improve student achievement (Vander Ark, 2015). Schools are implementing the use of blended learning in multiple ways, but the two most common ways in schools are through the lab model or through the station rotation model (Vander Ark, 2015). The lab model is one where multiple classes of students come to a computer lab and work on computer programs in that setting (Staker, 2011). The station rotation model is one where students rotate through learning centers, typically with one center being a face to face interaction with the teacher and one center being with a computer (Staker, 2011). Both models require increased amounts of funding to purchase equipment and to train staff on how to use the programs.

Blended learning came through the emergence of virtual schools in the early part of the 21<sup>st</sup> Century (Archambault & Crippen, 2009). By 2011, approximately 320,000 K-12 students attended a virtual school, where all schooling was received online, either in completely virtual courses or in a blended context (Insight, 2011). The proportion of students using some form of software has grown significantly since that time. In 2013, 43% of K-12 school leaders reported offering a form of online instruction to students in a survey offered by Project Tomorrow (Center For Digital Education, 2014). Based on market research, Insight (2011) estimated that 17.3 million students would be receiving at least 1 course online by 2015. The COVID-19 pandemic increased this, as students engaged in emergency remote learning, some of which included blended learning (Shamir-Inbal & Blau, 2021).

Blended learning could be a tool that helps increase student achievement. In one quantitative study at KIPP New Orleans, 94% of 130 teachers and school leaders believed that blended learning is a positive contributor to student success in the K-12 charter school setting in New Orleans (Alijani, Kwun, & Yu, 2014). In the first meta-analysis of blended learning studies, Iqbal et al. (2022) show that blended learning has a statistically significant impact on students in the K-12 setting, but its effect size has much to do with factors like related group activities in the class, the instructor and their knowledge base, and other factors. So, while there is promise in using blended learning with students, there are many questions that remain about the factors that create student learning. To implement blended learning, a large financial investment must be made by schools to include the hardware, software and connectivity costs. If such a large investment is going to be made, the public will demand an educational return on this investment. Of the major research studies on the topic of blended learning, the literature is primarily focused on learner experience, the effectiveness of content in supporting learners, and its implementation in a higher education context (Wang, Han, & Yang, 2015; Means, Toyama, Murphy et al., 2009; Kassner, 2013; Poirier, et al., 2019). In a study that analyzes trends in dissertation topics related to blended learning, only 8% of studies were even conducted in a K-12 environment (Drysdale, Graham, Spring, & Halverson, 2013). While the main focus of dissertations was the student experience, there were a few studies about professional development for K-12 teachers (Drysdale, et al., 2012). A later study that is a meta-analysis of professional development reviewed the different studies that had been done related to professional development for teachers using online and blended learning, and there were only fifteen studies that even met the criteria for being included in the study due to the lack of studies on the topic (Philipsen et al., 2019). These studies help us understand whether the investment is

worth the resources, but it is not sufficient. Blended learning also requires change in teaching practice. We have a limited understanding of what blended learning means in terms of changes in practice and changes in roles for a teacher.

**Changing Role of Teachers.** Research evidence suggests that the effectiveness of the teacher is the most important in-school factor for increased student learning (Stronge, Ward, & Grant, 2011). There has not been significant scholarly work in looking at teachers as a subsystem in blended learning (Xu, 2013). A sub-system is a small system within a larger system, and teachers are a component of the education of a student. Additionally, exhaustive review has identified no scholarly work in looking at teachers in primary classrooms using blended learning structures. There are, however, studies that discuss the role of teachers in the classroom without the context of blended learning, which will be explored in depth in the literature review to help guide this study.

This study will focus on the teacher experience in using blended learning structures in the K-4 classroom, given the gap in studies in the teacher experience and in those particular grade-levels. There is work from practitioners at iNACOL, the International Association for K-12 Online Learning and The New Teacher Project (TNTP) that is exploring the idea that blended learning instruction will require different types of teaching and teaching competencies (Powell et al., 2014; The New Teacher Project, 2014). In TNTP's working paper, it is posited that teachers who heavily use blended learning play four roles: researcher, developer, integrator and guide, as opposed to the traditional teacher who plans and assesses instruction (The New Teacher Project, 2014). Under this theory, the researcher and developer designs and pilots blended learning models, the integrator integrates current curriculum with online curriculum, and the guide uses data to adjust student learning (The New Teacher Project, 2014). Similarly, Xu (2013) states that

the role of the teacher is changing from a knowledge initiator and class controller to that of facilitator, advisor, and promoter of learning, while Shaikh and Khoja (2012) state the role includes instruction and teaching, planning and design, communication and interaction, management and administration, and use of technology. Schools using blended instruction will need to consider how they select and train teachers, with a view to the possibility that this style of instruction is a new way of thinking for teachers (The New Teacher Project, 2014; Fallon, 2020). In more recent work, there are continued ideas about the changing role of teachers. For example, Zhao (2022) argues that the role of teachers has changed due to the pandemic with online learning and that instead of being strong in direct instruction and classroom management, teachers need to be a talent coach, community organizer, project manager, and resource curator (Zhao, 2022). While compelling, Zhao's framework is not grounded in research but wide experience in the field. Barbour (2020) argues that the competencies discussed in the various models are not grounded in research and are thus flawed. Hodges et al. (2022) argues that having clear research-based standards for teacher knowledge in blended learning is key to having effective practices in the classroom and are a precursor to achieving success with blended learning. So, while there are many models and emergent thinking over the last few decades, with an explosion of interest post-COVID, there is not an agreed upon body of work that describes teacher role change and the associated competencies. A next step is to determine the teacher experience as related to role change in a blended learning environment.

### **Problem Statement**

The problem addressed in this study is how primary teachers perceive their role while using blended learning structures. There is a lack of research in the field of blended learning in both the area of teacher experience and the area of blended learning used with K-4 students. As

blended learning becomes a regularly used mode of instruction, it is important to critically look at its implementation through the eyes of the teacher. While this study was completed prior to the COVID-19 pandemic, emerging research demonstrates teachers felt unprepared to use technology, including blended learning software, during the pandemic (An et al, 2021). This has the potential to help teacher preparation programs and school and district leaders plan for the professional development needs of teachers, which is critical both for regular schooling and any disruptions to in-person learning.

### **Purpose Statement**

The purpose of this phenomenological study is to explore primary teachers' perceptions of their role in a station-rotation blended learning environment in two schools. The study examines how teachers perceive their role, as well as how teachers experience their role as reading and math teachers using blended learning as an instructional strategy. Through teacher interviews and classroom observations, the study gains insight into how teachers experience blended learning as an approach to teaching literacy to primary students. Teachers are the people who most directly impact whether or not students learn, and their voice in implementing such a large change in pedagogical practice is key to understanding the usefulness of blended learning in teacher role change and the intensification of the role of the teacher (McLaughlin & Mitra, 2001; Coburn, 2003).

### **Research Questions**

The central question of the study is: *What is the experience of K-4 teachers in using blended learning during in-class station rotations in reading and math class?* There are two sub-questions for the study related to the teacher's role in general and their conceptualization of their role as a reading teacher of primary students:

- What are teachers' conceptualization of their roles as teachers in a blended learning environment?
- How do teachers' conceptualizations of their roles change after blended learning structures are introduced?

### **Definition Of Terms**

The researcher has defined the following key terms as follows:

**Blended Learning.** Blended learning is defined as a combination of face-to-face instruction combined with computer-based instruction (Staker, 2011). Blended learning is a term that is often used interchangeably with distance learning, computer-assisted learning, personalized learning, and so on (Staker, 2011). For the purpose of this study, these terms will not be used, as they all have slightly different meanings. Sometimes, the computer-based instruction component of blended learning programs is not done in the classroom. Rather, it is done at home at one's own pace (Staker, 2011). This study is confined to blended learning within the confines of the classroom during the instructional day. Given that the teachers are K-4 teachers, all instruction will happen within the classroom.

**Station Rotation Model.** The station rotation model is one where students rotate through learning centers, typically with one center being a face to face interaction with the teacher and one center being with a computer (Staker, 2011).

### **Conclusion**

In summary, this research study will investigate teacher perceptions of their role in a blended learning environment. In Chapter 2, I will review the relevant literature about the evolution of the teacher role in a blended learning environment. In Chapter 3, I will provide an

overview of my research methods, including my two main methods of observation and interviews, along with information about my sampling and data analysis.



## CHAPTER 2

### Literature Review and Theoretical Framework

Across the United States the number of students taking part of their course work in an online environment is over 400,000 students as of 2019, and this is changing everyday (Molnar et al., 2019). This will likely have an impact on the role of the teacher, but we do not yet know how. To build the case for further investigation into the teacher experience, this literature review will deeply explore the roles of teachers, grounded in role theory. The field of blended learning is a wide field, in that it includes the use of educational technology, student outcomes and experiences, teacher outcomes and experiences, as well as institutional outcomes and experiences. To begin, I will briefly discuss the changing of the role of the teacher in the era of accountability, with a specific focus on the use and integration with educational technology. Given that the purpose of the study is to focus on the role of the teacher while using blended learning in primary classrooms, the literature review will also look at how reading and math are traditionally taught in a primary classroom and how it is being taught with technology. Lastly, the literature review will look at blended learning practices, starting from a wide focus to define the field of blended learning. It will then look at emerging ideas about the changing teacher role in the classroom, along with a discussion of research related to teacher competencies for the blended learning classroom.

#### **Policy and Teacher Role Change**

**A Nation At Risk.** The traditional roles of teachers are changing due to a new era of high stakes accountability (Valli & Buese, 2007). A brief discussion of policy is important to the study, as the policy is the impetus for change in the role of teachers. The national conversation of student achievement as compared to other nations has strong roots in the 1983 report, A

*Nation At Risk: The Imperative For Educational Reform*, published by the National Commission on Educational Excellence. The report begins with “Our Nation is at risk. Our once unchallenged preeminence in commerce, industry, science, and technological innovation is being overtaken by competitors throughout the world.” (National Commission on Excellence in Education, 1983, p. 9). The report goes on to detail multiple data points that suggest we are at risk. The commission makes the case that we are significantly behind in education as compared to other nations to lay the groundwork for its recommendations for educational reform. The report denotes four areas for reform: “content, time, expectations, and teaching.” (National Commission on Excellence in Education, 1983, p. 21). Key recommendations for improving teaching included creating rigorous standards and a robust core curriculum, along with specific outcomes for each curricular area (National Commission on Excellence in Education, 1983). The report discusses the importance of a deep investment in teacher preparation, given the changes required of teachers (National Commission on Excellence in Education, 1983). Another key recommendation was the importance of including new technologies in the curriculum to keep pace with other nations (National Commission on Excellence in Education, 1983).

**Standards and Accountability.** After this report was released in 1983, several important events and policies were set. To address the report, President George Bush met with the National Governor’s Association in 1989 for an educational summit to establish educational goals for the country (Vinovskis, 1999). One of the core action items identified at the summit was the idea of establishing national goals in education (Vinovskis, 1999). In 1994, President Clinton enacted a re-authorization of the Elementary and Secondary Education Act (ESEA) that began the work of states identifying standards to be taught across the nation (Vinovskis, 1999). Never before had the government mandated what a student should learn. A major shift in

national policy in education came with the policy of No Child Left Behind in 2001. One critical component of the No Child Left Behind legislation was the requirement of states to complete annual testing in reading and mathematics for all students (Jennings & Renter, 2006). While states were allowed to use their own standards and tests, states had to report each year on their schools' academic performance (No Child Left Behind, 2002). The implication of regular testing of all students was that states had to benchmark themselves and measure progress. States were now completely aware of the level of education in their state.

**Changing Role of Teachers.** Due to the new era of standards and accountability, several researchers argue that the role of a teacher has changed. The concept of teacher work intensification was introduced in the research community in the 1990s, as new reforms began to emerge (Hargreaves, 1992). In a four year study, Valli and Buese (2007) describe the role of a teacher as having increased, intensified, and expanded due to changes in policy about student achievement. In the study, the researchers analyzed teacher tasks that teachers were asked to do in relation to differentiation (Valli & Buese, 2007). Their finding was that teachers had numerous new tasks: “curriculum pacing and alignment, data analysis, ESOL instruction, inclusion instruction, instructional materials development, organizational system management, tutoring, and vertical articulation” (Valli & Buese, 2007, p.531). Valli & Buese (2007) argue that this increased, intensified and expanded role is one without impact on students, mostly due to the change being driven by policy makers and administrators as opposed to teachers. In a similar study, Bailey (2000) researches the experiences of ten teachers as related to mandated changes for teachers, with a particular focus on curriculum and pedagogical practices. While not specifically looking at these practices, Bailey (2000) describes the experience of increased mandated changes as marginalizing for teachers, as they themselves are not a part of the change.

Other studies related to role intensification support that teacher roles are intensifying as new duties and roles are being introduced. Kim (2018) demonstrates that the role of early childhood teachers is intensifying due to using mandated commercial curriculum, assessment, and technology programs. A study in England finds that as accountability measures increase, primary teachers feel that they cannot ever measure up to the standards and that their work is never good enough compared to the accountability metrics (Sturrock, 2021).

While different teachers have different roles based on experience, capacity, school and leadership characteristics, among others, there is also a general evolution of the teaching profession that can be seen. Hargreaves and Fullan (2000) describe that the role of a teacher has evolved from pre-professional to autonomous professional to collegial professional and finally to professional. In the professional era, teachers are required to work in collegial ways to support a more diverse clientele with increasing demands on their time (Hargreaves & Fullan, 2000). Given this change in teacher roles and the intensification of the role, technology can be both an intensifier, as it is something new to learn, or it can de-intensify the role, because students can be more self-sufficient and data is easier to collect from computer programs.

### **The Role of Teachers**

**Role Theory.** The theoretical framework is grounded in role theory, which helps explain how the role of the teacher has changed over time. Role theory describes how people come to understand specific roles in society. The first component of role theory is that people have social positions, identities that designate commonly recognized sets of people that behave in common ways (Biddle, 2013). Role theory began as a theatrical metaphor to explain how people act in a particular group or culture (Biddle, 1986). Individuals in different theatrical productions play a part by reading a script in a particular context. The metaphor is connected to social behaviors,

where parts and scripts are understood by social actors (Goffman, 1959). The theatrical metaphor was taken to develop a concept of roles. In role theory, roles are conceptualized in four ways: behavior, person, context, and characteristicness (Biddle, 2013). Given that, these groups of people have shared expectations for their roles through learning the role and teaching others about the role (Biddle, 2013). When taking on a particular role, the person learns these characteristic ways of behaving from those already in the role. Once someone is established in the role, she or he undertakes teaching new people to the role (Biddle, 2013). Context also plays an important role in establishing these sets of characteristic behaviors within a role (Biddle, 2013). For example, the role of a teacher in a primary classroom context is much different than the role of a teacher in a high school context.

Role theory is a lens to look at how the role of a teacher is evolving. In terms of behavior, role theory defines what a person typically does in their role (Biddle, 2013). In the instance of teaching, this would be defined as things such as lecturing, grading student work, planning lessons, and other things that teachers characteristically do. In terms of person, role theory looks at the role of one person to large groups of people that have something in common (Biddle, 2013). In the case of this study, the role that will be examined is the role of the K-4 teacher. Context and characteristicness are also important in role theory, as the group of people studied typically represent a certain subset of a larger group and their particular characteristics are dependent on the context (Biddle, 2013). In this study, the context and characteristicness of the group of teachers studied is important, in that the context is primary schools where blended learning structures have been implemented widely. In another group of schools or in another environment, the role of a K-4 teacher might be very different. Longstreet (2011) describes an understanding of roles in a group as “disciplinary communities [that] have particular histories,

values, practices, and institutions that distinguish them from one another (Longstreet, 2011, p. 23). Given the newness of blended learning, it is possible that teachers may not have a fully established sense of history, values, or practices to help them understand their role.

Role theory goes beyond explaining what a person or group of people do in a particular context and a particular way. Role theory also looks at how individuals play a role in the larger organizational context. One of the core principles of role theory is the idea of consensus and conformity. These ideas refer to how individuals come to understand and “act out” their roles and common norms (Hinden, 2007). With consensus, individuals make the decisions and choose to agree with the norms as an individual, while conformity is more compliance driven, which means that people accept the role without agreement. Biddle (1986) defines the different perspectives that the individual level role theory is applied to the larger social structure. Functional role theory is useful in describing the context in which the social structure is stable, and individuals learn their role in the structure through being taught the norms by others in the structure (Biddle, 1986). The norms and expectations of the role are generally learned through conformity in this model (Biddle, 1986). This works well in highly stable environments, but critics have pointed out that social structures are rarely stable (Biddle, 1986).

A second perspective is that of symbolic interactionist role theory, that highlights roles that are ever evolving through interaction of group members in the society (Biddle, 1986). This idea was criticized because it only accounts for group members within the social structure, not accounting for outside pressures. Organizational role theory accounts for both the role of the individual within an organization, interaction of the individual and the organization, external social structures that determine role and the role of the organization in defining the role of an individual (Biddle, 1986). A last area of role theory is cognitive role theory, which focuses on

the relationship between behavior and expectations (Biddle, 1986). Given that the focus of the study is on the role of teachers within primary schools, organizational role theory is the most helpful of the perspectives within the larger context of role theory. As I review teacher perception of role, I can investigate teacher perception about the primary school's role in defining their role in using blended learning structures.

These roles are then embedded in larger societal systems (Biddle, 2013). Role theory has been applied to the role of teachers since the 1930s (Waller, 1932). In this seminal work, Waller (1932) asks the question of what teaching does to teachers. His overarching findings were that teachers show specific traits that include prideful personalities, and that they are tied to doing things the same way without change. Since the 1930s, researchers have looked at the role of teachers from a variety of viewpoints and have described roles in different ways. The following discussion of the role of a teacher looks at how the role of a teacher is conceptualized in terms of tasks that the teacher does within the classroom.

**Traditional Teacher Role Theory.** For much of the 20<sup>th</sup> century, the predominant theory about teacher roles was Lortie's teacher role theory in his book, *Schoolteacher*, in 1975 (Hargreaves, 2010). In *Schoolteacher*, Lortie reviews the findings of 94 teacher interviews about their role (Lortie, 1975). From the interviews, Lortie (1975) posited that teachers viewed their role in three ways: individualism, presentism, and conservatism. Individualism means that teachers set their own criteria for success in the classroom, given that there were no common measures, and they were thus prone to keeping a high degree of autonomy in what they did (Lortie, 1975). Presentism relates to the role of teachers being one where there is little need for collaboration amongst colleagues, and conservatism is a preference for doing things as they have always been done (Lortie, 1975). In this era, teachers were able to make their own decisions

about what was taught, have a fair degree of autonomy, and made little change over the decades to how teaching was done. Understanding of this role was passed on through watching what other teachers did (Labaree, 2000).

**Role Intensification.** *A Nation At Risk* marked the beginning of teacher role change from earlier decades, as it demonstrated that American students were not making as significant academic progress in our schools compared to other countries (National Commission on Excellence in Education, 1983). While the role of the teacher remained fairly static for many decades, new policies beginning in the 1980s began to change the role of the teacher (Hargreaves, 1992). These policies, such as No Child Left Behind (2001), called for standards, which defined what would be taught, and assessments that would measure whether the standards were met by students. This inherently changed the teaching profession (Valli & Buese, 2007). Valli & Buese (2007) show that the role of the teacher has expanded, intensified, and increased due to the age of accountability, mostly due to requirements for differentiation of learning with students. This requires more data analysis, more selection of tasks for students to do to meet their needs, more planning of curriculum and assessment, and so on.

**Role Change with Blended Learning.** Blended learning, on the other hand, poses a new type of role change for teachers. Instead of intensification, it helps to automate many of the tasks that teachers are trying to do, such as data analysis, creating individualized assignments for students, and developing valid assessments (Staker, 2012). The New Teacher Project (2014) posits the change of the role to be one of integrator, researcher, developer and guide. Another framework, developed by iNACOL, the International Association of Computer and Online Learning, describes this role change as a set of new competencies that teachers must have, which include new data practices, new instructional strategies, new types of classroom management for



a blended setting and several adaptive skills such as reflection and continuous improvement (Powell et al., 2014). There are instruments that have been built to measure teacher readiness in blended learning, based on teacher perceptions of their readiness (Graham, et al., 2019). While instruments like that used in the Graham et al., 2019 study, this instrument is not further validated by other studies at this point, so it is not yet ready to be held up as the standard for teacher readiness in blended learning. In a study by Pulham and Graham (2018), they synthesized 18 different sets of competencies for online and blended learning, and they too note that while there are commonalities amongst these competency models, they are not grounded in research. Barbour (2020) demonstrates that while models for teacher competencies in blended learning exist, they are not research based. So, while there are models that address potential teacher competencies in a blended learning setting and a few that point to teacher role change in a blended learning setting, there are not yet studies that offer a concrete, research-based model for teacher role change. The conceptual framework for this study is that the role of a teacher is evolving over time with the introduction of blended learning.

### **Role Theory and Relationship to Problem of Study**

Role theory was chosen as the main framework for this study because it is a theory that serves as a large overarching theory to describe the behaviors that people exhibit in a particular context and the impact that an organization has on defining that role. There is emerging work from practitioners at The New Teacher Project that is exploring the idea that blended learning instruction will require a different type of teacher (The New Teacher Project, 2014). This work argues that teachers who heavily use blended learning play four roles: researcher and developer, integrator and guide, as opposed to the traditional teacher that plans & assesses instruction. As described in the previous section, there are additional studies that describe potential teacher

competencies in a blended learning environment, but there is still a lack of clear models for teacher role change that are grounded in research. The dissertation study is geared to see if these emerging ideas about teacher roles, specifically the behaviors they exhibit in the classroom, are how teachers perceive any potential role change.

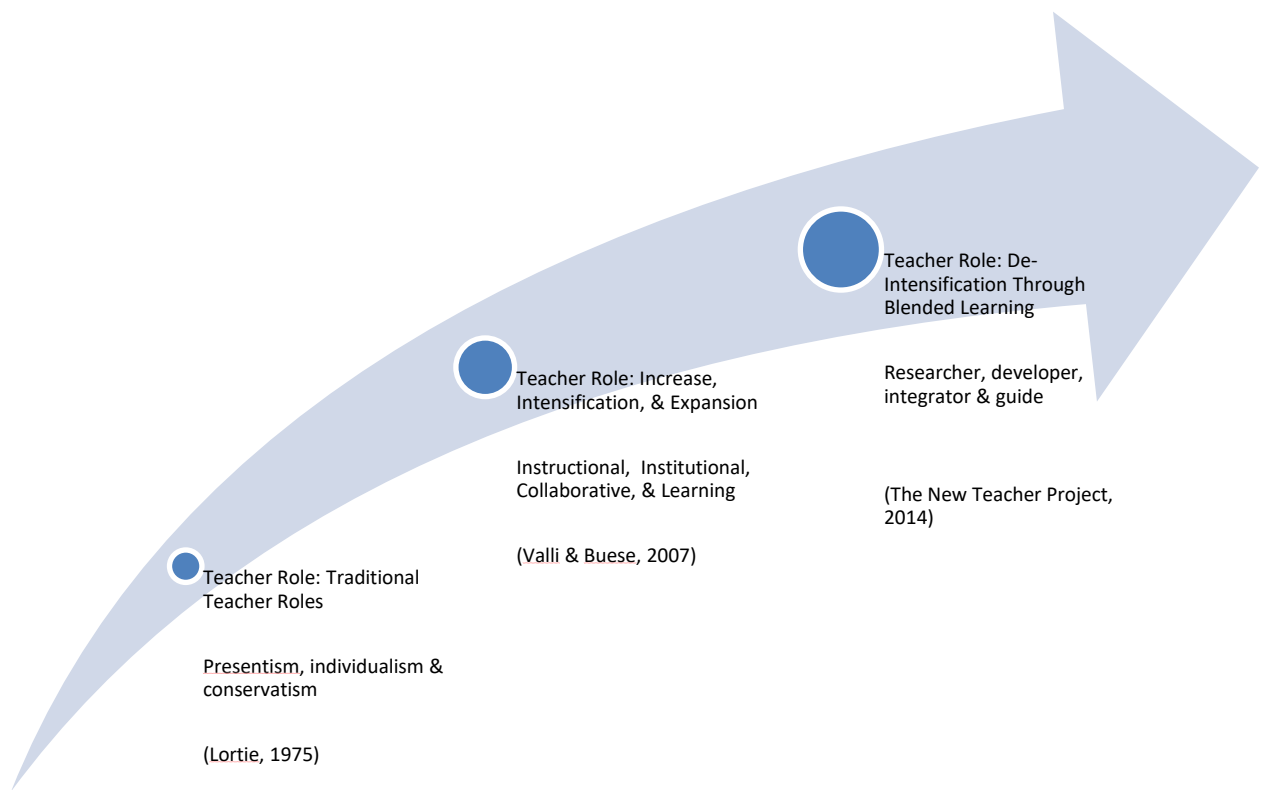
### **Advances in Applying Role Theory to the Work of Teachers**

Role theory is not typically used to explain the changing work of teachers in recent scholarship. However, Biddle (1986) shows that the actual term *role* is used in more than 10% of journals related to sociological research. When looking at what teachers do in the classroom, role is often a frequently used term. Thus, while Biddle's work and the work of other relevant role theorists is not explicitly named, people do use some of the concepts of role theory informally. This is particularly true when using role as a term that describes behaviors of teachers. Given that the problem of the study is to describe teacher perception of teacher role change, role theory remains a strong theory, as it is a concrete way to describe the evolving role of a teacher.

More commonly in current research, the discussion of teacher role change revolves around how teachers are held accountable for how they perform, and, how with accountability, the role of the teacher has intensified through the many mandates that come from increased accountability (Valli & Buese, 2007). There are a few theoretical frameworks that researchers employ in these areas. The core principle in these studies is that change is being done to teachers to achieve accountability and policy measures. Thus, researchers choose theoretical frameworks that have to do with change from the outside and power relationships. One theoretical framework that is frequently referenced in teacher role change studies is that of critical education theory by Michael Apple, originally presented as a thesis of intensification in 1986. Apple

(2013) uses critical theory to demonstrate how both gender and class play a role in teacher role intensification. Specifically, Apple (2013) criticizes the school reform movement and the amount of change that happens from outside of the school. This relates to many teacher role change studies because it looks specifically at how power relationships impact those not in power. This is then applied to teacher role change because many changes to teacher roles come from the government or other top-down methods. Given that my study is not directly looking at power dynamics or how the change in teacher role came about, role theory remains a relevant theory for the study.

### Theoretical Framework



## **Traditional Role of the Teacher**

**Sage On Stage.** According to Schaffer, Nash & Ruis (2015), a classroom teacher typically has up to five roles in the classroom: tutor, explicator, disciplinarian, counselor, and evaluator. As a tutor, the teacher helps a child acquire new learning, while as an explicator, the teacher communicates how to think about this new learning (Schaffer et al., 2015). While acting as a disciplinarian, the teacher places key social structures for student-to-student interaction, and as a counselor, the teacher nurtures the interpersonal relationships of the student (Schaffer et al., 2015). Lastly, as an evaluator, the teacher assesses the progress of the student (Schaffer et al., 2015). These roles place the teacher at the center of the classroom, as they are the main source of feedback for students in the classroom, whether it is feedback about how they have performed on an assignment to feedback on their behavior at recess (Schaffer et al., 2015). The actual teaching strategy, whether it is hands-on, practice-based, or simply worksheets, can vary, but the teacher's role stays the same. The teacher is at the center of the classroom, no matter the activity (Schaffer et al., 2015). A similar description of traditional teaching is that of a sage on the stage, which implies a lecture-based classroom where students listen to the teacher to learn (Jones, 1999). Jones (2006) describes this differently, focusing on the learner (Jones, 2006). The learner receives information from the teacher as an input, which can be in the form of a text, a lecture or other input the teacher designs. The learner then remembers the information to be assessed at a later point by the teacher (Jones, 2006). Connecting back to role theory, the role is characterized by having a set of tasks that the teacher leads with students. This style of teaching is in contrast to the teaching in a blended setting, as the teacher is not at the center of a blended classroom. In a blended setting, students are guiding themselves through curriculum and often assessing themselves. The teacher, on the other hand, helps the students do this.

**Teacher As Knowledge Giver.** Another way to look at how the role of the teacher has traditionally been situated is to look at how teachers are trained. In the late 1960s, a model called direct instruction became popular as a way to teach students (Magliaro, Lockee, & Burton, 2005). Direct instruction is a mode of instruction in which the teacher models and the students have different practice experiences to demonstrate mastery of what was modeled (Joyce, Weil, & Calhoun, 2000). For the last quarter century, most teachers have been trained to lesson plan through the teachings of Madeline Hunter, author of *Mastery Teaching*, who created a lesson plan design based on the direct instruction model (Magliaro et al., 2005). The style of teaching is similar that of the explicator and tutor, in that the teacher is the main planner of the lesson and the main source of feedback. In the eight-step lesson planning process, the teacher takes the following steps (Hunter, 1982).

1. Anticipatory Set: The teacher plans a short activity that focuses students on the learning of the day.
2. Lesson Objective: The teacher defines what the students will learn, why they will learn it, and how the learning will be demonstrated.
3. Input: The teacher outlines what information needs to be presented to students. This can be done in a variety of ways.
4. Model: The teacher models what a final product looks like to the students.
5. Check For Understanding: The teacher checks to see that students understood the modeling by asking questions of the students.
6. Guided Practice: The teacher has the students practice, under the teacher's direct supervision.

7. Independent Practice: Students complete the rest of the work on their own to demonstrate their understanding of the lesson.
8. Lesson Closure: The teacher checks to see what the students have learned in the lesson.

Direct instruction has a wide research base of effectiveness in its approach, particularly with African American and Latino students (Kim & Axelrod, 2005). Kim and Axelrod (2005) point to a study called Project Follow Through conducted in the 1960s with over 700,000 students in 170 communities, comparing 12 different teaching models. Direct instruction was cited over and over in multiple follow-up studies as being effective in improving basic skills and both cognitive and affective learning (Kim & Axelrod, 2005). This style of instruction is at the root of how many teachers have experienced learning how to teach, and the research shows that it is one approach that is effective. As discussed earlier, role theory states that how people learn their craft is one way that the role becomes defined for the person (Biddle, 2013). In this style of training, teachers are trained to teach as an explicator and tutor. What these teachers pass onto others joining the profession would be similar, as this is the other way that roles are defined for people (Biddle, 2013). However, educators have also pursued other ways to instruct students, particularly ones that are not as teacher centered, so there are multiple constructs of the role.

**Teacher As Facilitator.** The original role of the teacher is not singularly conceptualized with the teacher at the center of the classroom. Instead, the role of the constructivist teacher is that of facilitator, where the teacher scaffolds the learning experience for students, but the students interact more with one another in tasks of their choosing (Chrenka, 2001). Constructivists believe that students learn through interacting with the environment and creating new meaning for themselves by connecting new experiences to previously held schema

(Cunningham & Duffy, 1996). The role of the educator is to provide experiences that foster creative thinking and curiosity (Dewey, 1933). While Dewey was not a pure constructivist, his ideas of how students learn best help to found different ideas in constructivism. When the environment is one that fosters the creative mind, the mind will actually be creative (Dewey, 1933). An environment that fosters the creative mind is one where there is an experience connected to what is being learned, most ideally one where there is social interaction and real life experience intertwined (Dewey, 1933). Thus, the role of the teacher is to create the environment and experiences for learning, but students direct themselves through these experiences. More recently, Steffe and Gale (1995) have defined constructivism as a form of instruction that has minimal guidance. Instead, students are presented with goals to attain and experiences that will help the students attain the goal (Steffe & Gale, 1995). Additionally, they drive at the idea that students do not all learn at the same pace, so the experiences need to occur asynchronously (Steffe & Gale, 1995).

Teacher perception of how students learn best may impact their experience in using blended learning structures (Prawat, 1992). To employ the use of blended learning in a classroom, one must have a certain belief about the nature of how children learn. In a blended learning classroom, students spend part of their learning time interacting and learning from different types of experiences on a computer. In most blended learning software, students have a variety of choice in their learning path, both in terms of the activity they engage in, the interface they engage with, their characters, and so on (Michael & Susan Dell Foundation, 2012). This type of learning is more similar to Steffe & Gafe's (1995) definition of constructivism than direct instruction, given that the students have goals and the learning is done at their own pace.

## **Literacy and Mathematics in Primary Classrooms**

**Balanced Literacy.** As participants in this study will be selected due to their work as teachers of literacy or math, the role of teachers in this specific area will also be reviewed. Teaching reading to younger students is typically a specialized form of teaching, where teachers play a specific role. One widely accepted approach to teaching reading is one of balanced literacy. Balanced literacy is defined as using a reading and writing workshop approach to teaching literacy where the teacher models use of skills and strategies on grade-level material, the teacher meets with students in small instructional groups, working at an instructional level (guided reading/writing), and students practice on their own at their own level (Fountas & Pinnell, 1996). It also integrates systematic teaching of phonics, as the approach integrates both direct skill instruction and foundations in a shared literature experience (Frey, Lee, Tollefson, Pass, & Massengill, 2005). For parts of the balanced literacy day, students meet in small groups with a teacher and read books that are 1 - 2 reading levels above their current ability level. The teacher offers supports as necessary in word attack skills or in comprehension. Students are able to tackle the text because the teacher offers supports to access the book, even though it is slightly above the reading level of the students (Fountas & Pinnell, 1996).

Fountas and Pinnell (2006) recommend using a “gradient of text” to use with readers in guided reading groups. This gradient of text is a scale of difficulty for readers. Texts are rated using 10 particular attributes: “(1) genre/form, (2) text structure, (3) content, (4) themes and ideas, (5) language and literary features, (6) sentence complexity, (7) vocabulary, (8) word difficulty, (9) illustrations/graphics, and (10) book and print features (Fountas & Pinnell, 1996). Teachers are then to monitor student progress along this gradient of text. As students increase in their level reading level, students are pushed to use new, more complex skills and strategies as



they read. Resnick and Hampton (2009) also recommend rigorous yet achievable standards by text level for each grade level in their series, *Reading and Writing Grade By Grade* (Resnick & Hampton, 2009). By giving a list of standards related to a level of text and how to remediate based on a student's level, there is a systematic way for teachers to approach any intervention that a student may need. As a guided reading teacher, the teacher has the following roles in a the guided reading component of a balanced literacy lesson: selecting the text, introducing the text, reading the text, discussing the text, teaching processing strategies, extending meaning of the text, and word work (Iaquinta, 2006).

This type of reading instruction requires a high degree of differentiation in the classroom, in that teachers must be able to know how students are doing on each of their foundational phonics skills, as well as their comprehension levels. Students have a diverse set of needs and backgrounds in the classroom that range from special education needs to English Language Learners and so on (Tomlinson, et al. 2003). Given this wide variety, teachers of reading are being called to differentiate instruction, meaning that instruction should be different for different learners in terms of content, process, product and affect through understanding a student's interests, their learner profiles, and readiness (Tomlinson, et al. 2003). However, very few teachers even attempt to differentiate for students in this way because it is difficult to do (Tomlinson, et al., 2003). Technology, however, may make it more possible to differentiate because it provides rapid data, and it is possible that more teachers will differentiate instruction when using technology. The possibility of differentiation with technology has been studied in multiple ways. One such study showed 3rd grade reading teachers using technology to determine the different reader profiles in a class and then used a blended learning program, LexiaCore5, to differentiate blended instruction (Baron et al., 2019). The study showed

statistically significant growth in student achievement. While this study and other similar studies have not focused on the de-intensification of the role of a teacher, it is possible that technology is one way that meeting the needs of diverse learners could be done while de-intensifying the role of the teacher because the computer can grade student work instantaneously.

**Mathematics.** In the primary mathematics classroom, most of the description of pedagogy and the role of the teacher focuses upon how the content is taught versus teacher role (Cotton, 2016). A booklet about effective pedagogy in mathematics produced by the International Academy of Education lists the following as key in the math classroom: an ethic of care, arranging for learning, building on student thinking, worthwhile mathematical tasks, making connections, assessment for learning, mathematical communication, mathematical language, tools and representations, and teacher knowledge (Anthony & Walshaw, 2009). There are implications for teacher role in this study, as with other texts about math pedagogy. The main implication is that teachers must have strong content knowledge to plan for strong tasks that integrate cooperative learning, communication, and assessment in the primary math classroom.

### **Teaching With Technology**

Teaching with technology has been seen for sometime as a way to increase the use of “guide by the side” teaching instead of the “sage on a stage” approach. When investigating blended learning which combines face to face instruction with computer-assisted learning, there is more research available about the use of educational technology in general than blended learning in specific (Wang, Han, & Yang, 2015). Sometimes, they are one and the same, as the terms are often used interchangeably. Other times, they are separate and only focused on use of technology without a blended (face to face) component. For the purpose of the literature review,

I will not discuss teaching with technology in a fully online setting. There is promising research in educational technology that can potentially impact the work of blended learning.

**Blended Learning Models.** In a search of supporting articles of blended learning research, I did not find much in the way peer reviewed research to support the initiatives of station rotation models or lab models. However, it appears that there are several schools that are experimenting with this methodology and having success. A charter school in Los Angeles, KIPP Empower is experimenting with computer-assisted instruction in kindergarten (Barshay, 2011). Students use the computers twice a day for thirty minutes to allow the teachers to do small group instruction with other students. Instead of the teacher conducting a whole group math lesson, the teacher spends time in small groups with students, focused on the specific needs of the students based on data from the software (Barshay, 2011). Additionally, the teacher spent time creating a unique blend of programs, both on the computer and in small groups to cater to specific student needs (Barshay, 2011). 95 percent of students achieved at or above grade-level in math, and 96 percent of students achieved at or above grade-level in reading (Barshay, 2011).

The Innosight Institute (2011) produced a report of schools embarking on experimentation in the field of Blended Learning (Staker, 2011). In the report, it profiled the different schools, and it highlighted their different practices, along with the student gains that they are making. In reviewing the different profiles, Rocketship Education, a charter management group in California, had students in K-5 spend 75 percent of their day in a learning lab with up to 90 students at one time (Staker, 2011). The idea was actually born out of financial necessity, as it saves the school \$500,000 a year in personnel (Staker, 2011). What is interesting is that the school is seeing results, despite having much less personnel. The Rocketship schools are among the top 15 schools in California for low income students (Staker, 2011). In this

model, the role of the teacher has also changed drastically, given that there are less people. Teachers spend their time with students doing goal-setting, reviewing their work from the computer software and helping students understand any key mistakes they are making (Staker, 2011).

The Michael and Susan Dell Foundation (2012) completed a case study of the blended learning initiative at Arthur Ashe Charter School in New Orleans. In the case study, they describe the blended learning model that Arthur Ashe uses, which is a lab model. Essentially, two classes at a time enter a 60 student computer lab. From there, some students go to their computers, while other students work in small groups with regular education teachers, special education teachers, and other personnel in the lab. Students who work at the computers are completing work at their level and are mostly above or on grade-level. The computer programs customize what it is that students work on each session. The students who work with the teacher are receiving either remediation of class work taught that day or remediation of skills they did not learn in prior grades. The groups are flexible based upon what skills the students master. Additionally, students have goals for each program. The students track both their goals and their daily progress in a data tracker (Michael & Susan Dell Foundation, 2012).

Teachers give mini-formative assessments at the end of class each day and then work with students in small groups in the blended learning lab if the students did not master the skill being taught that day. The goal of this model is that students are not slipping through the cracks by not learning the skills they need to learn. There are a variety of activities that are happening within the lab to help improve student academic success. On grade level students are on customized programs while there are multiple types of small groups happening that are mixed types of instruction between the teacher and the computer. Students are regularly assessed to

maintain flexible groups and to track student mastery of skills. Students are involved in the goal setting and tracking of their data to show how they have progressed (Michael & Susan Dell Foundation, 2012).

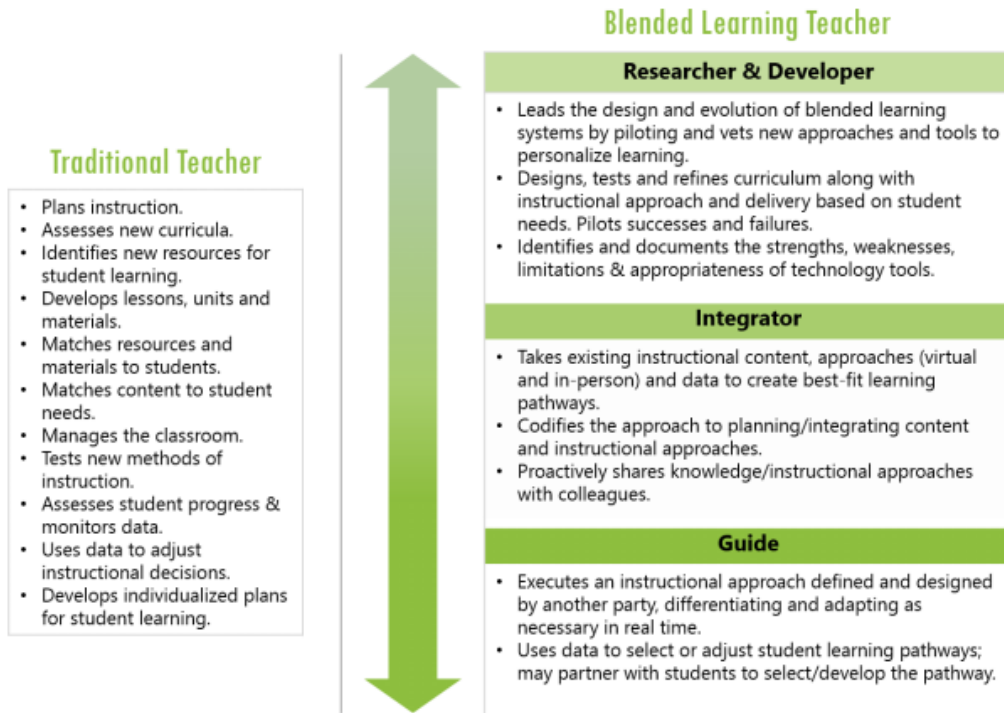
An additional peer-reviewed study does show the impact of a lab model in KIPP middle and high school students in New Orleans (Alijani, Kwun, & Yu, 2014). Teachers were given a survey to understand their perspective about the impact of blended learning models, and the researchers observed blended learning in action, specifically in a lab setting in middle and high school (Alijani, Kwun, & Yu, 2014). This is the same population of students as the proposed study, with the exception of age group. The findings of the study show that teachers perceive the blended learning lab approach to be effective, and observations support this premise (Alijani, Kwun, & Yu, 2014). Teachers noted the importance of training to be able to execute a blended learning model effectively (Alijani, Kwun, & Yu, 2014). While the study does not exactly drive at the teacher role in a blended setting, it is clear from the description of the setting that teachers are again using much more small group instruction in their classes and are basing that small group instruction on data from the instructional programs.

There is a significant gap in the research when it comes to the teacher experience of using blended learning as a strategy in the classroom (Wang, Han, & Yang, 2015). Most studies in blended learning are focused on the student experience or they are focused on the outcomes of particular software, most often in a combination of both (Wang, Han, & Yang, 2015). It is typical to find quantitative studies, such as the study at KIPP New Orleans. For example, a later study, a meta-analysis of 84 blended learning studies between 2020 and 2022, confirms the numerous studies about student outcomes in blended learning studies (Li & Wang, 2022). These studies, however, focused on student performance. The National Education Policy Center

publishes a report every 2 years, and Molnar et al. (2019) state that there was no policy, legislation, or quality implementation related to training for teachers in blended learning due to a lack of understanding of key teacher competencies. There is even more of a gap in research when it comes to the use of software in any capacity in the primary grades. Studies focus on middle school, high school, and college usage, as there is a perception that students are more capable of being self-directed.

**Teacher Experience with Blended Learning.** Despite a lack of studies about teacher experience with blended learning, there are emerging theories about the changing role of teachers who use blended learning. In a working paper by The New Teacher Project, it is posited that teachers that heavily use blended learning play four roles: researcher and developer, integrator and guide (The New Teacher Project, 2014). Schools will need to consider how they select and train teachers, given the potential that this style of instruction is a new way of thinking for teachers (The New Teacher Project, 2014).

Figure 2. The New Teacher Project blended learning teacher description.



(The New Teacher Project, 2014)

Another article supports this emerging theory about the changing role of a teacher in the digital age (Schaffer et al., 2015). The authors argue that teachers who teach in a digital age need a new type of preparation for the classroom because the role of the teacher has changed to that mainly of a coordinator (Schaffer et al., 2015). The coordinator helps to guide students as they engage in a variety of activities through technology. The authors also introduce four additional roles of a teacher: mentor, translator, learner, and expert (Schaffer et al., 2015). iNACOL, the International Association of Computer and Online Learning, describes this role change as a set of new competencies that teachers must have, both specific technical skills and adaptive skills (Powell et al., 2014). A later study tried to validate these competencies using

research-based methods, and the standards were not found to be comprehensive enough to actually measure the required teacher competencies (Adelstein & Barbour, 2018). This study, while not an attempt to verify pre-existing teacher competencies for blended classrooms, seeks to support this effort by describing teacher experiences in these settings and identifying changes in their role that might give rise to additional competencies.

### **Conclusion**

In conclusion, the roles of teachers have been changing over the course of the last several decades both due to how teachers are taught their craft and school reform efforts. Generally, these are described through the lens of teacher role intensification. However, blended learning offers a way forward that may both change the role of teachers and de-intensify components of the work. This study will examine how blended learning in several primary classrooms has changed how teachers teach reading and math and if the work is both different and less intense than it was before. In the next chapter, I will outline my methods of inquiry for the topic of teacher role change in a blended learning environment.



## **Chapter 3**

### **Methodology**

#### **Research Design**

This study seeks to understand the role of a primary teacher in a blended learning environment. This chapter will outline the research methods used in the study of the role of primary teachers while using a station rotation model in the classroom. Specifically, this chapter will outline the rationale for this specific methodology, participant selection procedures, data collection and analysis procedures, as well as a discussion of ethical considerations and my own researcher identity. For this study, a qualitative methodology, specifically a transcendental phenomenological approach, will be used because the study is one that seeks to learn the teacher's experience in using blended learning strategies in their own classrooms (Creswell, 2013). Transcendental phenomenology focuses mostly on the experience of the participant who experiences, bracketing out the experience of the researcher (Moustakas, 1994). This approach attempts to allow the researcher to approach the lived experience of a person without pre-judgements (Moustakas, 1994). It is important to bracket out the experience of the researcher in this study because I have had my own experiences with blended learning as a school leader, and I may misinterpret data if I do not bracket myself out. Given that the focus of the study is on individual teacher experiences, a phenomenology is an appropriate research method. It is important to understand the teacher experience of potential role change from the teacher perspective because it can help understand what supports need to be in place to help blended learning work for teachers and thus students.

The literature shows that there are emerging descriptions about how the role of the teacher is changing in a blended learning setting (The New Teacher Project, 2014; Xu, 2013;

Powell et al., 2014; Molnar et al., 2021). It is posited that the role of the teacher has changed from a traditional teacher who plans lessons and assesses student learning of those lessons to a researcher and developer, integrator and guide (The New Teacher Project, 2014). While these ideas are important in informing initial thinking on the topic, they are not the words of actual teachers. The main reason for using the approach of phenomenology is that it allows me to understand the perceptions of teachers surrounding their role. While these initial notions about the changing role of the teacher have impacted my own thinking, I am entering this study knowing that I must bracket out my perspective.

### **Sampling**

**Site Selection.** The study took place in two urban K- 8 schools in New Orleans that are a part of two charter management organizations. These schools are all open-enrollment, public charter schools that serve a 95% free/reduced lunch population. 95% of the student body is African American at all of the schools. The schools have a special education population of 15 – 25%. The main reasons for selecting schools within the same charter school network are: a.) the approach to blended learning in K-4 classrooms will be reasonably the same and b.) demographics of the student body are similar. Focusing on teachers having a similar approach to using blended learning in the classroom is important because teachers will be describing their own experience of a similar type of curriculum and classroom change. The reason that the schools are selected within New Orleans is because blended learning instruction is currently a trend within the city (VanderArk, 2015).

Given that this study is related to teacher role intensification or de-intensification, it is important to note that the schools in New Orleans have a school accountability system that is different from most districts across the nation. The city of New Orleans is an all charter school

system, and schools must meet a set of criteria to be renewed. The Cowen Institute at Tulane University documents the transformation of the school system, and in its 2019-20 report, it demonstrates how schools are held accountable to student performance (Babineaux et al., 2020). Schools must meet these requirements to continue to exist. This level of accountability is different, and it is important to consider as a limitation of the site selection.

**Participants.** To meet the criteria of the study, the teacher must have taught reading or math in a K-4 classroom that is using blended learning. Additionally, the person must have been in a lead teacher role, as opposed to a co-teacher role. All K-4 classrooms in these schools have a lead teacher and a co-teacher. Co-teachers are generally new to the profession and will not have much knowledge about the changing role of teachers as more veteran teachers. The purpose of this sampling is that the teachers involved in the study will be working in similar environments. In discussing their experiences in using blended learning software, having a similar environment will allow for comparability of participant experiences. According to Merriam & Tisdell (2015), this type of sampling is called unique sampling. Unique sampling occurs when there is a phenomenon to be studied that is unique to the case. Given the criteria of the types of teachers and the type of software, this is a unique set of circumstances. To find the participants, the researcher reached out to the leaders of schools in the city of New Orleans. First, the researcher asked if the school utilized blended learning software, and then the researcher asked if the leader would be open to asking their teachers to participate in the study. The researcher was contacted by school leaders who were open to the interviews for their teachers, and the teachers were then contacted by the researcher to see if they would participate in the study.

## **Data Collection**

In a qualitative study, there are three typical forms of data collection: interviews with participants, observations of the phenomenon, and analysis of documents related to the study (Creswell, 2013). Given that the purpose of this study is to look at the changing role of the teacher, I will be using both interviews of participants and deep observations. The reason for these two types of data collection is that I will be able to see specific tasks that teachers are doing during the observations, thus further understanding their role through their actions. The interviews are an opportunity to gauge the teachers' experience with blended learning in their classrooms through their own voices. For this study, the interviews will be face to face meetings where participants provide their interpretations of their role. By using multiple forms of data collection, I will be able to observe what participants describe as a part of their experience. The data collection occurred in the Fall of 2019 beginning in September through the end of December 2019. Typically, in the beginning of a school year, students are learning routines, and teachers are tweaking their routines. By this point, classroom routines surrounding blended learning will be in place. Participants will remain anonymous and will each have a pseudonym of their choosing for the study. I filed for and received IRB approval of observations in primary classrooms, as well as teacher interviews, in the fall of 2019.

**Participant Interviews.** To begin my work with participants, I had each participant complete a consent form (Appendix A). I sent the form in advance of our interviews, and I reviewed the form at the beginning of the interviews. Since I hold a senior role in a similar organization, I made sure that participants understand that a.) they are not obligated to participate and b.) if they choose to end participation, there will be no discussion of responses with their current employers. I also asked participants to complete a short demographic questionnaire

(Appendix B) to ensure that the teacher met the criteria of the study. In the demographics questionnaire, I asked about years of experience, as it is possible that years of experience will impact the teacher's perception of their role in the classroom.

Given that the study is a phenomenology, the main strategy for data collection will be lengthy, multiple interviews with participants to allow for thick description. Moustakas (1994) recommends two broad questions for participant interviews in a transcendental phenomenological approach. For this study, the first interviews began with these two main questions:

- 1 - What have you experienced in using blended learning as a strategy in your classroom?
- 2 - What contexts or situations have typically affected your experiences of blended learning?

I also had a series of questions as potential questions (see Appendix C) to ask as follow-up to participant responses, such as:

- 3- How did the use of software in your classroom begin? Why did you decide to do it?
- 4- What support do you receive in implementing the changes to a blended learning in class rotation?
- 5- Do you perceive it to help you increase student achievement in reading? Why or why not?

This helped with developing a textual and structural description of the experience. The interviews used a semi-structured interview protocol, in that questions will be open-ended (Appendix C). The goal of the questions was to guide the conversation and to ensure that broad topics are covered (Merriam & Tisdell, 2015). After this first set of interviews and after having developed clusters of meaning from the interviews, I conducted one follow-up interview, based

on uncovered themes. These follow-up interviews helped to confirm themes and to eliminate the impact of my potential bias by checking with participants about my conclusions from initial interviews. The interviews occurred over a period of eight weeks, allowing for several follow-up interviews of participants. I recorded and transcribed each interview.

**Observations.** Since the focus of the study is looking at the changing role of the teacher in a blended learning environment, I observed the K-4 participant classrooms where blended learning was happening as an additional component of data collection at least twice, once prior to interviews and once after interviews. In this role, I had the role of observer as participant (Merriam & Tisdell, 2015). In the role of observer as participant, the primary role of the researcher is observer. All parties involved know the purpose of the observation. The researcher may also be a participant, but this role is secondary to that of observer (Merriam & Tisdell, 2015). I used a form that allowed me to create a visual representation of the classroom and a chart that included time and what the teacher was doing. Observations happened throughout the interview process, mainly to be used as a way to validate themes from the interviews. I also collected any artifacts the participants have to share, such as training materials, related websites to the computer software, etc. Again, these were used to validate information from the interviews.

### **Data Analysis**

After collecting interviews and observations, I began the process of data analysis. The first step in this process was open coding of my data sources (Merriam & Tisdell, 2015). I took notes in the margins of all transcripts and in the thick descriptions in my observations. The open coding noted key phrases or words throughout the transcripts (Merriam & Tisdell, 2015). After going through a process of open coding, I grouped each of the codes into categories through

axial coding. In this process, the categorization is one that is interpretive from the point of view of the researcher (Merriam & Tisdell, 2015). I kept the category construction in a set of separate memos in Microsoft Word files. I have the category name, as well as the quotation from the data collection in the memo. Once I did this for each document, I analyzed across documents to construct themes in the data.

During the axial coding process, approximately ninety percent of codes were related to using data differently, and most of the other codes were related to motivation. This was unusual for a qualitative study, in that much of the discussion about blended learning and teacher role change was focused in one broad theme. In the selective coding process, the researcher had to look deeply to determine how the axial codes were actually different from one another. While the axial had to do with data-driven instruction and using the data from blended learning programs, the selective coding process revealed that there were themes within the broader theme of using data. Specifically, the themes were then organized into data for immediate in class use and the use of data and planning.

### **Trustworthiness**

Lincoln and Guba (1985) defined trustworthiness of qualitative research using four dimensions: credibility, transferability, dependability, and confirmability. To ensure that this research meets all four criteria, I had a variety of ways to confirm trustworthiness of the data. Credibility is defined by Lincoln and Guba (1985) as “activities that make it more likely that credible findings and interpretations will be produced” (p. 300). The first step is having prolonged engagement and persistent observation with participants to build trust and to gain full understanding of their experience (Lincoln & Guba, 1985). I engaged with participants in the study over the course of three months through interviews and multiple observations. An

additional way to increase credibility is through data triangulation (Lincoln & Guba, 1985). Observations were used as a method for checking the data of interviews. Additionally, I used member checking, which is where participants verified the conclusions of the researcher. After developing themes for the study, I met with the participants to get their feedback.

To ensure that there are other means of trustworthiness in the study, I ensured that my data, both interviews and observations, contain thick description. Lincoln and Guba (1985) note that this is a main way to ensure transferability. To increase dependability that results could be replicated, I used a peer doctoral student as external auditor to review my raw data, coding schemes, and theme selections (Lincoln & Guba, 1985). Lastly, to ensure confirmability and removing researcher bias, I used a reflexive journal to document my own thoughts and methods on a regular basis throughout the research process.

### **Ethical Considerations**

The main ethical considerations for this study is the maintenance of confidentiality of participant information and data. Given that I play a senior role in a different network of charter schools in the city of New Orleans, it is important that participants felt comfortable to share their responses openly. All participants were given pseudonyms, and the schools that participants worked at were also given pseudonyms. All participant names, demographic information, interviews, and coding are kept on a password protected drive.

### **Researcher Identity**

My paradigm as a researcher is that of a pragmatist. Pragmatists believe that reality is constructed from what works and that it is constantly negotiated in light of its usefulness (Morgan, 2007). Typically, a pragmatist would create a mixed methods study in the form of action research (Morgan, 2007). Given that I am a new researcher, I am choosing to begin with



the qualitative component of the work, but I may in the long-term investigate the role of the teacher through a quantitative lens. Most of my experience as an educator has been as a practitioner: teacher, school principal, Chief Academic Officer, and now Chief Executive Officer. I started as a teacher right as state-wide accountability practices were beginning, so I have always been accountable to state-wide testing. As a practitioner, I am always concerned with what works now for student learning. My experience as a practitioner has shaped who I am as a researcher. To me, research is best used to help understand what works and what does not. In this study, helping practitioners understand the changing role of teachers in a blended learning setting is important to me because there are potential implications in how teachers are trained, the support they receive and so forth so that learning outcomes can be as high as they can be.

As the researcher using a transcendental phenomenology, I will need to bracket out my own experiences in using blended learning as an instructional strategy for students. I have only used blended learning as a strategy for student learning as a school principal. In 2010, I began a lab model at the school where two grades of students came to a computer lab for a period a day. I found this to be effective for students based on my own observations of the lab environment and my anecdotal interviews with students about their experiences. I have not spent significant time in classrooms with a rotation model, as it is a strategy that was implemented once I left the school. Additionally, while I look at the results of specific computer-based programs, I do not know the experience of teachers using those programs. Given my own focus on student results, I will need to lean in to listening more to the teacher experience rather than the outputs of students. I know that the bias I bring to the work will be presenting the teacher experience in a positive light if the student data is not strong from the program.

## CHAPTER 4

### Findings

Blended learning computer programs are being used throughout classrooms in primary schools, although exact numbers across the country are difficult to quantify (Graham, 2018). Given the increased usage of blended learning in classrooms, this study sought to understand if there are significant changes to the perceived role of primary teachers when using blended learning. Primary teachers were defined as anyone leading a Kindergarten through 4<sup>th</sup> grade classroom that used blended learning in the classroom. The main research question was: *what is the experience of K-4 teachers in using blended learning?* There are two sub-questions for the study related to the teacher's role in general and his/her conceptualization of his/her role as a teacher of primary students:

- *What are teacher's conceptualizations of their role as teachers in a blended learning environment?*
- *How do teachers' conceptualizations of their roles change after blended learning structures are introduced?*

During the interviews, the participants described their experiences with using blended learning software as a part of their teaching. A transcendental phenomenological approach was used to learn the teacher experience in using blended learning strategies in their own classrooms (Creswell, 2013). A transcendental phenomenology approach was chosen because transcendental phenomenology seeks to understand human experience in an unbiased way (Moustakis, 1994). Other phenomenology approaches, such as hermeneutic phenomenology, co-create meaning between participants and the researcher, and this study is specifically about the experience of the teachers themselves (Laverty, 2003). The findings presented in this chapter

emerged through an analysis of the following data sources: semi-structured interviews with participants; semi-structured interviews with the senior leaders of two organizations; and observations of blended learning in the classrooms. The theoretical framework of role theory was applied to these data sources.

Chapter 4 is organized into two sections. The first section includes a description of each participant. Eleven primary school teachers and two senior leaders of each organization were interviewed for the study. Each participant has been assigned a pseudonym to maintain their confidentiality, and each school has been given a pseudonym, so that participants may not be easily identified. The second section includes themes that describe teacher role change: 1.) Data Usage and Differentiation, 2.) Classroom Technology and Teacher As Motivator, and 3.) Different Approaches To Instructional Planning.

### **Participants**

Eleven participants were recruited for this study in the Fall of 2019 at two primary schools in New Orleans, Park Elementary and Smith Elementary. All interviews and observations were completed prior to the COVID-19 pandemic. The school names are both pseudonyms. Participants all served as lead primary teachers in grades kindergarten through 4<sup>th</sup> grade. The teachers had a variety of experience in the classroom, ranging from 3 years to 17 years in primary education. The teachers also used a range of computer programs in both English Language Arts and mathematics. Additionally, I interviewed the academic leads at each organization to triangulate data and gain organizational perspective. A brief description of each participant is listed below, and specific demographics are listed in Table 4.1.

**Simone.** Simone is a 30 year old female first grade lead teacher at Smith Elementary. She has taught at Smith Elementary for four years. Prior to that, she was a substitute teacher for

several years. In her time at Smith Elementary, she has always used computers in her classroom with blended learning software. She currently uses ST-Math (math) and Lexia (reading) blended learning software.

**Michael.** Michael is a 35 year old male kindergarten lead teacher. He has been at Smith Elementary for six years. He moved to Louisiana from Tennessee, where he taught for eight years. He starting using blended learning software when he arrived at Smith Elementary but always had computers in the classroom. He also uses ST-Math and Lexia in his classroom currently.

**Kristy.** Kristy is a 28 year old female lead second grade lead teacher at Smith Elementary. She is a state certified mentor teacher in primary education. She has been teaching for seven years, and all of those years have been at Smith Elementary. Similarly to Simone and Michael, she uses ST-Math and Lexia as blended learning software in her classroom.

**Megan.** Megan is a 23 year old female first grade lead teacher. She is in the middle of her third year of teaching. She has taught at her current school, Park Elementary, for one and a half years. She started her teaching career through Teach For America, an alternative teaching certification program, in one of Louisiana's rural parishes. In her classroom, she has used Zearn (math), MobyMax (all subjects), and Smarty Ants (reading) software in a blended learning setting. She has been using blended learning software since she began teaching.

**Ian.** Ian is a 29 year old male kindergarten teacher. He has been teaching for six years, but only one year at Park Elementary. He has enjoyed the change from his previous school to Park Elementary. He has used blended learning software in different capacities for his entire career in teaching. Currently, his main blended learning software program is Think Central, with a focus on mathematics.

**Jessica.** Jessica is a 31 year old female lead special education teacher in primary at Smith Elementary. She has been teaching for ten years, with four of those years at her current school. She has used blended learning software in her classroom for eight of her ten years in teaching in both literacy and mathematics. Currently, she is using ST Math, Ticket To Read, Achieve 3000 (reading), and Teach To One (math).

**Eloise.** Eloise is a 35 year old female lead third grade teacher at Smith Elementary School. She began her teaching career seven years ago at Smith Elementary, she truly loves her school and subject area, math. Since she specializes in math, she uses Zearn as her main blended learning software in her classroom.

**Carol.** Carol is a 31 year old female kindergarten lead teacher. She has taught for ten years, with this being her first year at Park Elementary School. Over her ten years of teaching, she has always used some form of computer software in her classroom. Now, she is using the following blended learning software: RazKids (reading), ST Math, and Lexia (reading).

**Danielle.** Danielle is a 38 year old female second grade lead teacher. She has been teaching for fourteen years, and five of those years have been at Park Elementary School. She has used computers in her classroom in some capacity for all her years of teaching. She now uses the following blended learning software in her classroom: Smarty Ants, Reading A-Z, RazKids, Zearn and Think Central.

**Jasmine.** Jasmine is a 28 year old female first grade teacher, and she is also a state certified mentor teacher at her school, Park Elementary. Jasmine has been teaching for six years, five of which were at Park Elementary. She has used computers in her classroom for all her years of teaching, and she has used a variety of software to complement her core curriculum. Right now, she is using Think Central for math, Reading A-Z, and Smarty Ants.

**Shunte.** Shunte is a 41 year old female kindergarten teacher. She has been teaching for seventeen years, with three of those years at Park Elementary School. For the last ten years, she has used computers in her classroom and sometimes has used blended learning software with her students. She currently uses Smarty Ants with her students but hasn't integrated any other software due her perception that her students are too young.

**Katie.** Katie is the Chief Academic Officer of the Charter Management Organization (CMO) that Park Elementary is a part of. She has been an educator now for twenty-seven years. In her current role, she oversees student achievement across the CMO through support and management of school and network academic leaders to implement rigorous academic programming, maintain positive school cultures, plan for continuous data driven school improvement, and provide development and accountability structures for teacher and leadership quality. One of the components of her role is that she oversees the use of blended learning software used as a part of the academic program in the CMO's schools.

**Sara.** Sara is the Executive Director of Teaching and Learning at the CMO that Smith Elementary is a part of. In her current role, she supervises the entire academic program, including curriculum and teacher support. She has been an educator for sixteen years. Since she is directly responsible for curricula taught in the schools, she works with teachers on the use of blended learning software in their classrooms.

**Table 4.1**

<b>Name</b>	<b>Gender &amp; Race</b>	<b>Age</b>	<b>Role</b>	<b>Total Years Teaching and Years Teaching In A Blended Learning Environment</b>	<b>Years Teaching In Current School</b>	<b>Blended Learning Software Currently Used</b>
Simone	Female, Black	30	1 <sup>st</sup> Grade Lead	4 years, 4 years  *Not counting substituting	4 years	Lexia (Reading)  ST-Math (Math)
Michael	Male, White	35	Kinder Lead	14 years, 6 years	6 years	Lexia (Reading)  ST-Math (Math)
Kristy	Female, Black	28	2 <sup>nd</sup> Grade Lead	7 years, 7 years	7 years	Lexia (Reading)  ST-Math (Math)
Megan	Female, Black	23	1 <sup>st</sup> Grade Lead	3 years, 2 years	2 years	Moby Max (All Subjects)  Smarty Ants (Reading)  Zearn (Math)
Ian	Male, Black	29	Kinder Lead	6 years, 1 year	1 year	Think Central (Math)

Jessica	Female, White	31	Primary Special Ed Lead	10 years, 4 years	4 years	Achieve 3000 (Reading)  ST Math (Math)  Teach To One (Math)  Ticket To Read (Reading)
Eloise	Female, Black	35	3 <sup>rd</sup> Grade Math Lead	7 years, 5 years	7 years	Zearn
Carol	Female, Black	31	Kinder Lead	10 years, 5 years	1 year	Lexia (Reading)  RazKids (Reading)  ST Math (Math)
Danielle	Female, Black	38	2 <sup>nd</sup> Grade Lead	14 years, 8 years	5 years	Raz Kids (Reading)  Reading A-Z (Reading)  Smarty Ants (Reading)  Think Central (Math)



Jasmine	Female, Black	28	1 <sup>st</sup> Grade	6 years, 5 years	5 years	Reading A-Z (Reading)  Smarty Ants (Reading)  Think Central (Math)
Shunte	Female, Black	41	Kindergarten	17 years, 6 years	3 years	Smarty Ants (Reading)
Katie	Female, Black	47	CAO of CMO (Park Elementary)	N/A	N/A	N/A
Sara	Female, White	48	ED of Teaching and Learning of CMO (Smith Elementary)	N/A	N/A	N/A

The years of teaching with and without blended learning are included in the table, since the second sub-question of the study asks about how teachers’ conceptualizations of their roles have changed. Most teachers in the study have experience teaching with blended learning software and without blended learning software, so they can speak to their conceptualization of role change.

**Findings**

The purpose of this study was to understand the perspectives of primary school teachers related to role change, given the introduction of blended learning in the classroom. This study provided an opportunity for teachers to explore their experiences with blended learning in the classroom and, if applicable, how blended learning as changed their role. The phenomenon of

blended learning and the experiences of teachers and using it was organized into three themes: 1.) Data Usage and Differentiation; 2.) Classroom Technology and Teacher As Motivator; and 3.) Different Approaches To Instructional Planning. A review of the data demonstrated that primary grade teachers had role change after using blended learning in the classroom. Primary grades teachers are using their data more quickly and differently to inform their instruction, and they are teaching students in smaller, more targeted groups as a result of these faster data cycles. While the technology is helpful in getting students to learn because of its engaging interface, teachers are also altering the way they approach motivating students for learning when using blended learning. Lastly, they are changing the ways that they plan, often preparing for small group intervention versus whole group lessons. They are preparing less materials for centers, a hallmark of primary classrooms, because blended learning is serving as the main form of centers-based instruction.

### **Data Usage and Differentiation**

Teacher role change related to the use of blended learning data to target instruction is an overarching theme in this study. All participants discussed how blended learning data was impacting their role in the classroom, ranging from stronger and faster data cycles that allowed for faster intervening to differentiation of learning experiences based on this rapid data.

Teachers were very clear that blended learning data impacted how they approached instruction because it was real-time, easy to review, and detailed in nature, and teachers were able to use what they already know about their student to then be more effective with their time. Carol elaborated on this idea:

If you think about the resources that you have, you have time, you have a teacher, you have the kids, you have the content, and you can mix those up in a variety of different

ways. I think having blended learning as a resource just makes the flexibility of how all those pieces fit multiplied times ten. You could do it analog, but it would require so much planning and prep that it's unfeasible. I think about, you can sit down, look at how your students are performing on their blended learning programs, look at your own formative assessment data and observations, and come up with a plan for what kids need, and how am I going to hit each of those needs in a way that fits within the space and time constraints of my classroom.

This messaging, shared by multiple participants in the study, aligns to the theoretical framework which focuses on the perceptions of teacher role change with the introduction of blended learning, including changes to the intensity of the role, (Valli & Buese, 2007) and that teachers have become “Integrators,” where teachers use student data and integrate this with existing curricula (Schaffer et al., 2015). The technology is allowing teachers to do things they would not otherwise be able to do. In the next section, the following sub-themes about data usage and differentiation will be unpacked to demonstrate the findings: 1.) Faster Data Cycles With More Data Precision, 2.) Small Groups Versus Whole Group, and 3.) Re-teaching of Missed Content.

**Faster Data Cycles With More Data Precision.** Formative assessment practices have long been a part of classroom practice to differentiate instruction, with its origins in diagnostic testing beginning in the 1970s (Black & William, 2003). Formative assessment practices have typically been defined as assessments to be used as feedback to modify instruction (Black & William, 1998). Formative assessments also help to identify student learning gaps and plan for targeted, scaffolded lessons (Bennett & Gitomer, 2009). However, while formative assessment has shown to be a highly effective strategy for learning, there are often challenges with teachers

having the time to give and review assessments (Klute, Apthorp, Harlacher, & Reale, 2017). Strong formative assessments take a significant amount of teacher time to build. Subsequently, there must be class time dedicated to the assessment and teacher time for grading, which can sometimes take too long for formative assessment to be effective (Klute, Apthorp, Harlacher, & Reale, 2017).

Jessica notes that blended learning has helped her quickly see where students need help: “I get alerts about the data in real-time. I can see both who is struggling with the content and who is just not working. It allows me to immediately intervene.” Rapid formative assessment information afforded by blended learning data dashboard and without the need to score assessments overnight allows for adjusting instruction in the moment, instead of adjusting instruction the next day, Jessica can do so within the same class session. To build on this idea, Eloise discusses how it has changed her practices related to exit tickets, a daily formative assessment practice she was using in her classroom prior to using blended learning:

Most of my data when we did Achievement First (paper-based curriculum) came from exit tickets alone. Now this is more like a quick check. I don't have to go through the exit tickets immediately. I can look to see who's struggled with what, and then pull them back to my group instead of waiting to grade exit tickets to see how they are doing.

This allows the teacher to immediately intervene when students don't know how to do something, rather than waiting to the next day or later. This relates to a study by See et, al. (2021) about the effectiveness of digital formative assessments for learning outcomes. The findings of the study demonstrate that students have increased learned outcomes with the use of digital formative assessments. Here, teacher perception shows that they also feel more successful in their formative assessment practices.

There is also an aspect perception of role change related to saving time reviewing formative assessment and grading. Jasmine says, “we were grading work every day...let's say, maybe an extra like five hours out of the week. Now, I can review work in seconds.” Several participants echoed similar sentiments in terms of it being a time saver, and their attention can go to other tasks both outside of classroom time and inside the classroom. Megan talks about how digital assessment within blended learning programs makes her time in and out of class everyday more efficient and more informed:

I used to review student work each day after school and count up all their stuff up to know what kids understood. Now, the program just does it for you. I just think this is great! It has even changed what I do in the classroom. Typically, I would be checking over kids' shoulders, looking at their work periodically throughout the lesson. Now, I can rely much more on the program than what I see over a student's shoulder, and the information is much richer. Zearn gives you so much information in the moment, like ‘Oh, that kid was stuck here for four minutes when it should have taken him five seconds to answer a question like  $10+5$ .’ I would not have ever been able to know that about my students by just reviewing their work while walking by. All I would know is that their work was right or wrong, not how long it took to do it.

Both grading student work outside of class and understanding how well students are mastering content in class has always been a core component of teaching. Blended learning data cycles make the grading process quicker and contain more information so that teachers may respond more quickly and differently. So, while the role of grading is still a component of a teacher's role, these teachers perceive it as one way that blended learning has automated routine tasks and

allowing teachers to focus on instructional decision-making versus grading and record-keeping.

Katie, a leader of a CMO, echoes this idea:

I think that teachers are able to better execute their role because they get better data. At the end of the day, as good as you are, it's really hard to figure out, of your thirty-two kids, who is doing what, who needs what at any moment. Within the software, it has a strong data system that is being captured for you, and so you're like "Oh, let me sit down with my data at the end of the day and figure out who got stuck where. Now I can work with that child. I know how to help them fix it tomorrow. I can be more responsive because I got that." I got it in a way that wasn't really time consuming or really cumbersome for the teacher. I also think that ... this probably is how a role changes. To some degree it removes the teacher from needing to be the on stage and allows kids to do more learning on their own.

Katie thinks that this may imply role change for teachers, both in terms of faster data cycles and what the teacher does in the class versus the student. In the next section, the role of the teacher as a facilitator of small groups of students versus a whole group instructor will be explored.

**Small Group vs. Whole Group.** The quick data cycles discussed above have an impact from the perspectives of the participants in this study related to the balance between whole group instruction and small group learning. The teachers perceive that they have more flexibility in the classroom, and they have the ability to meet individual needs more flexibly. Danielle describes the difference as follows:

Blended learning is an element that's woven throughout the day and gives me a lot more flexibility over how I spend my time and energy over the course of the day to really meet kids face to face with what they need, and have more flexible groupings, and know that I

don't have to plan this other independent activity. I am able to target the right students and have others working independently. I spend a lot less time teaching whole group, particularly for skills I am reteaching. Whole group instruction is reserved for roll out of new content, not practice.

In the past, new content would have been taught to the whole group, and then students would complete the practice of the lesson objectives on a traditional worksheet as a whole group. The teacher would have had to plan the independent work and monitor it. Now, the teacher is not planning the independent work and is instead meeting with students who struggle. Several participants gave specific examples of seeing this play out with their students. Shunte noted that she has four students who typically need more time with the teacher after whole group instruction. Blended learning allows her to review their data on a particular concept to know if they need extra support, and the rest of the students can work in their programs while she works with her small group. Simone discusses how this has impacted her math intervention practices, which is already a small group activity. She used to pull the entire group and follow a scripted program. Now, she has realized that ST-Math gives her enough information about skill gaps in students, and she only offers intervention to students that haven't mastered a concept. This has allowed her to give more individualized attention to students that she knew they needed: "I now pull them one at a time, and I can make so much more progress than before. And, because it is one on one and targeted, it is much less time." This one on one, small group attention is truly different from the Sage On Stage approach, where the teacher is the person that gives knowledge to students (Schaffer, Nash & Ruis (2015). Instead, teachers are describing that kids are at the center of their own learning and teachers guide them, helping them where they make mistakes.

Targeting students with the instruction they need versus completing whole group instruction that only some students may need has led to a positive perception of efficacy for many of the participants. Ian says, “I feel empowered to make decisions about what [instruction] kids need versus just covering the curriculum. I can see what they know, intervene as necessary with the right small group, and I don’t have to waste time on things they already know.” This is an echoed sentiment across several of the participants. Hersi & Bal (2021) studied the practices of teachers related to differentiated instruction for students, and they found that there was a significant gap between what teachers desired to do for differentiation and what they actually did. The main reason for this gap was time, specifically teachers not having the time to plan the number of activities to meet student learning needs. Blended learning helps this, as the computer programs take on a part of the planning. In this study, teachers are reporting the opposite about differentiated instruction from the Hersi & Bal (2021) study.. They believe they have the data to support their choices and the flexibility to pull student groups that meet the needs of students. Differentiation is something that is much more doable because the computer provides much of the actual material.

**Reteaching of Missed Content.** In addition to differentiating instruction for small groups, teachers discussed how blended learning helps them reteach content that students may have missed, with precision. As discussed in the prior section, teachers are using a lot less whole group instruction because they know who needs help on different skills. In this case, teachers are using the data and flexible groupings to specifically target content taught during whole group instruction. Kristy discusses how this has changed how she approaches reteaching content from whole group instruction:

In the past, I would give an exit ticket at the end of my whole group lesson to see if all



of the kids learned what I taught. On good days, I would grade it that day, and I would reteach the entire class the main misconceptions the students had the next day. With that approach, I'd usually improve learning for twenty-five percent of the kids. To be honest, though, I didn't always get to grading that day, and I might even forget to do it. That meant kids might go a week not understanding something I taught from our whole group time. Now that the data is at my fingertips, I can give the kids a few minutes on their program, and I reteach immediately. I am seeing change in student learning because I can intervene on today's learning objectives.

Kristy's experience was similar across participants, and there was an overarching feeling of being more successful in meeting student learning goals. Teachers didn't feel like they were letting students sit with misconceptions from the day's lessons. Instead, they were able to quickly know what students knew right then and there. This speed then led to immediate intervention.

This was particularly clear for the teachers who were using a program linked to the curriculum they were teaching, such as the Zearn math program and Teach To One Math. Both of these blended learning programs also have a curriculum, including non-computer based lessons, for the teacher to deliver. Most of the other programs are curriculum agnostic, and they can be paired with any curriculum. Megan discusses how this content connection would help her pinpoint students quickly once they were on the Zearn programming:

The thing about Zearn is the whole block is like one big lesson. I'd teach a new concept to a small group and the other kids would be on the computer. After I was finished teaching, I'd review the data hit quick little points of based on what they need to know as far as the standard and daily lesson content is concerned.

Eloise, another teacher who used Zearn also talked about how the pacing data included in the program would help her focus on students after the daily lesson. The pacing data would show how long a student was spending on a particular item or concept. When she saw that a student was on something for a long time after she taught her whole group lesson, even if the student got it right eventually, she would reteach it with the student, focusing on automaticity. She found that this helped to clear up misconceptions quickly.

While teachers have used student learning data to inform instruction for many years, teachers are able to use it faster and more precisely, and this is changing what they do in the classroom. Teachers are reporting that they are teaching much more in flexible, small groups and that they have time and strategy to help students who did not yet master the content.

### **Classroom Technology and Teacher As Motivator**

Classroom technology has changed the way that teachers approach motivating students for learning based on participant experience in this study. All teachers in this study reported that technology played a role in motivating students to learn, largely due to gamifying learning. For a student who has not been in a blended learning classroom, they would typically be working in a center for classroom work, which might include independent reading or writing, completing grammar worksheets, or completing phonics worksheets. Teachers perceived that most students had higher levels of engagement much of the time because of the interface on the computer. Jasmine notes that “it keeps their attention differently and they are still learning.” Megan states the students were more motivated to do their work, since it wasn’t boring paper and pencil work. In that way, it has changed what independent practice looks like in the classroom, and both the technology and the teacher play a stronger role in motivating students to do well. Additionally, many teachers had a perception of change in their own role, as they had to learn to integrate

blended learning data reporting into their rewards and behavior management systems. Carol explores the idea of being a “champion and motivator” with her students, even more than in the past. Classroom observations were conducted as a part of data triangulation for this study, and this idea of motivation was clear when observing classrooms. Students were visibly excited to start their blended learning programs, and they would immediately get started on their work. This idea of the classroom technology and teacher as motivator will be explored using the following three sub-themes: a.) Change in Format, b.) Change in Rewards, and c.) Change in Behavior Management.

**Change in Format.** A common approach for independent work, according to teachers in this study, was having students complete worksheets in an independent setting. Sometimes this happened during centers work time, and sometimes this happened during the independent practice part of a lesson. Now, students use their blended learning program both as a center or as the independent work component of a lesson, depending on the time of day and component of class. Overall, teachers are reporting much more engagement and motivation from most students due to the change in format of the work, meaning that 75% or more students are highly engaged by the interface. Ian and several teachers discussed how the computer appeals to students that learn through different modalities. Ian stated, “This really engages my students that are visual, auditory, or tactile learners” because of the actual interface on the computer screen. The blended learning programs are often in a game format and include lots of animation and characters. Additionally, they are often designed so that students have to listen to the program, including the talking characters. Also, students are frequently using the mouse to manipulate the learning games, and this is what Ian thinks grabs the attention of his students. Additionally, Jessica discusses how a game format improves motivation:

They thoroughly enjoy it. It's that's the fun thing because it's seen as a game type thing. I think it also helps them move along a little faster. Because sometimes they can pick up things faster when it's presented as a game. And it's not like, 'Ugh...I have to sit here and like listen to the teacher,' but like, 'Oh, I'm like playing this fun game, and let me try to like beat the game,' but they are still learning about whatever it is at the same time.

Jessica discusses how gamification gets students to stay on task and complete their work with enthusiasm. Shunte described this type of engagement as “game-changing” for teachers. Her experience is that students find the software more engaging because it is interactive, and she believes this change in format for students leads to more learning:

The computer activities just make learning more fun. Because it is so engaging, I am finding that students learn a concept the first time it is taught, and I don't have to reteach much the next day. Between me and the computer, the kids get the content most of the time on that day.

Students maintain motivation for learning through the high interactive, game-like nature of the programs, competition, and the pace of the work. Teachers see their students more involved in their independent practice and learning more. During classroom observations, most students were engaged, sometimes for up to 30 minutes, in their programs with very little interruption for most of the time. Other participants also discussed how competition within the software and across students would motivate students to both pay more attention to their work and work faster, as students were focused on winning or doing better than a classmate. Both Danielle and Jasmine also discussed the game-like qualities of the programs and competition across students, even though they were not trying to foster a competitive environment. Danielle said, “Something about the program itself encourages competition amongst kids, but it's

something that I don't love. I want students to compete against themselves." The competition is driving students to complete more work and faster, which is then creating more learning.

However, Danielle does wish that students were only working against themselves because she wants them to be focused on beating their own personal bests rather than their classmates' personal bests.

The software also builds in celebration of student work, which teachers report as increasing motivation for students to complete their work in the lesson. During blended learning observations, an observer notices the programs build in small celebrations of student progress very frequently, often every two to three minutes. While this looks different across programs, most programs will pause after a few correct questions and have a quick celebration. This might look like a character dancing on the screen, giving students a virtual high five, showing virtual fireworks or other ways to show the student mastered their work. Kristy stated, "They get so much more positive feedback consistently from the software. So, it really, like, lessened the role on me to constantly be going around and giving stickers during the lesson." Jasmine also discussed how the software celebrations added more capacity to her during class. While she always rewards students, she cannot do it on the frequency of a computer program. She perceives that it has helped her students become more goal oriented. These mini celebrations of progress were also seen during classroom observations. Kids were frequently seen doing small gestures and saying "Yes!" when they received this positive feedback from their program.

**Change in Rewards.** While teachers perceive that the change in format helps them with student motivation and interest, it is not enough to keep all students focused all the time. Teachers report that the students who don't find the gamification as motivating need to use other structures of motivation. This number of students typically accounts for 20% of the class.

Several of the teachers in the study discuss how they have had to change their in-class reward system to motivate students to do their blended learning work, even though most students find it to be more engaging in general. One example of this is Simone, who created a daily reward system for students. She had originally started rewarding students when they passed a unit, but she found that this was not frequent enough since that would only happen once per week. However, she was seeing off task behavior, so she tried a more frequent reward by doing it daily. Once she began rewarding students daily for their progress on the program, she saw student behavior while doing their work on their blended learning program change. At the end of each blended learning session, she would do fun call and response chanting for students that completed a level. Students, in turn, were more focused on their work since they wanted to get their shout outs. Simone stated that “students work hard for their shout outs” because she saw increased engagement with the addition of daily shout outs.

Michael also talked about his rewards system, where he added a bit of mystery to students getting rewards. He felt like this special type of rewarding students kept them interested in their programming, which can sometimes feel redundant:

We give them certificates. We’ll do this for Lexia and ST Math, but we make a really big deal of the presentation of the certificates. I usually make them guess who the certificate is for. They usually know who it is. I’ll say something like...this person’s initials are J.B., and they have a younger sister. The kids will then say, ‘Oh my gosh!’ And then we will get the student up there, and I will use a popsicle stick like a microphone and say, ‘Mr. Jay, how did you feel when you passed this level?’ They usually say happy, and I push them to use bigger and better vocabulary.

During observations of his classroom, it was clear that this was a regular, important part of Michael's classroom rituals. In the posted class schedule, there is a dedicated five-minute period for blended learning celebrations each day. Both he and his co-teacher do different fun celebrations to get students excited. They get to come to the front of the room and show their certificates to their fellow students. Additionally, Michael and his co-teacher regularly remind students of the coming celebrations for students who complete a lesson. Michael said that he does this to keep the students focused on the goal they are trying to accomplish that day.

Kristy also talks about the regular use of certificates for progress in her classroom, particularly for programs that are more redundant, like Lexia. Observations of the classroom demonstrated that she has created a certificate wall, and she takes a picture of the student with their certificates to immediately text home to families. She has found that this invests the families in doing even more blended learning work at home, as most programs are able to be accessed over the internet. Several other teachers discuss the use of data walls as student motivation. For example, Jasmine's classroom has a section of the room for charts related to blended learning progress. Jasmine stated, "I have the students fill in their progress when they pass a lesson. Kids really love doing that." Observations of the classroom confirmed different data sets for different programs, and students would come up to the data wall to add a sticker when they passed a lesson.

There has always been a debate over whether students should receive extrinsic rewards in the classroom, particularly when it relates to intrinsic motivation for students and learning (Cahya, Kusnadi, & Anggareni, 2018). When extrinsic rewards are given, there is even more debate about when they should be given, the frequency of rewards, and for what (behavior or work related to learning). The teachers in this study believe extrinsic rewards are necessary for

blended learning software to be effective in the classroom, as it keeps students motivated towards meeting a goal. The teachers have created a variety of systems to reward lesson and goal completion, often more than they would in a traditional classroom. Ian captured this when he said, “I used to just put a sticker on their paper.” Now, he too, has a daily reward program in the classroom, using shout outs at the end of each blended learning session. Students also track their progress on a large data wall in the classroom. This makes rewards more public to the whole class versus a quiet personal validation.

**Changes in Behavior Management.** Blended learning software is almost exclusively used by students in an independent setting for the classrooms studied in this study, and teachers are typically working either in small groups or individually with other students based on the data from the blended learning programs. This was communicated by teachers and observed by the researcher when observing classrooms. Additionally, blended learning software both remediates learning and accelerates learning. This means that students may sometimes come across new content that they have not yet been taught. As a result, blended learning comes with the same behavior management challenges for teachers as any type of independent work, and in some cases, there are new challenges related to perseverance and knowing what to do when there is new content in the software. So, while the work is generally more engaging for most students and most students are motivated by rewards, sometimes this is not enough.

As is with the case in any form of student work, students sometimes do get off task, even though the software itself is engaging. Teachers in the study discussed how they had to learn to use their regular behavior management systems for off task behavior. When most teachers started using blended learning software, they thought the program would take care of itself.



Instead, teachers began treating it like any other independent work. Jessica illustrates this point in her use of ST-Math:

We started holding them accountable. We didn't do it so much in the beginning because we thought they would just be engaged in the program, but now it's like, if you don't do what you're supposed to do on the computer, then that means you need to do it during recess, or electives. So, we'll tell them, "I see that you're not working," or, "I see that you're struggling," or for whatever reason, "You need to stay on Lexia. Tomorrow that's what you're doing for recess or elective."

Teachers also described that they would use the old format of independent practice, worksheets, as a tool for punishment. Megan discusses what she has seen and her system:

Kids get excited that they were playing a game or they were beating something they were like, "I beat you!" And they're whispering to each other saying, "I'm passing you". Kids really like the competition. But, if they are off task, I give them a worksheet in another area of the classroom. They're upset because they're up there doing their math on their little worksheet. This has changed behavior dramatically, since kids want to be on the program.

This strategy is important because the students lose access to something that they generally enjoy, which is working on their blended learning software. Additionally, students are no longer partaking in the activity that most students are doing in the classroom. By removing the privilege, teachers can then see behavior change. During one of the classroom observations in Megan's class, the researcher saw a student receive a consequence for off task behavior while in the program. Megan was able to see the student was not working in the program from her teacher dashboard. After warnings and re-direction, the student was asked to stop using the

program and work on a worksheet, as noted in Megan's quote above. The student was disappointed and clearly knew this was the rule for not engaging in learning.

Teachers are seeing other behaviors specific to blended learning when students are frustrated. Eloise noted that, "There was definitely days where, like, the software was the biggest barrier to us having a positive classroom environment." Most of the time, this barrier existed because students did not know what to do. Sometimes this would happen because it was new content, and sometimes it would happen for other reasons. One way that this would manifest is through hasty clicking. Most teachers stated that the blended learning software would identify when students were off pace (either too fast or too slow). Jessica discussed how she would have to work with students to simply slow down: "They will get frustrated because they are getting the answer wrong, even if they know how to do it. I'll remind them to stop, slow down, touch the graphics, and count for me." Other teachers mentioned the work they were doing to develop patience for learning when they got the answer wrong.

Teachers are also working on developing new skills: teaching students about growth mindset, perseverance, and getting help when in their blended learning program. Multiple teachers reported how students would shut down quickly when they did not know the answer to a question within the software. Eloise said, "So the challenging part is often that they get stuck, they can't keep progressing and they get frustrated." Carol stated that one thing she learned is that she had to explicitly teach growth mindset (Dweck, 2006). Growth mindset is the idea that you can get better at something through focused hard work (Dweck, 2006). Carol and several other teachers created lessons about a student who demonstrated growth mindset and one that did not (Jack and Jill), and she would refer kids back by asking them if they were a Jack or a Jill during their time on blended learning software. Jasmine discussed that she needed to build a

classroom culture where everyone was “comfortable with making mistakes.” She even built this into her rewards system – perseverance rewards. She would review program data to see where a student struggled in the program and then overcame it to give the perseverance reward. She discussed that this normalized the idea that you had to work through things when working within a program.

Additionally, teachers reported spending more time teaching students how to help a friend, from teaching them how to ask for help to how to give help. Shunte described a colored cup system she created specifically for students that needed help. One or two students were designated helpers, and they had green cups. All other students had red cups, and they were to turn over the red cup if they needed assistance. The students with green cups would then go assist those students. Michael had to work with students on how to give help without just doing it for the other student. Initially, other students would just take the mouse from the other student and answer the question. He worked with students to think about being a teacher by asking questions. Building a culture of helping helped with behavior management in the class, as students had an outlet when they did not know what to do and could not immediately ask the teacher.

Another trend amongst the teachers was that they would see misbehavior when there were unfamiliar representations in their math programs. Several teachers reported that they would look for whole group trends of struggle in the data, and it was often a predictor of misbehavior. To deal with this, teachers would pull the entire class together to review the mathematical representation students were struggling with. Carol described what she would do with ST-Math when this happened:

We had this ladder / slide representation that everyone was stuck on. And you could tell

– I was giving more color changes in the behavior management cycle than usual. I brought them together as a whole group to demonstrate – and voila – on task kids! Pulling students together face to face on a challenging skill was also discussed by Michael, Kristy, Simone, and Jessica, teachers that use the ST-Math program. ST-Math is a visual program without words, and this scaffold was reported by each of them in their interviews. Teachers did not initially predict this to be an issue but quickly discovered that it was so they intervened quickly.

Teachers are both using tried and true behavior management techniques and new techniques that are unique to blended learning programs. So, while their role as behavior manager and classroom culture builder exists, it has certainly evolved to employ new methods. Overall, teachers have a positive response to this change but also note that things can be more challenging when multiple students are frustrated or when the technology just does not work that day.

### **Planner of Instruction**

In addition to requiring new forms of classroom management, blended learning has shifted the way that teachers are planning for instruction. Planning for instruction is generally considered a critical role for teachers, and it usually entails determining the tasks students will complete to meet the learning goals, including sequencing of lesson activities, activity procedures, and formative assessment during and at the end of the lesson (Jacobs, Martin, Otieno, 2008). Teachers in this study are planning from materials given by their school, although the materials themselves vary. This section has 3 sub-themes related to role change and planning for instruction: 1.) Changes in Front End Planning, 2.) Changes in Material Preparation, and 3.) Lead and Co-Teacher Roles in Planning. Teachers are changing the way that they plan

for lessons by integrating the blended learning data and using the resources from blended learning software to create stronger lessons. They are both spending more time in preparing materials when it comes to technology preparation and less time when it comes to preparing for centers time. Lastly, for teachers who have co-teachers in the classroom, blended learning has shifted roles and responsibilities for planning instruction.

**Changes In Front-End Planning.** Before delivering instruction, teachers in this study, just like teachers have for years, prepare lesson plans that include the objectives of the lessons, lesson activities to meet the objectives, and within / end of lesson assessments. All the participants discussed that paper-based curriculum materials were provided by the school to assist in lesson planning. These materials include a scope and sequence, daily lesson objectives, and lots of supporting materials, from independent work to assessments. Teachers reported that these materials were generally geared towards whole group learning of reading or math. According to the teacher participants of this study, blended learning has changed the way that they approach planning with these paper-based curriculum. Instead of approaching planning as a one size fits all approach, which is what teachers in the study described about their curriculum materials, they are planning with differentiation in mind, using their blended learning data. Teachers are rarely planning for whole group lessons but instead are planning for small groups on targeted skills the students need to master the standards within the scope and sequence. Carol states that she plans differently now:

First, I look at what the students should know and be able to do from the standards and curriculum. Then, I think about how my students are performing on the program, look at any other formative assessment data and observations and I come up with a plan for what kids need and how I am going to hit those needs in a way that fits in the space and time

constraints in my classroom. Most of the time, this results in lots of small group mini-lessons, not these long whole group lessons. My lesson plans are literally a list of kids, the next most important skill for the kids, and quick hits for getting them there, particularly in math. Most of these lessons are short.

As evidenced here, teachers are now able to target learning in their planning, rather than solely using whole-class oriented curriculum materials. Carol and others in the study are basing their lessons on what students know with a level of precision not easily attainable without blended learning, and therefore they can cut extraneous teaching. While this was most frequently reported in math instructional planning, this was also true in phonics instruction for those using software with available phonics information. Simone, for example, discussed planning for targeted phonics lessons and being able to cut a lot out of the provided curriculum given that she knew students had mastered specific sounds in Lexia. She saw this as both saving her time in planning and saving actual lesson time itself. Like Carol, she was listing students with targeted skills and integrating that knowledge with the prepared curriculum. She said, “I still use my CKLA [literacy] curriculum, but I can cut out so much because I have so much data.” Other teachers explored this idea of integrating blended learning data with the paper-based curriculum. They talked about how they use them as complementary resources, and their job as the teacher was to integrate the material. Shunte stated, “I am the person that brings all of the teaching resources together to form something coherent for kids.” Teachers like Shunte are thinking about how the paper-based materials and blended learning materials come together.

Being able to tailor lessons seemed to be most clear when there were concrete skills that were mastered or not, such as math procedures or phonics. This was less true with complex skills like reading comprehension. When asked if the software was impacting how they were

teaching reading, all teachers said yes for phonics and less so for reading comprehension. Most teachers were still doing small group guided reading with students and using their small group data to drive the instructional plan for those groups. Danielle said the data about reading comprehension wasn't as strong from blended learning programs because reading is more complex. She wanted to know about their fluency rates, whether or not they could accurately summarize the reading and whether the students could answer higher order questions about the reading. So far, she has not used a program that gives this type of information. There are programs that do this, like Amira, but she has not used them. Other teachers, when asked about this, reported similar experiences. Michael talked about how he would always review Lexia data reports for student phonics data but didn't find the reading comprehension information very useful. He stated, "I just need to hear the kids read and then, I need to see if they can tell me what happened in the story. A computer doesn't seem to do that yet." So, while extremely useful in planning all of math instruction and phonics instruction, the technology for helping to plan guided reading or other forms of reading comprehension is not quite there yet, based on the programs that the teachers in this study are using.

Another way that planning changed for teachers was using resources from the blended software to assist with planning. Megan, who uses Zearn, talked about how that resource helped her build her conceptual understanding of the content before she planned her lessons. She would watch the Zearn videos preparing for her lessons, both to learn the content and to use similar methods as were presented to the kids. She discussed that she would often not know how to use a set of manipulatives in the paper-based curriculum, and Zearn would show her what to do. So, she would integrate what she saw in the videos with the activities she was planning from the curriculum. She called it a "great reference guide." Other teachers with other software, like ST-

Math, commented similarly. Both Michael and Kristy spoke about reviewing the conceptual way something was being taught in ST-Math and then using a similar representation in their lessons, even if it wasn't in the curriculum. This approach has helped students be more successful in their traditional curriculum and blended learning programs.

Blended learning is also changing teacher planning of whole group lessons. Prior to the introduction of blended learning, teachers in this study would have planned the lesson from the curriculum, following that scope and sequence. Teachers in this study discussed how they are often changing the scope and sequence based on the data. Sometimes, they are slowing it down, realizing that students need more time with the teacher on content, sometimes they are speeding it up because students are close to mastering content and sometimes, they are skipping content in the scope and sequence all together because the whole class knows the information. Ian talks about this: "I used to think of the scope and sequence as the gospel. Now, the data is the gospel, and I feel like I have more autonomy to determine what instruction my kids need." Teachers are feeling more empowered to make instructional choices in their planning because blended learning offers them the data to make those decisions. Otherwise, they were following the curriculum provided. That is not to say the teachers don't use the curriculum materials. They are just used differently. Jessica said, "The curriculum is still the gold-standard, and I use it all of the time. I just use it better and more efficiently when I plan." She uses the curriculum for the scope and sequence, problem sets, timing of activities, and more. However, similarly to Ian, she is cutting things out or adding things in because of the data she has on students. Blended learning programs are often pre-teaching new content. So, when the data shows the kids have mastered something, teachers are cutting it and moving to the next thing. Jasmine asks a key question related to this idea of pre-teaching: "Why teach the kids something they clearly already



know? We never have enough time, so this approach allows me to be efficient.” She has found she is able to cover more material because she can skip or condense things when students have already seen the content.

**Preparation Of Materials.** Teachers in this study discussed a change in how they prepare lesson materials for students. Most teachers in the study reported spending a significant amount of time in the past selecting the materials students would use from their curriculum materials and photocopying those materials for students. Teachers characterized their paper-based curricula as having lots of practice materials for students, requiring teacher selection of the material, and that the teachers would make daily packets for students. These packets would often include independent practice material for the day and would sometimes include centers work. Typically, the materials would be the same for everyone in the class. Blended learning has changed this. Teachers are spending more time ensuring the technology is ready for student learning. They are spending less time preparing independent practice work.

First, teachers noted something new that they do is preparing a new material for class: the actual technology itself. Teachers talked about how they had a new piece of lesson materials, the computer, and they had to make sure they had time for taking care of the computers. This ranged from making sure that the computers were charging everyday, so they had power when students went to use them to checking on the computer’s connectivity ahead of class. Several participants noted that it was always important to check for wireless connectivity in the morning. If wireless is not working, it can be a lesson “killer,” according to Megan. She said she had learned to always have a backup activity in case the power or connection went down, as it rendered the computer unusable. Eloise also talked about the initial materials preparation at the beginning of the year, which included ensuring each student has access to their user name and password. She

said, “You would think that is an easy lift, but with young kids, it takes training. From a teacher’s perspective, it is more material that I am managing.” Getting student user names and passwords set up so that students could use them was another area of added responsibility. Lastly, there is the actual care of the computers. Most teachers in the study noted that there was another person in the building to help with computer repair, such as missing keys, but they had to take the time to get them to the person. Ian said, “Kids are hard on computers, and the devices today don’t last forever. Every month or so, I have a stack of computers with minor repairs, and I have to find time to get that done where it won’t disrupt learning.” Like Ian, many of the teachers in the study had to constantly check on their computers to make sure they were in top working condition. Teachers in this study did not state that the connectivity issues made things bad enough not to use it, but it is possible that teachers in other settings might have that experience.

Another way that teachers have had a change in lesson material preparation is through preparing activities for independent practice. In most cases, teachers reported that there was much less material to prepare. Michael said, “Preparing for lessons is just more manageable now. I don’t have to have a class set of every lesson material – now, I usually just use my lesson plan.” This is because the computer is generating the majority of the independent practice materials, not the teacher or the paper-based curriculum. Additionally, for teachers who were regularly modifying work for students to meet them at their level, the preparation is significantly different. Jessica talked about the difference in modifying student work:

It has totally changed the way that I modify packets for students with accommodations.

For my students with accommodations, the software already meets them at their instructional level on a skill. All that I have to do is to make sure they are working on an

aligned skill to the in class material. I don't have to sit and think about how to modify the work – the computer does it for me. And, when I have taught whole group, it's great for the kids that are ready to accelerate. I never had the time to create acceleration materials, and the computer also does that for me.

Teachers like Jessica have less work to prepare for students because the computer is meeting the students where they are. However, it does not mean that the teacher is not involved. The teacher still must go into the computer program and align skills. Otherwise, the students would be practicing material unrelated to the class content.

A third way that blended learning is changing teacher material preparation is by replacing teacher work in preparing for learning centers. Many primary classrooms have learning centers, which are places students go to practice skills while the teacher is working with small groups (Ford & Optiz, 2002). Teachers in this study talked about how center preparation used to take a lot of time and effort. Danielle, a 14 year veteran, reminisces about the work she used to do preparing her centers:

I remember when I first started teaching, I would spend hours every evening preparing my centers materials for the next week. I would have a sight word center, a blends center, an independent writing center, and an independent reading center. The materials would be spread out all over my kitchen table at home. I would have to create instructions for each center, along with lesson plans on how to teach the kids to use the centers. Having blended learning instead of centers has helped me tremendously because it has cut the need for planning the centers at all.

Danielle and others now don't have to create this variety of independent activities for students to do while they work in small groups. Shunte remembers agonizing over the books she would

choose for her centers. Several other teachers reported that they spent a lot of time preparing for centers, and they weren't always sure that centers were a high quality use of student time.

Michael said, "I always felt like I was preparing materials for babysitting the kids." He felt this way because he rarely had the time to review what they did in their centers, so the actual work preparation on his end did not feel useful. Now, most of the time students would have spent in centers, students are on their program, working on work tailored to their learning needs.

Teachers are making sure they are working on the right things and planning for intervention when needed but not on creating the materials themselves.

**Lead and Co-Teacher Planning Roles.** Most of the teachers in this study have a co-teacher in the room during instruction. Most of these teachers play the role of assistant or associate teachers and are in their first year of teaching. Blended learning has changed the way some of these teaching pairs have approached planning for lessons in terms of the roles and responsibilities that they have. Kristy describes what this planning looks like in her math class:

So, a typical day between myself and my associate teacher would pretty much be in 35-to-45-minute cycles. I would plan for the more intensive lesson, while she would take a simpler lesson and then we would rotate through the students. I would generally provide the scaffolded grade level content to the students, and the associate teacher would focus on students needing remedial instruction with more concrete skills.

Kristy would focus on making sure that grade-level material was accessible to students, taking on the harder part of planning. The associate teacher would take on easier, more straightforward skills. Another teacher, Carol, discusses something similar, where she focuses on teaching what kids will most struggle with. She specifically delegates out tasks to her co-teacher that she thinks are easier. She delegates smaller interventions to her co-teacher, which she feels is a more

appropriate planning load for a newer teacher. Other teachers who had a co-teacher felt similarly, and they felt that they were able to utilize their own skills better while also building the planning skills of the co-teacher. Megan spoke about how she was able to use her planning time to figure out how to teach conceptually, and rote tasks were delegated to her co-teacher. Her perception was that conceptual tasks were more difficult to teach and therefore took more time.

A few of the teachers discussed how they would work with their co-teachers to show them where students would struggle on the blended learning program so that it could inform their co-teacher's planning process. Jasmine spoke about how she "knew when kids were going to have major road blocks, and I would show my co-teacher how I wanted her to help them." Jasmine and others spoke to this idea of coaching their co-teachers to plan using the blended programs most effectively.

### **Summary**

In this chapter, the significant themes from the 13 participants were outlined in regards to teacher role change when implementing blended learning structures in the classroom. The three main themes were 1.) Data Usage and Differentiation, 2.) Classroom Technology and Teacher As Motivator, and 3.) Different Approaches To Instructional Planning. In reviewing the shared experiences of participants, it is clear that blended learning has impacted teacher roles. Teachers are using data differently and more quickly. They are adapting to new motivation strategies to keep students engaged, and they are planning their lessons differently as a result of using blended learning in the classroom. In the final chapter, the implications of these findings will be outlined and recommendations for teacher support will be made to teacher training programs and to school leaders. Additionally, areas to explore for future research will be discussed.

## CHAPTER 5

### Discussion and Conclusion

There is an established body of work related to the use of blended learning in the classroom, and there are emerging studies about how blended learning is impacting the roles of teachers, particularly in higher education and high school (Jokinen & Mikkonen, 2013; Nortvig, Petersen, & Balle, 2018). There are fewer studies of the impact of blended learning on the role of primary grades teachers learning (Poirier, Law, & Veispak, 2019). This study explored how 11 primary grades teachers and 2 CMO administrators 1.) perceived the teacher's role in a blended learning environment and 2.) how their perception of the teacher's role has changed with the introduction of blended learning in the classroom. A phenomenological study guided by Role Theory (Biddle, 2013) was conducted with these primary grade teachers and CMO administrators. This chapter will discuss findings reported in Chapter 4 by demonstrating how the themes connect to each other, the literature review, and to the theoretical framework. After that, implications for policy and practice will be discussed, as well as opportunities for future research on this topic. Lastly, limitations of this study will be reviewed.

### Discussion of Findings

The findings of this research study filled a gap in research about blended learning as it relates to the changing role of primary teachers in a blended learning environment. There is much research about the *use* of technology in the classroom, and there is research about the role of educators using blended learning in higher education and a smaller amount in high school (Nortvig, Petersen, & Balle, 2018). However, there are very few studies about the changing role of primary grades teachers as it relates to blended learning, as most studies in the K-12 space are focused on definitions, models, and the possibilities of using blended learning (Poirier, Law, &

Veispak, 2019). The shared experiences of the primary teachers related to role change were organized into three themes, with associated sub-themes:

Table 5.1: *Themes and Sub-Themes*

<b>Theme</b>	<b>Sub-Themes</b>
Data Usage and Differentiation	<ol style="list-style-type: none"> <li>1. Faster Data Cycles With More Data Precision</li> <li>2. Small Group vs. Whole Group</li> <li>3. Reteaching Missed Content</li> </ol>
Classroom Technology and Teacher as Motivator	<ol style="list-style-type: none"> <li>1. Change in Format</li> <li>2. Change in Rewards</li> <li>3. Changes in Behavior Management</li> </ol>
Different Approaches to Instructional Planning	<ol style="list-style-type: none"> <li>1. Changes in Front-End Planning</li> <li>2. Preparation of Materials</li> <li>3. Lead and Co-Teacher Planning Roles</li> </ol>

### **Addressing The Research Question**

The primary question of this research study was, *what are the teachers' conceptualization of their role as a teacher in a blended learning environment?* The literature revealed that there are emerging ideas about the changing roles of teachers in a blended learning environment (The New Teacher Project, 2014; Powell et al., 2014; Fallon, 2020; Zhao, 2022). The literature also demonstrated how teacher roles have intensified over the years and that a hope of blended learning is that it would in fact de-intensify their roles (Schaffer et al., 2015). There are fewer studies about teacher role change in blended learning environments, particularly for teachers of grades K-4. The findings of this study provide practical explanations and applications of how teacher roles are changing in a K-4 blended learning environment. By using role theory, this study allowed teachers to explain how they saw their work in a blended learning environment, and the study explored their common experiences of role change. For example,

teachers in the study noted changes in how they use data to inform instruction, how they motivate students for learning or how they plan. An example related to planning comes from Danielle. She stated, “My work is less tedious than it used to be because I don’t need to prepare as much independent practice.” Blended learning provides for much of the independent practice material for instruction for students, and Danielle, as with other teachers in the study, is able to spend her planning time on planning more targeted lessons for students. Katie, one of the CMO administrators, builds on the idea of role change, describing the altered activities of a blended learning teacher:

The role of a teacher has definitely changed – mostly by being able to do the job the way we had always hoped they could do it. They are able to better execute on their role because they get better data. At the end of the day, as good as you are, it’s really hard to figure out who is doing what, who needs what at any moment when you have 30 students in a classroom. The software changes that and captures student learning in a way a human cannot. Teachers can now really look at the data and figure out who got stuck and where. The teacher can then help the kid tomorrow. Without blended learning data, it’s not possible for one person, and this allows the teacher to be truly responsive. This is how the role changes. It changes the need from the teacher from needing to be on stage and allows kids to learn on their own.

Katie describes that the role has changed through being able to be truly responsive to achievement data, as discussed in the first theme in Chapter 4. She also notes how the teacher is spending less time in front of the students teaching and is instead working with students in places where it is clear they need extra support. The majority of students are making progress on their own, and the teacher is able to focus their support tracking, remediation and motivation.



A sub-question of the study was, “how do teachers’ conceptualizations of their roles change after blended learning structures are introduced?” The main way that teachers describe their roles changing is similar to what Katie, an administrator, describes above, which is they see themselves as being responsive to student learning needs differently. The main reason for this change is that they have the data to actually drive instruction at an individual student level. Another way that they describe their role changing is through amplifying something they were already doing – motivating students to learn on their own. Blended learning in the classrooms in the study requires students to spend chunks of time completing independent practice, and, as a result, teachers are inventing new motivational structures, such as daily rewards about progress within the program or rewards about students who persevere when they get stuck within the program. Lastly, teachers see their role as a planner changing. They are integrating curriculum and blended learning software to build learning experiences for students, and they are planning to address individual needs more often.

In perhaps a surprising finding, there has been a hope that blended learning would de-intensify the role of teachers, it is not having that effect in the classrooms studied here. One example of this is the findings about how teachers are changing their use of data. In the past, some teachers in the study used daily formative assessment in a traditional classroom, but it was difficult to keep up with consistency because the volume of hand-grading daily assessments would sometimes be too much. Others in the study did not use daily formative assessment at all. This corresponds to the literature about daily formative assessment in primary classrooms, as teachers are not often implementing the strategy (Veldhuis et al., 2013). This is largely due to not having the right resources for formative assessment or teacher knowledge gaps in using the data from formative assessments (Hondrich et al, 2016). Teachers in this study, however, are

reviewing data every day, and they are using it to determine their instructional approach. Data that is given to teachers is organized by the software, and the software is often giving suggestions of what to do with the data. Teachers are doing more, both by giving the assessments and planning for instruction from the assessments. However, that does not mean that this feels like intensification to teachers. Carol states: “Is it more work? Absolutely. But it’s better work because it feels more sustainable because you see the rewards.” Carol is speaking to the success in student learning that she sees by teaching in a blended classroom, and that success motivates her. Also, it feels more sustainable because she is not doing “paperwork” – i.e., grading papers. She is reviewing the results of student work and thinking about how to best meet student needs, and that is how she wants to spend her time. Other teachers in the study note similar reactions, both due to feeling successful and using their time for more professional work. Eloise sums this up by saying, “It just opens up a whole new world of possibilities because I can meet students where they are, and the content is presented in ways that students prefer to learn.”

Another way that the role has intensified is through increased teacher work in motivation of students. While the teachers in this study all report that students are more engaged in their independent work due to the engagement provided by the technology, they also report that they are doing much more to ensure students stay motivated towards reaching their goals in their blended learning programs. The reason for this is that students are expected to work on their own for longer periods of time, and the teachers perceive that students need extra motivation to do so. The blended learning software in all primary classrooms in this study relied on using games for students to engage in independent learning. However, while all teachers noted this increase in engagement, they also discussed how they also had to engage students *more* with

rewards than they would do in their traditional classrooms. The gamification of learning did not capture every student's attention, and teachers in this study were inventing more frequent strategies for motivating students to attend to the work of the program. These strategies ranged from giving out certificates at the end of every lesson to creating chants and more. There were examples of special award walls and photos being sent home to families, which again demonstrates new forms of work. While the teacher has always been responsible for motivating students, teachers are doing more to keep all students engaged in their independent work for those that are not intrinsically motivated by the software. A related finding in a study of Khan Academy, a math software sometimes used in blended classrooms, shows that students who use the program increase in their achievement and those who don't do not make progress (Hill & Chattergoon, 2020). When reviewing the data of this study, it is clear that a strong majority of students is not completing the learning of the program, and to achieve success with the program, teachers have to increase motivational strategies for students who are not doing the work in the program (Hill & Chattergoon, 2020). The teachers in this study have chosen to find other ways to make sure students are engaged, which is to provide more intensive and more frequent extrinsic rewards, thus expanding their role.

Lastly, the role of a teacher has changed in terms of planning when using blended learning in the classroom setting. Teachers in this study are reviewing student learning data from their blended learning programs, and they are using it to customize their lessons. They are integrating what they know about student learning with their curriculum materials, which is another form of role intensification. In the past, teachers would have reviewed their curriculum materials to use as the lesson plan. Now, they are both doing that and making changes to the lessons based on learning data. Sometimes, they are also integrating the lessons provided by the

software itself. The one area where there is true deintensification of the role of teacher is related to preparing materials for independent practice and learning centers, as the technology is replacing that need. In the past, teachers in the study reported spending significant amounts of time creating independent learning centers for students to go to while in small groups for reading or math, and the teachers do very little of this work now. Instead, blended learning has taken its place. While teachers are spending less time on preparing lesson materials, they are spending time in other ways, such as reviewing data and planning small group interventions.

The literature outlined a few frameworks and ideas of how the role of teachers is changing and the new skills that teachers must have to be successful in a blended learning classroom. This study adds to that body of knowledge and research. Each of the models discussed in the literature review discuss the idea that teachers must be able to be adaptive and able to integrate different digital and print materials for students (Shaikh, 2012; Powell, Rabbit, & Kennedy, 2014; The New Teacher Project, 2014). There are multiple instances where teachers in this study are integrating what they know about students from the data provided by the software with curriculum materials, with blended learning materials, and with what they know from observation. They are taking this information and creating the right learning pathways for the student, whether that be on the blended learning program, with the teacher or co-teacher, using core curriculum materials or other ways of integrating the different materials. Jessica speaks to this idea of being an integrator: “I think about planning so differently now. I am not just planning from one set of materials – I have to take the planning materials and the student data to determine what each individual needs. Then, I make a plan for each kid or group of kids.” Jessica describes putting the different materials and data together to create an

individualized learning pathway for each student. Jessica, as with other teachers, is serving as an integrator, as several models discuss.

In the different models of teacher role change and teacher competencies in the literature, only one of the studies mentions the role of the teacher as being a motivator in a blended learning environment. Shaikh (2012) lists being a motivator as one of the critical skills of a teacher in a blended learning environment, but what this role looks like is not deeply discussed in that research study. In this current study, teachers are finding that the computer provides a level of motivation for most students, given its gamification of learning. However, the gamification of learning is not enough to keep students independently engaged, particularly when they struggle in the program. Teachers in this study note that they have created new tools to motivate students to persevere in their learning and to employ a growth mindset (Dweck, 2006). Megan talked about this cognitive dissonance between the computer both being fun but sometimes hard:

Most of the time, kids are really excited to learn on the computer because it is fun. The kids are learning through games. However, I remember being really surprised that the computer does not always keep their attention. This mostly happens when the students get frustrated because they do not know something. I have created a complex set of awards for students that persevere even when the learning is hard.

Megan is speaking here to the work she has done to create new motivational systems in her blended learning environment because the gamification of learning is not enough to keep all students engaged all of the time. This is different than keeping students engaged in centers for two reasons: 1.) Students are using the computer programs for longer than periods of time than a traditional center; 2.) The computer is constantly adjusting the level of students, often pushing students further in their learning than a premade center. Lastly, teachers have also had to modify

their behavior systems for the blended learning environment because there is a small subset of students that needs behavior correction.

In this study, the third finding was that teacher roles were changing related to planning of instruction. The literature review addresses this change in role in The New Teacher Project (2014) framework, in that it states that teachers refine curriculum to meet the needs of students. The iNACOL teacher competency framework (2011) also calls for teachers to have the technical planning skills of creating learning pathways for students based on the data and student learning preferences. This study has some commonalities with these findings as well as differences. In terms of planning, teachers reported that they were planning based on student needs and not solely from the curriculum. Teachers did not report that they were planning towards student learning interests. The teachers in this study also showed how they were spending less time preparing student materials for independent practice, and this lessening of this type of planning is not mentioned in the models reviewed in the literature review. This study adds to the current models of teacher role change in blended learning environments because there are differences from the few current models.

### **Connection To Theoretical Framework**

The primary teachers in this study experienced role change with the introduction of blended learning, as well as role intensification. Role theory states that roles are thought in terms of behavior, person, context, and characteristicness (Biddle, 2013). The behavior component of role theory defines what a person does in their role (Biddle, 2013). Given that what teachers are doing in this study is functionally different than what they were doing before, we can point to role change in terms of behavior, in a specific context (K-4 classrooms) and with a certain type of characteristicness (blended learning environments). Role theory can also be defined to

explain roles within a group, and groups typically have a history, set of values, and practices as a group (Longstreet, 2011). The introduction of blended learning is relatively new, so while there has been change, there is not yet a sense of a group in this way. There are emerging sets of practices that are different from teachers not yet using blended learning in a classroom, but there is not a clear sense of history or values. So, in this case, the role of primary teachers using blended learning have not developed a sense of collective identity for their role because this is emerging practice. This points to a need to support their professional learning and codify so that others may benefit.

The theoretical framework for this study demonstrates how teacher roles have shifted over time, from that of a traditional teacher with high autonomy and low accountability to teacher role intensification with increased accountability and workload (Lortie, 1975; Valli & Buese, 2007). The literature discusses several of the traditional teacher role frameworks: Sage On Stage, Teacher As Knowledge Giver, and Teacher As Facilitator. The first two models place the teacher at the center of the classroom, directing the learning, and the teacher as facilitator creates activities for students to do to make meaning on their own (Chrenka, 2001). The introduction of blended learning in primary classrooms has moved teachers away from the Sage On Stage and Teacher As Knowledge Giver role. Teachers in this study reported students learning on their own and using the data to address specific learning gaps, rather than being the person relaying all of the information to students. Teachers saw themselves planning to meet specific student needs, and they also saw themselves as the motivator of the classroom. This is similar to the role of Teacher As Facilitator because students are making their own meaning to some degree. However, the teacher is not at the center of the facilitation, the computer is at the center of the facilitation. So, while similar, this too has shifted.

## **Implications for Practice**

The findings of this transcendental phenomenology outline K-4 teacher experiences of teacher role change in primary classrooms that use blended learning. The shared experiences of the teachers in this study reveal that teachers do perceive that their role is changing when using blended learning software in the classroom. Hopefully, this study will help shape the pre-service training that primary teachers do to prepare them for this type of classroom, since more than 40% of classrooms in the U.S. use some form of blended learning (Molnar et al., 2021). Additionally, it will hopefully change how CMOs / districts and schools plan for professional development. This section includes the professional development experiences of the teachers in this study, including their perceptions of what worked well for them and what did not. The experiences of these teachers may help give insight into how to think about professional development for teachers using blended learning.

Based on the findings of the study, there are several implications for training of pre-service teachers. The main implication of the study is that pre-service teachers should be exposed to blended learning software, with a focus on how to integrate student learning data from software programs into planning for instruction in the primary classroom. In this study, teachers repeatedly talked about how they used the data to plan for small groups, reteach lessons and target their instruction. When pre-service teachers are learning to lesson plan, they should get exposure to using blended learning data to plan their lessons. Additionally, it might make sense to place student teachers into settings where they practice this skill with their mentor teacher. This way, they would practice integrating what they know about students from their blended learning data, what they know about them in class, and what their curriculum materials suggest for instruction.



Several studies address the need for pre-service teachers receiving preparation related to blended learning. Hodges et al. (2022), present a 2025 vision for pre-service teacher training that integrates blended learning, including creating a set of standards for teachers to meet related to integrating blended learning into instruction and pre-service teachers getting field experience integrating blended learning. Hodges et al. (2022) also points out that more work needs to be done to understand teacher roles and necessary competencies for success in a blended learning environment. Molnar et al. (2021) argue that developing a set of standards for pre-service teachers related to blended learning has been difficult due to the lack of research in teacher competencies, resulting in most recommendations coming from corporate or ideological agendas, rather than peer-reviewed scholarship. This study, while not aimed at teacher competencies, describes how teacher roles have changed and could be a starting point to further explore standards for utilizing data effectively, strong motivational practices, and planning in a blended learning environment.

Schools are regularly implementing blended learning strategies whether their teachers have been trained in blended learning or not. This means that schools and CMOs / districts must be strategic about how to do effective professional development for their teachers using blended learning. Teachers in the study were asked this question: “What support do you receive in implementing the shift to a blended learning environment, specifically in class rotations?” Teachers were then asked: “What would be the ideal support you would need to implement blended learning in your classroom?” Their words of wisdom can help provide context for what is happening to teachers related to support and what their perceptions are about what would be most effective.

First, several of the teachers in the study reported that they did not receive professional development in the initial phases of using blended learning. This group of teachers reported feeling very lost when using the software because they did not know how to help students or how to read and utilize the data from the programs. Megan was one of these teachers, and she discussed how she felt under pressure to perform without having the knowledge to do so. The school started tracking student progress and publishing the data to the school, and her student learning data was not strong. She reported that she reached out to colleagues, so she was able to pick up most of it from peers, but it was a true struggle until she received more extensive professional development. Other teachers reported that they received professional development, but it was mostly focused on the classroom management component of blended learning versus using the program. Teachers in this situation said they really needed both classroom management related to blended learning practices and program usage professional development. Shunte went so far to say that initially the blended learning program just felt like a “babysitting” tool so that she could run her guided reading groups. She was not initially doing anything with the computer program data, and the students were just engaged in games. The students were engaged, but there was not a clear purpose to what they were doing, so it was not leading to any sort of student achievement.

Other teachers reported the opposite about their professional development experiences, and they found them to be truly valuable. A commonality amongst these teachers was that there was a significant amount of time in the summer to plan for a successful roll-out. Simone describes her professional development experience in the summer and throughout the year:

As a part of the initial PD, they also showed us how to read the student data reports. We spent time planning our classroom management strategies. Then, we launched and had a

weekly follow-up meeting with our network staff. We would problem solve issues we were having and would share best practice. Honestly, this was pretty ideal because it felt like we were a true learning community.

What Simone discusses here is that the professional development both met initial roll-out needs, such as how to read a data report and how to set up the classroom, and ongoing needs through collective problem solving. Eloise discusses a similar experience, and she said the most important part was learning how the digital components and paper-based curriculum went together. In her experience, teachers were able to practice both parts of the lesson, and she felt like this was helpful for beginning the year with the knowledge and skills to be successful.

The teachers who had extensive professional development opportunities before the year started seemed to have a more favorable experience with professional development. These teachers were able to explore the programs so they had enough familiarity to launch them in their classrooms. Conversely, teachers who did not have strong initial professional development reported not knowing how to use the tools. Several of these teachers described actually playing in the software itself, and this helped them understand the student experience. Schools and CMOs / districts should consider building summer PD time for any new software, as well as time for teachers to use the software as a student. Also, teachers reported that having ongoing professional development was key to successful implementation. Research about effective professional development also demonstrates the importance of repeated contact hours for professional development (Guskey, 2000).

Despite widely varied professional development experiences, teachers demonstrated that they were also resourceful in identifying their own sources of professional development, whether that be from a colleague or elsewhere. So, while teachers should not have to resort to their own

devices to learn about their blended learning software, schools can be intentional about setting up time for self-learning related to integrating blended learning. Then, this practice can be shared with other teachers.

While this study was completed before the COVID-19 pandemic, its findings and implications are incredibly relevant to the impact on teachers during the pandemic. Many teachers across the globe were required to teach virtually, and many of these teachers were using blended learning technology during that time. There is emerging research about the impact on teachers and their perceptions of their work during the pandemic. In one such study, An et al. (2021) demonstrate that one of the major challenges for teachers was that they were not prepared to use the variety of technologies required of them due to a lack of training. Given what we have learned from the pandemic, it is essential that teacher training related to blended learning software and effectively using technology is integrated into teacher preparation programs and professional development for teachers. We do not know what other challenges may disrupt in-person learning, and blended learning offers one way to deliver instruction without in-person instruction.

A final implication of this research relates to teacher retention and teacher role change. The research on teacher role change shows that teachers' roles are more intense than they used to be, and teachers are burning out in their current jobs (Valli & Buese, 2007; Wong et al., 2017). The push for student performance and teacher accountability, while important, cannot drive teachers out of the profession, and educators need to think of ways to de-intensify the work so that teachers may focus. Blended learning is one area for continued exploration, given that it automates parts of a teacher's role, while intensifying other parts of their role. One way this might be possible is by a continued focus on automating what can be automated. For instance,

teachers may need to review the data, but programs could create customized lessons based on student results. This would save teacher time in planning small group instruction. There are likely other ways that a continued push for automation could do to reduce teacher workload and pressure.

This study took place in New Orleans, which is an all charter school environment. Charter schools in New Orleans are at a crossroads of how to vastly improve the schools, but they struggle with teacher retention mostly due to dissatisfaction with the workplace (Stuit & Smith, 2009). Teacher retention and teacher burn-out, however, is a challenge beyond New Orleans and charter schools. The COVID-19 pandemic has only exacerbated this, and teachers are reporting higher levels of stress and anxiety, often due to teacher role change from the pandemic (Pressley, 2021). A teacher shortage is happening throughout the country due to a lack of competitive salaries, fear for personal safety from COVID exposure, and a lack of support (Bryner, 2021). Barry & Shields (2017) show that one strategy to help fight against teacher shortage is providing high quality materials to teachers. Blended learning materials may help to make the job more sustainable, particularly as both lessons and independent practice materials are linked to curriculum and are pre-made for teachers. One of the potential keys to success is how the role of the teacher can become more sustainable in a high stakes environment (Valli & Buese, 2007). Teachers are held accountable for how they perform, and, with accountability, the role of the teacher has intensified through the many mandates that come from increased accountability (Valli & Buese, 2007). While this study didn't confirm de-intensification, there are possibilities that it could lead to it if the right supports and right linkages to curriculum are made (Woodward, 2013).

## **Limitations and Future Research**

Future studies should continue to build on the findings of this study related to teacher role change in primary classrooms while using blended learning. The first major implication for further research is to continue to develop a clear framework for teacher role change at different grade and subject levels for teachers. Different subjects have different types of potential software that change teacher roles in different ways. Thus, frameworks by grade-level and teacher type are important. This type of framework can then help build clear models for pre-service teacher training for blended learning classrooms and professional development for current teachers. The researcher recommends a specific deep dive into math classrooms, where there are existing curriculum materials and blended learning platforms, since this specific role change is different than the change for teachers who are using software that is not connected to the core curriculum. There have been multiple studies about effective professional development to implement blended learning in the classroom, and this research can be further nuanced by including teacher role change as a factor for developing strong teacher professional development as well. For instance, given that teachers are integrating curriculum and blended learning software, as well as the data that the software produces, it would be useful that this type of integration is specifically studied. Implications for future research also include seeing how teacher roles can be de-intensified with the strategic use of blended learning in the classroom. For instance, with the right matches between pre-service training, professional development, and matched curriculum and blended learning software, there is the potential for de-intensifying the work of teachers, even though this was not an overall finding of this study. This is critical, given that teachers are quitting the profession at record high rates, mostly due to stress (Diliberti, et al., 2021). Teacher attrition impacts student achievement, the ability to have a coherent curriculum,

and is very costly (Sorenson & Ladd, 2019). Given that blended learning is being used more and more across many classrooms, it is essential to see where the technology can better assist in making the role less intense with the hope that more teachers choose to stay in the profession.

### **Limitations**

There are several limitations of this study that must be discussed. First, this was a qualitative study with 13 participants, so the results are not able to be fully generalized. Additionally, the research was conducted across two schools in New Orleans, which may or may not reflect schools more broadly. In New Orleans, there is high pressure for teachers and schools to perform because the schools are charter schools that are only renewed if they meet certain performance metrics. Additionally, these schools have a high percentage of students that are free and reduced lunch, which can make the required gains more challenging to achieve. In another context with less accountability or different demographics of students, the pressure might be less. The profile of the type of school may have more of an impact than the researcher may know, given that this is the experience of every teacher in the study. It is possible that the intensity of the charter renewal cycle creates more of an intense environment for teachers. The researcher attempted to find diverse teachers, particularly in terms of teaching experience, given that this study was about blended learning. While the teaching experience of participants ranged from 3 years to 17 years in teaching experience, there were more teachers with more than 5 years of experience than not. If this study were to be replicated, the perspective of teachers with more experience, particularly those who started teaching without blended learning technology, would be of importance to be more precise related to role change. Additionally, teachers in their first year of teaching with only their pre-service training to draw on could also help understand teacher role change. Second, researcher bias was predicted to be a limitation of the study. As a

school principal, I started blended learning at my campus, and I have planned for its implementation and have considered potential teacher role changes to plan for successful implementation. This bias could have impacted the way that I interpreted teacher experiences described by the participants. Lastly, a limitation of the study is location and my role of leadership in the city of New Orleans. This study was focused on two schools in New Orleans, and I am the CEO of a group of schools in the city. While I did not perform this research in any of my own schools, teachers at the other schools were aware of my position. I was able to use my network of leaders to help me secure interviews, and this may have impacted what was shared.

### **Delimitations**

The delimitations of this study include the population criteria, theoretical framework, methodology, and research questions. First, the population criteria are limited to teachers who are currently teaching in K-4 classrooms using blended learning software. Other criteria, like type of blended learning software used or CMO/district choices for implementing blended learning were not included, given that the study was about primary teacher experience in blended learning classrooms. Next, given that the study was a transcendental phenomenology, the research questions were directed at a.) how the teacher is using blended learning in the classroom, b.) how teaching tasks and work has changed since blended learning was introduced and c.) the support received to implement blended learning. While other facets of blended learning could have been addressed, such as teacher perception of its effectiveness for learning, research questions were primarily looking at teacher role change.



## **Conclusions**

The roles of primary teachers are changing quickly in blended learning environments. It is crucial that teacher preparation programs, as well as schools plan for these changes so that teachers have the skills to be successful with new technologies in their classrooms. This study sought to understand the perceptions of primary teachers in blended learning environments related to teacher role change. This study revealed that primary teachers are using student learning data in new ways to inform instruction, motivating students differently to persevere on blended learning software, and planning differently with their provided materials and blended learning software. The teachers in this study also provided their experience with professional development and offered ideas on what worked for them personally and what did not. The researcher hopes that this study inspires additional related studies to create research-based teacher role frameworks and competencies so that all teachers are prepared for their changing and intensifying roles. The researcher also hopes that others continue to see how blended learning can be utilized to deintensify the work of teachers.

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## Appendix A

Dear Participant:

I, Sabrina Pence, am a graduate student under the direction of Dr. Brian Beabout in the Department of Educational Leadership, Counseling, and Foundations at the University of New Orleans. This study involves research on the role of the primary school teacher in a blended learning environment in charter schools in New Orleans. Should you choose to participate, you will be asked to participate in 2-3 interviews lasting no more than 45 minutes, with a potential for follow-up interviews if you are willing.

Every effort will be made to present results in such a way that your identity remains confidential. Participation in this study is voluntary and refusal to participate will involve no penalty or loss of benefits to which you are otherwise entitled. You may discontinue participation at any time without penalty or loss of benefits to which you are otherwise entitled.

It is likely that this research will benefit you by prompting you to think about your role in the classroom. I intend this study to be used to inform school leaders and policymakers of how to best support teachers in a blended learning context. Your insights are essential to providing a better sense of how we can improve our schools in ways that improve outcomes for students.

To maximize confidentiality, neither your name nor your school's name will be used in any the publications resulting from this research. Interview will be audio recorded and will be kept secure and will only be accessible by Sabrina Pence. If you have any questions about this particular study, please contact Sabrina Pence at (504) 810-9537 or [spence@uno.edu](mailto:spence@uno.edu). You may also contact Dr. Beabout at 504-280-7388 or [bbeabout@uno.edu](mailto:bbeabout@uno.edu).

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Participant (print name) Researcher (print name)

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Participant (sign)                      date Researcher (sign)                      date

## Appendix B

### **Demographic Questionnaire**

- Age:
- Pseudonym:
- Sex:
- Grade-level:
- Lead teacher or co-teacher:
- Number of years teaching:
- Number of years teaching at current school:
- Number of years using blended learning in the literacy classroom:
- Number of years using blended learning in the classroom:
- Computer programs currently used in the classroom:

## Appendix C

### Semi-Structured Interview Protocol

- What have you experienced in using blended learning as a strategy in your classroom?
- Tell me about a typical day in your reading class when you are implementing blended learning.
- How do you use blended learning in your classroom?
- What does the computer teach students in your classroom?
- What are students doing when they are not on the computer?
- What contexts or situations have typically affected your experiences of blended learning?
- How did the use of software in your classroom begin? Did you elect to do it, or was it a change implemented by the CMO?
- What has changed about your role since you started using blended learning in your classroom to teach reading?
  - o Potential follow-up questions:
  - o Has the way that you plan for instruction changed since using blended learning? If so, how?
  - o How is your time spent in the classroom while using blended learning? Is it different than before you used blended learning as an instructional strategy?
  - o What data did you look at before using blended learning to drive your reading instruction? What do you look at now? What has changed, and what has stayed the same?
- What is your opinion of the changes in your role since implementing blended learning?
- Are you finding your experience in the classroom to be different from when you first began teaching?
- Some people would say that the computer programs provide data that is really helpful to the teacher for planning instruction. What would you say?



- What support do you receive in implementing the shift to a blended learning environment, specifically in class rotations?
- What would be the ideal support you would need to implement blended learning in your classroom?
- Do you perceive blended learning to help you increase student achievement in reading? Why or why not?

## Vita

Sabrina Pence grew up in the suburbs of Chicago. She began her teaching career in rural South Louisiana as a 5<sup>th</sup> grade teacher. After that time, she moved overseas as an educational consultant to a small Middle Eastern country, Qatar, where she trained local science teachers to implement new curriculum standards. From there, she returned to New Orleans to join New Leaders for New Schools, where she trained as a principal at Arthur Ashe Charter School. In her first year as a principal at a turn-around middle school, she had the highest academic gains of any school in the city at 18 points. She then led another school to become one of the top five schools in the city. She is currently the Chief Executive Officer for FirstLine Schools, a charter management organization in New Orleans. Her research interests include blended learning, teacher retention strategies, and de-intensifying the roles of teachers in places of high accountability.