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Exploring Rural Elementary Teachers' Integration of the Beyond Textbooks Framework

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Walden University

College of Education and Human Sciences

This is to certify that the doctoral study by

Yolanda Noriega

has been found to be complete and satisfactory in all respects,
and that any and all revisions required by
the review committee have been made.

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Walden University
2023

Abstract

Exploring Rural Elementary Teachers' Integration of the Beyond Textbooks Framework

by

Yolanda Noriega

MA, Walden University, 2014

BS, University of Arizona South, 2006

Doctoral Project Study Submitted in Fulfillment

of the Requirements for the Degree of

Doctor of Education

Curriculum, Instruction, and Assessment

Walden University

August 2023

Abstract

Elementary school teachers at a rural school district in southeastern Arizona integrated the Beyond Textbooks framework in their classroom instruction related to academic achievement; however, exploring how rural elementary teachers integrated Beyond Textbooks in classroom instruction had yet to be investigated. This basic qualitative project study aimed to explore rural elementary teachers' integration of Beyond Textbooks as related to student academic achievement. Guided by David Kolb's experiential learning theory of learning from experience, the research question explored how rural elementary teachers integrated Beyond Textbooks in classroom instruction to improve student academic achievement. Due to the Covid-19 pandemic at the time of data collection, this study was limited to one rural school and five purposefully selected participants who were interviewed via Zoom video conferencing. Data were analyzed through coding and theme development. The findings revealed that the Beyond Textbooks framework, in conjunction with teacher training, resources, and fidelity to implementation, could assist educators with integrating Beyond Textbooks. In addition, a 3-day professional development project was developed to support teachers integrating Beyond Textbooks into their classroom instruction. Positive social change may result from sharing research-based findings that can help elementary teachers to integrate a technology-based curriculum framework that may improve student academic achievement.

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Dedication

This project study is dedicated to my family. To the memory of my mother, whom I left speechless when I told her I would pursue a doctoral degree. To the memory of my father, who taught me patience to persevere in any task. To my brother and sisters, for their love. To my eight children, 12+ grandchildren, for their unconditional love and support. To my guardian angel, Michael, for always being there!

"Life shrinks or expands in proportion to one's courage." Anaïs Nin.

Acknowledgments

Completing a doctoral project study takes a lot of patience and perseverance. Perseverance was key to achieving this doctoral degree. As Dr. Michael Vinella, a Walden University professor, once told me, “This journey is more about perseverance than anything else. Delve and dig into the research.” He was absolutely right!

Behind every student that earns a doctoral degree is a team of professors and mentors that provide guidance throughout the doctoral journey. I especially want to thank my dearest friend and mentor, Dr. Lucille Lang, for encouraging me to pursue this research work. Very special thanks to Dr. Irene McAfee and Dr. Laurel Walsh for the extra time, guidance, and encouragement to see me through this. Thanks to my colleagues, Dr. Natalia Ruiz, Dr. Allen Turner, and Dr. Morgan Foster, for their valuable advice and inspiration. To my chair, Dr. Heather Caldwell, who impressed me with her words... “Let’s get this done!” To my second committee member, Dr. Michelle McCraney, and URR reviewer, Dr. Mary Howe. It takes a team to get a student through this doctoral journey!

Special thanks to the rural study site Administrator, Program Director, and teacher participants who made this project possible. To Justin Chesebrough, Director of Beyond Textbooks, for always being available to answer questions and offer information on the participating school districts and providing background information.

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Section 1: The Problem

The Local Problem

Digital innovations have elevated the field of teaching and learning, and equitable education requires effective innovations of scale to help produce high-quality learning outcomes for all learners (Hartman et al., 2019; Serdyukov, 2017). As improvements to instruction through technology integrations continue at all levels in the 21st century, equitable access to digital innovations remains an issue (Makarova & Makarova, 2018). Although some rural schools have made progress with the use and integration of digital technologies (Kormos, 2018), a deeper understanding of how innovative digital programs are integrated into classroom instruction was needed (Tyler-Wood et al., 2018).

Integrating digital technology to support quality rural education is challenging (Wargo et al., 2021). According to Kalonde (2017) and Kormos (2018), rural schools face challenges acquiring adequate funding for technology, sufficient bandwidth, time, and ongoing comprehensive professional development. Obtaining funding for technical specialists and maintenance of technical equipment is also challenging (Tyler-Wood et al., 2018). Hill and Uribe-Florez (2020) and Kalonde (2017) also mention that among challenging factors with teacher adaptation to integrating technology is the comfort level using technology, motivation to improve current technology practices, confidence in mastering new technology, perceptions of the usefulness of new technology, the ability to integrate technology in instruction (Spireti, 2018), minimal familiarization with technology, and the time needed to learn new technology skills (Amhag et. al., 2019; Hill & Uribe-Florez, 2020). Sims et al., (2021) and others were consistent in their findings of

‘time’ being a barrier to teachers’ integration of technology (Francom, 2019; Hill & Uribe-Florez, 2020; Kalonde, 2017).

Since exploring how digital innovation was integrated into rural schools to improve student academic achievement was of interest, this project study was designed to investigate teachers’ experiences using the Beyond Textbooks (BT) framework for guidance and insight. Educators and district leaders at a local school district in a western U. S. state developed and implemented the Beyond Textbooks framework to improve student mastery of the content standards, and to increase academic achievement (Beyond Textbooks, 2020). According to the information detailed on their website, Beyond Textbooks (BT) is a digitally based framework for teaching required standards that include student assessments and multi-level interventions. Beyond Textbooks, an online curriculum delivery approach, has positively affected student learning outcomes (Beyond Textbooks, 2020). School personnel who implemented Beyond Textbooks noted that students experienced enhanced student learning, increased self-esteem, and improved academic achievement (Beyond Textbooks, 2020).

As technological advances and digital innovation in education emerge, BT provided information to classroom teachers about how to streamline lesson plan content and utilize a platform for delivery, sharing, and oversight among educators (Beyond Textbooks, 2020). While the push for raising student academic achievement using BT is appealing, new demands are placed on teachers to integrate BT in their classrooms, while little is known about how rural elementary teachers integrate BT in classroom instruction. For this basic qualitative project study, I investigated how rural elementary teachers

integrated BT into their classroom instruction to improve student academic achievement. Rural elementary school teachers were interviewed to gain knowledge of the BT integration process in classroom instruction.

Evidence of the Problem at the Local Level

The BT framework was designed to incorporate state standards and focus on the delivery of classroom instruction as well as the assessment of student learning. Typically, teachers conduct formative and summative assessments to measure a student's proficiency in state content standards. According to the Arizona Governor Doug Ducey, testing for students was performed using an AzMERIT (Arizona's Measurement of Educational Readiness to Inform Teaching) statewide achievement assessment adopted by the Arizona Board of Education for all students in Arizona (Office of Education, 2022). The AzMERIT was designed to measure students' knowledge of English, language arts, and mathematics. The Arizona governor further stated that Arizona public school students in grades 3 through high school are required to take the AzMERIT test, and students in grades 3-8 must take an assessment in English, language arts, and mathematics at their grade level (Office of Education, 2022). The rural site of interest experienced low state assessment scores, which prompted the purchase and implementation of BT at their school district.

Rationale

Due to nominal empirical research on how rural elementary teachers integrate BT in classroom instruction, school district leaders and teachers needed more information on integrating BT from the viewpoint of elementary teachers. This project study found that

knowledge of how rural elementary teachers integrated BT into classroom instruction positively affects rural student learning. Additional BT implementation procedures, instructional strategies, timelines, and available resources are needed (elementary school district administrator, personal communication, February 15, 2019). Additionally, faculty are unaware of additional BT implementation procedures or instructional strategies required to successfully integrate BT (elementary school administrator, personal communication, June 20, 2019). Teachers are required to log into the BT site to maximize student academic success and to optimize teacher experience with BT, yet differences in student outcomes suggest otherwise (elementary school administrator, personal communication, August 7, 2020).

Exploring the role that teachers played in integrating BT to improve classroom instruction revealed information about the degree of integration. The purpose of this project study was to investigate how rural elementary teachers integrated BT in classroom instruction to improve student achievement. School districts that had recently purchased or planned to buy the program can benefit from this research by learning how rural elementary teachers at the rural study site integrated BT into their classroom instruction. With this information, school districts can learn strategies to implement BT efficiently; they can deliver more efficient and effective classroom instruction and influence positive gains in overall student academic achievement.

While the integration of BT may have resulted in the desired outcomes at the rural site of interest, empirical research of how rural elementary teachers integrated BT in classroom instruction to improve student learning outcomes are not always apparent to

those wanting to replicate the integration of a digital innovation. There was no empirical research to support how rural elementary teachers integrated BT into classroom instruction. Also, much of the research on digital educational innovation needs to be more focused on rural districts (Fox et al., 2017; Harmon, 2020). Researchers and education practitioners face challenges when designing and implementing digital innovations in rural schools, yet effective changes are needed as an investment in rural America (Fox et al., 2017; Harmon, 2020).

According to experts, accessibility, and knowledge base for integrating technology in the classroom by teachers and students is still a challenge (Kalonde, 2017b; Kormos & Wisdom, 2021; Spiteri & Chang Rundgren, 2018). Rural districts suffer from poverty (Fusarelli & Fusarelli, 2018) to the point that 23.6% of residents have less than a high school diploma or equivalent (USDA, 2022) and limited access to technology resources (Tyler-Wood et al., 2018). Technology and internet access are limited in some rural communities or nonexistent (Kalonde, 2017a; Kormos & Wisdom, 2021; Wargo & Simmons, 2021). The rural district's economic base affects access to bandwidth, technology specialists, support for professional technological development, and the ability to maintain equipment (Tyler-Wood et al., 2018). Such information is especially vital because rural sites frequently support underserved student populations in education, and funding depends on academic success. State education funding formulas vary, and funding disparities may be contingent upon the state, student demographics, different obstacles, and student success, all of which affect technology integration in rural schools (Kormos 2018; Urban Institute, 2017).

There are few studies on rural teachers' implementation of instructional technology in the classroom (Kalonde, 2017a; Kormos & Wisdom, 2021). Therefore, it is imperative to implement a program or intervention as intended with fidelity to improve the desired outcomes as purported (Brigandi, 2019; Harn et al., 2017). Besides the challenges, fidelity to implementing a digital program is also an issue. There is no guarantee that the strategies provided are implemented as intended, nor is there a tool to gauge implementation (Ford, 2018). The degree of fidelity to the integration of instructional technology affects teaching and student learning. Ford (2018) and Stains and Vickrey (2017) recommend a framework to assess teacher perceptions when implementing an intervention with fidelity.

Programs such as BT align with education research literature about curricular and instructional standardization (Beyond Textbooks, 2020). The alignment points to the connections between effective instructional practices and student academic progress (Lekwa et al., 2019). For example, the blending of curriculum standardization and the integration of new digital educational technologies in the classrooms converge to focus on the fundamental purposes of education (Mason, 2017), which are both components of BT. Similarly, the BT model provides a standards-based framework that supports instructional efficacy, student assessment, and the use of a digital framework (Beyond Textbooks, 2020). Consequently, further knowledge-sharing of BT among educators can help schools wishing to improve students' academic knowledge outcomes. For example, raising the quality and scale of digital innovations in schools could positively impact rural education and benefit society (Serdyukov, 2017).

Innovations in education should increase both the productivity of learning and learning efficiency (Serdyukov, 2017). Research suggests that positive outcomes and increased academic achievement are indicators of an individual growth mindset (Sisk et al., 2018). Implementing innovative programs for public schools in rural areas is a unique challenge for both researchers and educational practitioners (Fox et al., 2017; Kormos & Wisdom, 2021); therefore, district leaders must have clear expectations of what the innovation entails, as well as transparency about time commitments. District leaders also need to take time for teacher adaptation to technology into account, as this is critical to successfully implementing a digital innovation.

Teacher adaptation to instructional strategies and interventions is expected, but implementing these strategies with high fidelity can produce more successful results (Quinn & Kim, 2017). When executing a new instructional framework such as BT, the pedagogical practices, technology integration, management, and the faculty professional development programs need to be explored for evidence of fidelity to see how closely the implementation process aligns with how the program was intended and designed. Without careful review, student academic outcomes can be incorrectly accredited to instructional programs when, in fact, other contributing factors could be confounding the outcomes (Stains & Vickrey, 2017).

The pressure to increase student academic achievement is a national concern (Mitani, 2017), prompting school districts to make significant investments into the integration of the latest digital technology into K-12 classrooms. These investments reflect the hope of educators to better address digital literacy and the college and career

needs of all students in preparation for their future endeavors with 21st -century skills (Delgado et al., 2015; Kaur, 2020). Technology in education includes using digital instructional tools to support teaching and learning and is an integral part of the curriculum (Bates, 2015; Kaur, 2020). According to Kalonde (2017a), "technology has changed the ways students learn new concepts, complete projects, and how teachers access students' performance" (p. 17). In addition, Kalonde (2017a) notes that technology helps students grow beyond the limits of classroom instruction and textbook-based learning.

Technology has changed the education field, affecting how educators integrate instructional strategies using digital technology when teaching (Delgado et al., 2015; Kaur, 2020; Makarova & Makarova, 2018). Teachers and students are encouraged to use technology in the classroom to enhance learning outcomes and digital literacy (Kaur, 2020; Makarova & Makarova, 2018). However, technology can amplify instructional pedagogy when used effectively (Sheninger & Murray, 2017). Yet due to economic constraints, inadequate resources, limited technology, internet access, and fluctuations in student enrollments (Valentine et al., 2019), rural teachers look toward interschool collaborations (Kaur, 2020). Although rural teachers self-educate and educate each other (Kalonde, 2017b), additional external resources are sought for technical support and instructional integration. Given the economics and word of mouth, rural school administrators must decide which instructional program seems most promising (Neal et al., 2018) and monitor results carefully as the overall goal is to improve student learning outcomes.

One of the evidence-based best practices that promotes the successful implementation of instructional programs is professional development. As school districts incorporate innovative technologies, teachers have limited time to master the latest technology for classroom use (Vareberg & Platt, 2018). As requirements for teacher technology skills broaden, consideration to prepare teacher candidates with knowledge and skills in technology integration is needed (Dillon et al., 2019). Professional development can be instrumental in helping improve teachers' technological knowledge for the successful implementation of new instructional programs; however, teachers face challenges gaining access to quality professional learning (Powell & Bodur, 2019), especially in rural settings (Autio & Deussen, 2017; Zolkoski et al., 2021). Quality professional development is needed for teachers to refine pedagogies that address the higher-cognitive level as sophisticated forms of teaching student competencies such as critical thinking and complex problem-solving (Darling-Hammond et al., 2017).

Rural district leaders contemplating the purchase of BT may need to be more receptive to the broad implications of implementing a new district-wide instructional program. Teacher preparation, participation, collaboration among colleagues, and school leadership can positively influence the successful integration of BT. As stated by Tyler-Wood et al. (2018), "for new technology to be adopted by a school, significant planning, teacher training, and resources need to be in place" (p. 14). Careful planning is a collective and distributed approach, including supportive school leadership leading and making continuous educational (van Schaik et al., 2020) and technological improvements (Waari, 2022).

Among the six influences of collaborative school leadership are instructional leadership, collective teacher efficacy, and professional development (Lim, 2018). Collaborative school leadership is evident in the development and implementation of BT, as administrators, teachers, the curriculum department, and content specialists continue forming a collaborative team that continually refines BT to align new and existing information. Such collaborative leadership is necessary to sustain the long-term use of digital innovations.

Definition of Terms

Beyond Textbooks curriculum framework: An innovative electronic, web-based tool in the form of a standards-based framework that supports the use and development of digital lesson plans directly aligned to state standards in all academic content. Teachers use the BT website portal (a network of resource-practice partnerships) to review the curriculum and calendars, share lesson plans, locate, or share external online resource materials, and communicate and collaborate with peers across their district and state(s). A specialized, designated curricular team unwraps, prioritizes, and calendarizes standards, and develops delivery and assessment strategies via this BT online platform (Beyond Textbooks, 2020). According to WestEd (2019), BT provides a framework for curriculum development, instructional improvement, student assessment, and multilevel interventions designed to improve student achievement.

Teacher self-efficacy: The belief teachers have in their ability to teach and effectively handle tasks, obligations, and challenges resulting in improved student academic learning (Barni et al., 2019; Harrell & Bynum, 2018).

Technology integration: In the Tondeur et al. (2019) study (as cited in Belland, (2009)), technology integration is described as a sustainable change in the social structure of the K-12 educational system resulting from adopting technology to assist students with constructing knowledge.

Underserved student populations in education: Wolniak et al. (2016) (as cited in Byrd (2020)) describes underserved student populations as students in poverty, such as low-income families and communities, homeless students, immigrant students, students with disabilities, students in rural settings, speakers of languages other than English who do not receive equitable resources, and students who are the first in their families to attend college.

Significance of the Study

This project study was significant because exploring the problem could benefit teachers, students, and administrators at the local rural study site and other school districts. The gap in practice was examined by asking rural elementary school teachers to describe how they integrated Beyond Textbooks into their classroom instruction. According to Kalonde (2017a), a knowledge base for integrating technology in classrooms continues to take time and effort. Findings can provide researchers, administrators, and school faculty with information on how BT was integrated into classroom instruction.

Findings from this study will be presented to the administrators of BT and school faculty at the rural study site. Findings can also provide information on the integration of BT in classroom instruction to those school districts that recently purchased or are

contemplating purchasing BT with a knowledge base that can assist in decision-making. Other local rural district administrators wanting to adopt the BT curriculum framework stand to benefit from learning how to successfully integrate BT in their school districts. School district administrators can offer BT professional development training sessions (Appendix A) based on the findings discovered at the rural site of interest. Elementary school educators can also apply the findings in their classroom instruction to facilitate student learning and improve academic achievement. Consequently, students can benefit from overall increased academic achievement.

This project study will contribute to educational literature by providing information on how rural elementary teachers integrated the BT framework at the rural study site. Information from this study has the potential to contribute to the scholarship of existing literature on technology integration in the elementary school setting, the integration of technology in rural classroom instruction, and how the experiential theory can serve as a guide to empirical research in the study of the integration of the BT digital curriculum framework.

Research Question

The exploration of how rural elementary teachers integrated Beyond Textbooks had not been previously examined using a basic qualitative approach. This study explored how rural elementary teachers integrated BT by interviewing five teachers, ranging from grades K–5 at the rural study site. Guided by Kolb's experiential theory, the research question was designed to explore how rural elementary teachers integrated BT into classroom instruction.

RQ: How do rural K–5 elementary teachers integrate Beyond Textbooks in classroom instruction to improve student academic achievement?

Review of the Literature

A broad base of relevant literature was reviewed to provide context to this study. This section includes a review of the literature on classroom instruction, teacher preparation for working in rural school districts, technology integration in classroom instruction, and the experiential theory. This review also includes technological research, as BT is a digital tool requiring technology to implement the curriculum framework. Technology integration in education is much like integrating technology in any business; it makes sense to research technological applications by changes in learning productivity and quality (Serdyukov, 2017). Technology integration is not just about owning technology, but how teachers make the best use of technology in their classroom instruction (Carver, 2016; Hill & Uribe-Florez, 2020; Kalonde, 2017a; Kaur, 2020). The purpose of selecting these areas of literature is to convey the importance of looking at factors affecting student achievement in rural schools to understand the BT integration process better.

Conceptual Framework

There is a strong push in the United States to increase the use of technology in K-12 classrooms (Francom, 2018; McKnight et al., 2016). Rural schools face unique challenges in integrating technology, yet technology could improve students' overall learning experience (Vareberg & Platt, 2018). Teachers use technology to facilitate access to more learning resources (McKnight et al., 2016; Powers et al., 2020). However,

instructors in rural schools teach multiple grade levels and/or subjects, and they struggle to find time to learn innovative technologies; yet those who take the time to familiarize themselves with technology tend to apply and integrate technology more often in their classrooms (Vareberg & Platt, 2018). So much can be learned by focusing on how rural elementary teachers integrated the BT digital innovation in their classroom instruction.

The conceptual framework for this project study was the experiential learning theory. The experiential learning theory (Kolb, 1984) is a suitable framework for research on the constitution of learning from experience. According to Kolb (1984), the experiential learning theory connects the works of Dewey, Lewin, and Piaget with the role of experience as a learning process described in a four-stage learning cycle. Kolb (1984) combined the model of learning by John Dewey, the model of action research and change theory by Kurt Lewin, and the model of learning and cognitive development by Jean Piaget to create the experiential learning theory. By finding similarities in the learning models of Dewey, Lewin, and Piaget, Kolb found that "learning is the process whereby knowledge is created through the transformation of experience" (Kolb, 1984, p. 38).

Kolb (1984) refers to experiential learning theory as learning from experience and describes the four stages of learning as concrete experiencing (feeling the experience) reflective observation (watching and reflecting on experience), abstract conceptualization (thinking and concluding about the experience), and active experimentation (doing and trying what was learned). Kolb (1984) explained the experiential learning theory as learning from experiences and learning is continuously changing due to lived

experiences. Based on the experiential learning theory, rural elementary school teachers gain knowledge from their experiences integrating BT in their classrooms, and they share the knowledge acquired so that other educational colleagues can learn from those experiences.

Rural elementary school teachers integrating the BT digital curriculum framework in their classrooms can relate to Kolb's experiential learning theory as their experiences occur daily, thus creating student learning opportunities daily. Through the lens of the experiential learning theory, I considered how five rural elementary school teachers integrated BT into their classroom instruction to answer the research question. To analyze the experiences of rural elementary school teachers using the experiential learning approach, one must examine the implementation of programs through the actions taken by the staff and consider school successes and failures (Farchi & Tubin, 2019). Since experiential learning processes involve learning experiences as knowledge, school leaders should carefully consider the structures they put into place, as well as how they communicate the process and goals of cooperation (Kramer et al., 2017) when implementing a digital district-wide curriculum.

In this study, the experiential learning theory illuminated the phenomenon being investigated and helped provide insight into the research question from the voices of rural elementary school faculty. The underlying phenomenon that grounded this study was exploring how the BT curriculum framework was integrated, as described by elementary school faculty at the rural study site. Understanding how the digital innovation of BT influenced classroom instruction in rural settings is critical for promoting student

learning, compiling best practices, and successful replication in other educational settings.

The experiential learning theory served as a guide to explore how rural elementary teachers integrated BT into classroom instruction. An interview protocol was followed to gather data and to answer the research question about how school faculty integrated BT into their classroom instruction. Further, interview data were analyzed using qualitative data analysis procedures, NVivo software was used for word count, In-Vivo coding for transcription, and interpretative analysis techniques to generate themes. Using the generated themes from the interviews, the four components of Kolb's experiential learning theory were used to explain how rural elementary teachers integrated BT into classroom instruction.

Review of the Broader Problem

Whereas a local public school district attempted to implement BT during the middle of the school year with unsuccessful results, a local rural school district began the implementation of BT at the beginning of the school year, using multiple resources to support the use of the curriculum, with successful results. Nevertheless, exploring how the rural elementary teachers at the rural site integrated BT into classroom instruction using a basic qualitative approach had not been researched. The purpose of this study was to investigate how rural elementary teachers at a rural site integrated BT into classroom instruction.

Walden Library databases were accessed to conduct this literature review, including Taylor and Francis Online, Science Direct, Sage, ERIC, and Education Source,

as well as Google Scholar. Among the following keywords used were *school improvement, digital learning program/practices, rural schools, teacher preparation, school climate, professional development, standardized lesson planning/planning practices, technology integration, classroom technology implementation, technology barriers, instruction and technology integration in curriculum,* and *the experiential learning theory*. The following search criteria were used to research articles based on the relevance to this study: peer-reviewed and within five years of publication unless the article pertained to the experiential learning theory, purposeful sampling, conceptual change, qualitative methodology, and definitions.

Relevant articles were organized by topic: (a) factors affecting student achievement in rural schools; (b) enhancing classroom instruction; (c) teacher preparation to integrate digital innovations in rural contexts; (d) technology in classroom instruction; and (e) the BT curriculum framework. The literature review provided background information on the topics most closely related to the problem of this study. The literature also offered insight into how teacher's proficiency levels and knowledge of technology use are imperative in learning new digital innovations.

Factors Affecting Student Achievement in Rural Schools

Even though some rural schools using BT indicated significant positive test score changes according to the AzMERIT (Arizona's Measurement of Educational Readiness to Inform Teaching) statewide achievement assessment. Student academic achievement levels tend to be lower in rural school districts across Arizona (Arizona Department of Education, n.d.; Azednews, 2017) due to teacher shortages, teacher attrition, lack of funds

to offer attractive salaries, and other factors further discussed in this section. Put simply, the rapid evolution and availability of technology continues to be a challenge (DeCoito & Richardson, 2018).

Traditionally, teachers are expected to provide meaningful instruction, including student engagement (Bond & Bendenlier, 2019). In rural settings, however, researchers noted difficulties with motivation, student engagement, and time on tasks (Azano & Stewart, 2016). The technical skill level of teachers and lack of proficiency are barriers to technology integration in the classroom (Carver, 2016; Raja & Nagasubramani, 2018). Teachers need to be knowledgeable in technology, understand technology functionality, and know how to implement technology in their classes for technology to be helpful in their practice (DeCoito & Richardson, 2018). Teachers can have access to the latest technology, but without changes in teaching philosophy, there can be no real change in classroom instruction (Powers et al., 2020). DeCoito and Richardson (2018) reported that most teachers expressed interest in technology, others lost interest due to the lack of resources and time available to learn new technologies, and some were skeptical about the benefits of technology. “In today’s technology-rich world, educators need to be prepared to incorporate technology into practice immediately upon entering the classroom” (U.S. Department of Education, Office of Educational Technology, 2016, p. 4).

Although teachers play an essential role in student achievement, complex teacher labor markets in rural areas are also a challenge (Gross & Jochim, 2015; Maina et.al., 2021). Low salaries (Zolkoski et al., 2021) and poor working conditions also contribute

to difficulty recruiting and keeping teachers in general, as well as working in rural settings (Guha et al., 2017). Among rural school concerns are teacher shortages (Cuervo & Acquaro, 2018), technology availability and connectivity (Carver, 2016; Chowkase, 2022), quality internet access, replacement of outdated technology, and professional development for teacher technology learning (Powers et al., 2020).

A program such as BT has the potential to create a positive impact on student learning. BT provides opportunities for specialized teacher growth through access to scheduled, professional development and increased collaboration among local districts and as well as in other states. According to Carver (2016), "research has indicated that technology can increase student motivation, attitude, engagement, and self-confidence, while improving organization and study skills" (p. 110). Raja and Nagasubramani (2018) further support the idea that technology use can increase student motivation, interaction, and interest levels.

In rural environments, factors affecting student achievement include hiring quality teachers to staff rural schools and preparing teachers to work in rural schools (Azano & Stewart, 2016; Oyen & Schweinle, 2021). Generally, rural school districts lack the necessary funds to hire quality teachers, or the ability to offer tentative incentives for quality teachers to stay in rural settings (Cole, 2017). Despite having limited access to teachers available within their state, rural districts also have difficulty attracting and recruiting rural teachers (Starrett et al., 2021) and keeping quality teachers (Carver-Thomas & Darling-Hammond, 2019; Gross & Jochim, 2015). There is less teacher attrition when teachers establish a strong relationship between job satisfaction and a

passion for teaching (Song & Alpaslan, 2015) and a supportive climate to educate (See et al., 2020), which can be a challenge in a rural district.

Rural schools also face challenges with funding to support educational improvement (Garwood, 2018). Rural schools have less access to professional development for teachers (Autio & Deussen, 2017; Zolkoski et al., 2021). School board effectiveness (Loh et al., 2021) makes it more challenging to obtain funds for professional development, technology, or approval for instructional tools, while other school districts are challenged with teachers disinterested in technology or afraid of change (Zipke, 2018). The Covid-19 pandemic also brought new instructional challenges for rural schools (Zolkoski et al., 2021) such as the abrupt transition to online instruction, the lack of home computer equipment and internet, and students' knowledge of computer use (Brock et al., 2021).

School-aged children spend a considerable amount of time in school; therefore, providing a positive school-learning climate is crucial. Climate is the overall welcoming feeling immediately experienced by students and teachers in the classroom and throughout the school, nurturing teaching and learning. Teachers' perceptions also influence a positive school climate (Reaves & Cozzens, 2018). School climate plays a critical role in student wellness and learning; however, it can be difficult for rural educators to find time and resources to nurture a positive school climate (Zolkoski et al., 2021). Classroom management and staff relationships influence school climate and academic achievement (Back et al., 2016; Chowkase, 2022).

School leadership, parental involvement, and climate impact students' academic achievement (Singh et al., 2017). Principals of rural school districts have higher leadership expectations from the community and multiple job responsibilities (Wieczorek & Manard, 2018). Sebastian et al. (2017) found that teacher leadership is a critical element connecting principal leadership and student achievement in the learning climate. Effective leadership is essential in faculty as well, as school administration is related to school climate for teaching and student learning (Baptiste, 2019; Tschannen-Moran & Gareis, 2015). Attracting and retaining high-quality leadership in rural areas is a significant challenge with fewer qualified applicants, lower pay, and fewer social and cultural opportunities available (Chowkase, 2022; Fusarelli & Fusarelli, 2018).

The challenges discussed can limit the breadth and depth of rural students' learning. Nevertheless, rural school district superintendents face immense pressure from the community to improve the academic achievement of all students in their school district (Davidson et al., 2019). Rural schools also face challenges meeting state standards and passing state testing (Garwood et al., 2018). The context and setting of rural schools need to be taken into consideration when devising solutions for improving and facilitating teaching, learning, and subsequent student improvement in rural schools (Assouline et al., 2017; Azano & Stewart, 2016). Given that rural school districts typically have limited budgets for professional development, along with difficulty hiring or retaining faculty, the transition into a new district-wide school improvement plan, such as a digital instructional program, should be considered a viable option. The quality of

school improvement plans also needs to be considered when implementing new instructional programs.

Enhancing Classroom Instruction

Among the factors shown to enhance classroom instruction are retrieval-based learning using elaboration strategies (Endres et al., 2017), applying humorous images to in-class questioning (Huang et al., 2017), humor as a teaching tool for productive classroom talk and interventions (Khong et al., 2019), and student motivation (Herzberg et al., 2017). Kearney et al. (2022) studied the role of digital technologies in future teaching, which promoted the development of four school educational scenarios to assist teachers in educating remotely during emergency learning situations. Enhancing classroom instruction using digital innovations to promote student learning is in preparation for tomorrow's digital citizens (Johnston, 2018).

Digital innovations utilizing multimedia delivery such as iPads, Chrome books, learning apps, teacher-created videos, animations, interactive games, and social networks promoted student learning during the Covid-19 pandemic. Cucinotta and Vanelli (2020) stated, "Covid-19 was a global pandemic declared by the World Health Organization (WHO) on March 11, 2020" (p. 157). Schools were closed and unprepared for total digital immersion, which abruptly brought many changes to the online delivery of curriculum and difficulties with computers and access to the internet at home (Jamilah & Fauzi, 2021). Other changes included parental support, supervision (Novianti & Garzia, 2020), and knowledge about technological device use. As stated by Zhao (2020), "Covid-19 was an opportunity to rethink education…so we may reimagine and recreate human

institutions" (p. 29). Aidoo et al. (2022) conducted a study using the flipped classroom approach during the Covid-19 pandemic, concluding that teachers must change their classroom practices during unexpected circumstances for uninterrupted teaching and learning. According to Jamilah and Fauzi (2021), "information technology to support the implementation of online learning during this pandemic includes e-learning, learning house, Edmodo, EdLink, Moodle, and Google Classroom" (p. 192).

Endres et al. (2017) explored the effects of a retrieval strategy on both retention and comprehension of complex, educationally relevant material to find out which retrieval task worked best by comparing a free recall condition with a prompted recall condition. Free recall condition is described as freely learning by retrieval without prompts, while prompted recall requires learners to recall information and apply new information to prior knowledge. The study used elaboration strategies for both groups. The findings indicated that an elaborative prompt enhances the learning effects of retrieval practice and is consistent with previous research (Endres et al., 2017).

Ayar and Yalvac (2016) and Holzberger and Schiepe-Tiska (2021) found that the social structure of a classroom can be changed by promoting a positive climate and establishing mentorship, thus academic development and facilitating student learning. Teaching strategies through questioning or humor can solicit social interactions. Huang et al. (2017) investigated whether satisfying answers to in-class questions with humorous images could reinforce students' learning experiences and improve their test scores. Huang et al. (2017) conducted three studies in which the findings consistently showed that questions using funny visual stimuli as rewards could elicit more positive emotional

responses as compared to problems that do not have such stimuli. The evidence suggests teachers should use in-class questions and image rewards to enhance students' emotional states, even if this instructional strategy only sometimes leads to higher student performance (Huang et al., 2017).

Student writing and literacy skills can be enhanced by using multimodal compositions such as print-based text, pictures, and digital technologies. Consalvo and David (2016) found that even in the 21st century, students will produce multimodal compositions with basic supplies such as butcher paper, sticky notes, and magnetic tile words for visual projects. Anderson and Kachorsky (2019) mention that students can produce compositions "with screen-based multimodal texts (e.g., videos, videogames) and non-digital forms (e.g., signs, collages, live performances) or…. using multiple modes (e.g., written language, sound, image)" (p.1-2). Lim et al. (2022) suggest student literacy involves numerous multimodal components including communicating via digital material, text, images, animation, and slide presentations.

Khong et al. (2019) noted that classrooms are the primary place where school-age children communicate with classmates and teachers, and it is this talk that influences what children learn and how learning takes place. Khong et al. (2019) conclude that when students internalize verbal interactions in the classroom, students tend to elaborate more on ideas rather than answering yes/no questions. Instructional practices on student communication in the classroom contribute to significant and continuous academic achievement. The art of teaching is evident as school leaders and educators strive to understand how students learn.

Staff can incorporate immersive virtual reality mediums (Cheng & Tsai, 2019) and learning strategies that result in meaningful interactions between teachers and learners (Gosselin et al., 2016). Teachers need to use specific strategies, such as higher-order thinking skills, so students can apply knowledge of lived experiences before learning can unfold (Keleman et al., 2021; Zenda & Ferreira, 2016). Science, technology, engineering, and mathematics (STEM) education and subject material can also lead to students' engagement in higher-level thinking skills (Wahono et al., 2020). Kahn (2017) suggested that "thinking outside the box" involves social relations to help sustain student commitment to intellectual and practical projects associated with learning. Enhanced classroom instruction stems from quality instructional practices.

According to a 30-year study by (Lin et al., 2016), conceptual change also influences students' learning processes. It is associated with instruction and personal reasoning ability, while (Nadelson et al., 2018) describe conceptual change as a multi-level, ongoing process of building on existing knowledge. Conceptual change refers to changes in knowledge over time, such as in building knowledge of technology integration. Englund et al. (2017) looked at conceptual change to better understand teaching with technology in higher education. Lin et al. (2016) and Nadelson et al. (2018) described how influences on conceptual change stem from positive instruction.

Prayogi and Yuanita (2018) developed the Critical-Inquiry-Based-Learning (CIBL) model to prepare teachers to teach higher-order critical thinking skills. Siew and Mapeala (2016) define critical thinking as one of the essential cognitive skills and dispositions in education and suggest educators integrate these into teaching practices,

while Wechsler et al. (2018) add that creative and critical thinking are elements of developing problem-solving skills. Educators need learning opportunities on how to elicit and promote analytical thinking abilities before teaching students to become critical thinkers.

Teacher Preparation to Integrate Digital Innovations in Rural Contexts

Teacher preparation to integrate digital technology in classrooms is a growing concern. The role teachers' preparation played in using BT to improve classroom instruction revealed the way digital innovation informed instruction in rural contexts. While teacher preparation and teacher confidence can be applied to all schools, preparing teachers to work and remain in rural schools is essential (Azano & Stewart, 2016; Oyen & Schweinle, 2021).

Teacher preparation relies on the quality of training obtained and the application of new knowledge into practice to enhance student learning. According to Darling-Hammond (2017), "teacher preparation and development are key building blocks in developing effective teachers" (p. 291). First-year teachers who have not completed adequate preparation are more likely to leave the profession at more than twice the rate of teachers with student teaching experience and rigorous training (Guha et al., 2017). In addition, rural school districts face challenges in preparing, attracting, and retaining highly qualified teachers (Adam & Farnsworth, 2020; Gallo & Beckman, 2016; Tran, 2020), so teachers must have a deeper understanding of the characteristics and qualities of rural communities (Starrett et al., 2021).

There need to be more teacher education programs that address the needs of rural schools (Schafft, 2016), especially in preparing rural teachers to integrate digital technology in their classrooms (Kormos, 2018). Strengthening teacher instructional skills through participation in collaborative professional development practices at least five times a year has a positive association with teacher self-efficacy and job satisfaction, as well as effective interrelations that promote teacher enthusiasm (Burić & Moe, 2020; Schleicher, 2015). Teacher participation in a well-designed professional development program can significantly affect student achievement gains, as improving school effectiveness has been positively correlated with improving teacher effectiveness (Valiandes & Neophytou, 2018). Blanchard et al. (2016) and Hennessy et al. (2022) investigated the effects of technology-enhanced professional development (TPD). Blanchard et al. (2016) found that while some TPD teachers modified classroom practices with the use of technology, the majority integrated technology in ways that improved efficiency and effectiveness, while Hennessy et al. (2022) found that professional learning opportunities can be achieved thru TPD to increase the use of technology.

Novice teachers can benefit from professional development activities that focus on classroom management or instruction strategies, especially for those teaching challenging courses (Coenders & Verhoef, 2019; Schleicher, 2015). Moffa & McHenry-Sorber (2018) suggested that pre-service teachers could benefit from extended teacher programs to understand rurality better and thus increase persistence in hard-to-staff rural schools. Recruiting science, technology, engineering, and mathematics (STEM) teachers

is a unique challenge for rural schools. Therefore, rural school districts should work with education institutions to create and assist in licensure pathways to help with teacher preparation and graduate STEM certificates that align with rural contexts (Goodson-Espy & Salinas, 2018). Azano and Stewart (2015) and Du Plessis and Mestry (2019) suggested that rural teacher candidates be exposed or connected to rural life in preparation for being successful, highly skilled rural teachers as these experiences contribute to enhancing their skill sets and digital innovation competencies.

Teacher confidence cultivated from preparation for digital innovations makes a teacher more motivated and more willing to assist students' learning. Since a teacher's level of confidence can affect students' learning, teachers need to be confident in their teaching abilities related to teacher self-efficacy and collective efficacy, which facilitates positive student achievement (Noble, 2016; Thornton et al., 2020). Teacher confidence from preparation makes a difference in student learning (Henry et al., 2014; Palmer, 2015; U. S. Department of Education, 2020). Nolan and Molla (2017) found that teacher confidence equates to teacher professionalism, and gains in confidence expand the acquisition of knowledge, pedagogical practices, and other critical skills. As a result, teacher confidence with adequate rigor in subject areas, especially technology, is an influential factor in improving the academic achievement of learners in rural schools (Tyler-Wood et al., 2018; Zenda & Ferreira, 2016). Researchers studied the growth of maturation of pre-service teacher education. They found evidence of increased confidence in the second year of teaching, given the mentoring and preparation these teachers received (Murray-Orr & Mitton-Kukner, 2017).

Research on teacher preparation was necessary to understand the underlying elements for integrating digital technology in the rural classroom. Computer knowledge of Microsoft Office ™, iWork ‘08, or Office ™ files is required to use the BT curriculum framework; thus, teacher preparation to use technology is fundamental. Collaborating with tech-savvy colleagues can increase technology use in the classroom (Zipke, 2018), especially when technical staff are not available during the school day to resolve technical issues (Liu et al., 2017). The level of a teacher’s experience with technology, including comfort and confidence, and frequency of technology use, influences the integration and use of technology in the classroom (Liu et al., 2017).

Technology in Classroom Instruction

Researchers claim that multiple interventions supporting technology integration preparation can improve student growth and achievement in learning as emerging new technologies influence curriculum and instruction (Aydin et al., 2017). The use of technology in the classroom has changed how students learn and how educators facilitate instruction with digital technology (Delgado et al., 2015; Kaur, 2020; Makarova & Makarova, 2018). Today’s rural students can benefit from digital learning. Valentine et al. (2019) state, “technology extends the ability of teachers to reach students in new ways yet does not replace teachers (p. 127).” Integrating technology innovation in the classroom allows educators to build connections and a sense of community (Fox et al., 2017).

The literature on technology integration in classroom instruction is relevant because BT is an innovative digital curriculum instruction program. The BT framework

manages the standards-based curriculum among educators within the same school district (Beyond Textbooks, 2020). Understanding the implications and management of the implementation of BT as a new digital curriculum program will further assist school districts in contemplating its purchase.

Although practitioners face challenges with technology integration, sustained use, and different technical skill levels, it is imperative to have a firm understanding of faculty's current skills, beliefs, attitudes, and contextual constraints to establish training for the successful incorporation into the teaching profession (O'Reilly, 2016; Spiteri & Chang Rundgren, 2018). The U.S. Department of Education (2016) indicates that teachers' active use of technology during instruction should be part of teacher preparation programs. Therefore, teachers are critical in effectively facilitating students' technology-enhanced learning (Tyler-Wood et al., 2018).

The integration of technology in the classroom permits students to participate actively and individually rather than being lectured (EBSCOpost, 2018). Among the reasons students do not use technology at school are the lack of funding for technology, access to bandwidth and teacher approval especially in rural areas, despite students already owning a device and knowing how to use modern technologies (Armstrong, 2014; Raja & Nagasubramani, 2018). The internet and new technologies have brought about changes, yet schools have been slow to keep up with technological advances (Zipke, 2018).

Teachers also use technology tools in student learning activities. For example, game-based learning (GBL) activities have positive impacts on students' academic

performances and learning behaviors across grade levels (Teräs & Kartoglu, 2017). According to Armstrong (2014), “technology is changing the way students learn...and is transforming students into explorers and teachers into guides” (p. 41). Raja & Nagasubramani (2018) further expand on Armstrong (2014) by noting that technology innovation is unavoidable in schools. Preparing schools to be future-ready requires integrating technology to improve student growth and academic achievement.

Beyond Textbooks Framework

School leaders’ primary goal is preparing students to make gains in learning and overall academic achievement. School districts wanting to improve classroom instruction through technology integration, such as BT, can consider research evidence in the yearlong correlational study conducted by WestEd (2019). The study’s purpose was to determine if the use of the BT framework raised student achievement scores (WestEd, 2019). The study addressed the correlational relationship between schools’ use of the BT framework and changes in students’ academic achievement in reading and math using two types of statistical modeling (WestEd, 2019). The findings indicate a “consistent and positive correlational relationship between the use of BT and increased school-level proficiency at every grade in both reading and math” (WestEd, 2019, p. 9). A comparison of Arizona state assessment reports indicates school districts using BT make gains in student academic achievement.

In summary, this portion of the literature review concludes with a broad base of relevant literature that provides context to this study. The literature review contains:

(a) factors affecting student achievement in rural schools; (b) enhancing classroom instruction; (c) teacher preparation to integrate digital innovations in rural contexts; (d) technology in classroom instruction; and (e) the Beyond Textbooks framework. The Beyond Textbooks framework topic details the yearlong correlational study conducted by (WestEd, 2019). Each topic is vital for exploring and understanding the integration of the BT framework in classroom instruction.

Implications

Exploring the rural elementary school teachers' integration of the BT digital framework in classroom instruction had not been investigated using a basic qualitative approach. The purpose of this study was to investigate how rural elementary school teachers integrated the BT digital curriculum framework in classroom instruction to foster success in student academic achievement. Based on the data collection and analysis findings, a professional development project (Appendix A) was developed to share how the rural elementary school teachers at the study site integrated BT in their classroom instruction as well as any other findings. Professional development is integral to creating continuous school improvement to maximize student learning (Baird & Clark, 2017).

Summary

Educators and district leaders at a local school district in a western U.S. state created and implemented the BT framework to improve student growth and academic achievement. The rural study site applied BT to their school district curriculum. Students showed improvements and overall academic achievement on the AIMS state testing (Arizona Department of Education, 2019) and on the AzMERIT (Arizona's Measurement

of Educational Readiness to Inform Teaching) statewide achievement assessment (Arizona Governor Doug Ducey Office of Education, 2022). However, there needed to be empirical research on how rural elementary school teachers integrated BT into classroom instruction using a basic qualitative approach.

Given the increasing adoption of BT, a basic qualitative approach addressed the need to explore how rural elementary school teachers at the rural study site integrated BT into their classroom instruction. Evidence from the literature indicates that even though rural schools face many challenges with technology-related innovations, a comprehensive understanding of the integration of technology in classroom instruction could provide new knowledge for teachers and enhance student growth and learning. A basic qualitative approach was most appropriate for this study to delve deeper into understanding teachers' experiences with technology integration because qualitative research is grounded on human experiences, perceptions, and interactions with a specific problem. Various themes emerged as interview transcripts were analyzed.

Section 2 presents a description of the methodology, research design and approach, participants, data collection, and data analysis procedures. Section 3 presents the project based on findings from the research, project goals, rationale, literature review, project description, project evaluation plan, and project implications. Section 4 contains reflections and directions for future research, followed by the conclusion.

Section 2: The Methodology

This section of the project study concentrates on the qualitative methodology used for this doctoral study. A thorough description of the participant sample, selection criteria, access procedures for data collection, data analysis methods, themes, and findings are presented. School faculty can use the findings to expand their knowledge base on integrating BT with positive results from the experiences of rural elementary teachers who integrated BT into their classroom instruction. The initial project study was organized and planned for interviewing eight to ten teacher participants at two rural schools. Due to the Covid-19 pandemic, this study was limited to five purposive selected participants and one rural school.

Research Design and Approach

This project study aimed to investigate how five rural elementary school teachers from grades K-5 integrated the BT framework in classroom instruction to foster success in student academic achievement. Due to nominal empirical research on how rural elementary teachers integrate BT in classroom instruction from the viewpoint of elementary teachers, it was necessary to conduct this qualitative study to examine the experiences of those teachers who integrated BT in their classrooms. The selection of the qualitative design was based on the problem, purpose, and research question posed in Section 1.

According to Nassaji (2020), qualitative research is an interpretative, naturalistic, non-numerical inquiry that seeks to explore and understand while emphasizing the process or patterns of development rather than manipulating variables. A basic qualitative

study was conducted at the rural study site to establish a frame of reference, knowledge base, implementation protocols, and effective instructional practices. The experiences of five rural elementary teachers that integrated BT in their classroom instruction were examined. The following research question guided this research:

RQ: How do rural K-5 elementary teachers integrate Beyond Textbooks in classroom instruction to improve student academic achievement?

Basic Qualitative Design

I selected a basic qualitative methodology approach over other qualitative design as the most appropriate method to explore and capture the essence of how five rural elementary school teachers, ranging from grades K-5, integrated BT within the defined rural context. Through use of a qualitative study, the teacher interviews revealed information about teaching practices, experiences, and strategies that could not be possible using a quantitative approach. According to Merriam (2015), a basic qualitative study encompasses "understanding how people make sense of their lives and their experiences" (p. 24). Research data were collected from rural elementary school teacher participants by means of Zoom conferencing interviews. Miles et al. (2018) noted that "qualitative data can help researchers get beyond initial concepts and generate new understandings" (p. 3) … add "focus on naturally occurring, ordinary events in natural settings…what "real life" is like" (p. 7).

Justification of Research Design

A qualitative research method is appropriate when the researcher seeks to discover a deeper understanding of the complexities of human experiences, perceptions,

actions, and interactions that intertwine to provide information about what people experience and perceive (Merriam, 2009). A quantitative research method was not appropriate for this study because quantitative research dismisses individual humans, instead concentrating on numerical data (Merriam & Tisdell, 2015). Since this study does not focus on how much or how many dependent or independent variables there are, nor collect surveys or numerical data of any form, it does not meet the criteria for a quantitative study (Merriam & Tisdell, 2015).

Merriam and Tisdell (2015) described six qualitative research approaches: narrative, phenomenology, grounded theory, ethnography, case study, and basic. Each research approach was thoroughly reviewed before selecting the basic qualitative approach as the most appropriate for this study. A narrative approach is used to explore the life experiences of an individual, collect stories, and then retell the stories of experiences lived (Merriam & Tisdell, 2015). I did not gather stories or interpret stories; therefore, a narrative approach was not appropriate for this study (Merriam & Tisdell, 2015). A phenomenological approach was unsuitable for this study because this approach involves extensive engagement in fieldwork and direct observation of first-hand experiences. According to Merriam and Tisdell (2015), a phenomenological approach also involves an awareness of participants and extensive engagement to understand the essence and the underlying structure of the phenomena from the participants' perspective, which was not the focus of my study.

The grounded theory approach not only seeks to understand a theory but is employed to develop a theory "grounded" in data (Corbin & Strauss, 2015; Merriam &

Tisdell, 2015), which was not appropriate for this study since I did not seek to develop a theory. An ethnography approach is used to investigate people in their communities, pursuing daily lives and routines while adopting a cultural lens that keeps an open mind about the ethnic, cultural, or social group and location (Merriam & Tisdell, 2015). The ethnography approach was not selected because this study did not focus on cultural groups or locations. A case study method is used to investigate distinct phenomena characterized by a lack of detailed preliminary research, specially formulated hypotheses that can be tested, and/or by a specific research environment limiting the choice of methodology (Merriam & Tisdell, 2015). Researchers use a case study design "if the unit of analysis is a bounded system, a case, such as a person, a program, or an event (Merriam & Tisdell, 2015, p. 24). A person, program, or event did not bind this study.

A basic qualitative approach was selected for this study to understand and learn how rural elementary school teachers integrated BT into classroom instruction because this topic had yet to be researched. A basic qualitative approach is used to explore a practical problem that practitioners experience in the field (Merriam & Tisdell, 2015). For this research study, Walden University IRB approval was obtained before conducting any research or contacting potential participants. Teacher-participants were interviewed via Zoom video conferencing using Walden doctoral committee approved questions and interview protocol.

Participants

Population and Sampling

As the study was designed to explore how rural elementary teachers integrated BT into classroom instruction, the setting for this project study was a rural school district located in the southwestern United States. According to the AZ School Report Cards (2020), the total K-12 enrollment for the rural study site school district for 2019-2020 was 388 students; of these, 199 were boys, 172 were girls, and 199 students were in grades K-5. The most current (2018-2019) enrollment figures for gender are from the National Center for Education Statistics (2021) website. The rural study site district had 24 teachers, one director, one principal, one assistant principal in grades K-12, seven of whom had less than three years of experience. The rural study site district website (2022) reports a total of one director, one principal, one assistant principal, and six elementary teachers for grades K-5.

Purposive, criterion-based sampling was conducted to select participants based on specific characteristics and knowledge. In this type of sampling, individuals or groups are identified and selected based on the phenomenon of interest (Creswell & Plano Clark, 2011; Palinkas et al., 2015; Patton, 2002). Purposive, criterion-based sampling was appropriate for this study because teacher participants were selected based on having integrated BT in classroom instruction, to better match the sample to the research question. The target population was six elementary teachers in grades K-5 at the rural study site who integrated BT into their classroom instruction. Six elementary teachers from the rural study site were purposefully selected for the study. The sample size is

associated with data saturation that can be obtained with one interview. Malterud et al. (2016) use the term *information power* to contend that the more information a sample holds, the smaller number of participants are needed (Campbell et al, 2020). Interviews with teachers from various grade levels yielded ample data to answer the research question.

Criteria for Selection of Participants

With the assistance of the rural site program director, six elementary teachers ranging from grades K-5 were identified. The criteria for selection were (a) at least two years teaching experience at the study site, (b) being state certified, and (c) having integrated BT in classroom instruction. Five of the six potential teacher participants identified responded to the invitation to participate in this study (Section 2, Table 1). The total sample size for this project was five teachers who met the selection criteria and agreed to participate. These participants provided insight into the integration of BT in classroom instruction. Table 1 illustrates the demographic information of the participants such as gender and grade level taught.

Table 1

Demographic Information of Participants

Pseudonym	Gender	Grade
RS1	Female	1
RS2	Female	2
RS3	Female	3
RS4	Female	4
RS5	Male	5

Participant Justification

Two rural schools, and eight to 10 purposive selected participants were initially planned for this study; however, due to the Covid-19 pandemic, this study was limited to one rural school and five purposive selected participants ranging between K-5 grade levels. Although six teacher participants were identified as meeting the selection criteria, only five agreed to participate in this study. The number of key-informant participants justified the number of available school faculty in this rural setting. These participants provided insight into the integration of BT in classroom instruction. Given the population size of the rural school and the number of selected teachers who could yield quality data needed for depth, the following was true: the fewer participants, the deeper the inquiry. Cleary et al. (2014) noted, "an experienced interviewer with a clearly defined research topic and a small number of well-selected homogeneous interviewees can produce highly relevant information for analysis" (p. 473).

Participant Access

Compliance was obtained by following Walden University Institutional Review Board (IRB) guidelines and securing IRB approval (06-02-21-0305107) before conducting any research, contacting the school administrator, potential participants, or collecting data. Amidst Covid-19, access to participants was obtained by first e-mailing the school administrator at the rural study site. After the rural study site program director provided a list of potential elementary grades teacher participants, invitations to participate were emailed. At this time, I presented an informal introduction of myself as a rural educator and student-researcher to establish rapport with participants before

interviews took place. School district IRB approval was procured to conduct the project study. The study site program director confirmed through an email that the school does not have an internal IRB or other research approval system and requested Walden University IRB provide its review and approval.

Upon approval from Walden University IRB, an email was sent to the program director of the rural study site (as designated by the school administrator) details of the project study. A written letter of cooperation requesting access to participants and permission to conduct this study was presented to the study site program director by email. The letter of cooperation included signed authorization to conduct the study via Zoom Video Conferencing. A Zoom business plan was purchased to enhance security and obtain transcription services of the Zoom video site. In addition, participants were emailed a password to access the Zoom video meeting. The program director was asked to provide a list of possible participants who met the selection criterion and contact information.

An invitation to participate was emailed to six grades K-5 rural elementary school teachers who met the criteria of the purposive, criterion-based sampling strategy. Five teachers responded to the invitation. The invitation contained my formal introduction as a rural educator and student-researcher, purpose of the research, and a brief description of this project study. This step is a starting point for establishing a researcher-participant relationship and building rapport with the participants before the interviews. Following this introduction procedure which stated my intentions and having emailed the interview questions beforehand, interaction with the participants became more comfortable during

the Zoom interview meetings as participants were prepared to answer the interview questions.

Participants were informed that their participation in this study was voluntary and highly appreciated. At the time of the scheduled Zoom interview, participants were given all the details of this project study. The informed consent form and the interview questions were previously emailed. The informed consent form included personal privacy statements, procedures for safeguarding participant information, the assignment of pseudonyms to protect identity, and the right to withdraw from the participation of this project study at any given time.

Researcher-Participant Relationship

There were no previous acquaintances or relationships with the participants nor was there a supervisory role at the study site on behalf of the student researcher. A researcher-participant relationship was established by contacting the rural study site program director and potential participants via email. Due to the Covid-19 pandemic, other technical means, such as emails and Zoom Video Conferencing were used. Ongoing emails indicating each step of the interview process were sent to the rural study site program director and participants to continue fostering a positive researcher-participant working relationship.

Before conducting an interview, each participant was reminded that their participation in the study was voluntary. If participants felt uncomfortable at any point, they were free to withdrawal from the study at any time. I also explained I would be taking notes during the interview and would need their approval to voice record the

interview in case technical difficulties with transcription should arise with Zoom. I further explained my role was that of a researcher and thus the primary instrument in data collection. According to Merriam and Tisdell (2015), “The researcher is the primary instrument for data collection and analysis” (p. 16), while Roberts (2020) adds, “The instruments include the researcher and the interview questions” (p. 3185). At the end of the interview, I welcomed questions, and each participant was thanked for their participation and time dedicated to this study. Even though my position as an educator helped me understand terminology, lesson planning, and everyday classroom experiences, this process further established a positive rapport. Finally, I ensured my personal biases did not interfere with the study by following the interview protocol.

Protection of Participants

The following measures were taken to protect participants from harm and protect their rights and confidentiality. The *CITI Program Human Subjects Protection* training was completed before Walden University IRB approval. Each participant was assigned a pseudonym and a number for identity protection throughout this study. For ease of coding data, participants’ identities were designated as follows: RS for rural study site and the numbers 1, 2, 3, 4, and 5 for the participants (e.g., RS-1, RS-2, RS-3, RS-4, and RS-5). I am the only person who knows the identity of each participant. The study site’s identity and participants will not be revealed in the findings or to any administrator or school faculty member at any time. No photographs or video recordings of participants were taken. Therefore, the primary responsibility of a researcher is to safeguard participants and their data (Sutton & Austin, 2015; Velardo & Elliott, 2018).

Zoom Video Conferencing was used to interview participants. During the initial meeting, this project study was introduced to the participants. The informed consent form was read to each participant, reassuring them all information collected during interviews will only be used for this research and will remain strictly confidential as I am the only person with access to the data collected. Each potential participant had the opportunity to choose whether they desired to participate. After completing the interview, a $25 gift card was mailed to each participant to thank them for their time.

All interview data collected were stored and organized on a password protected (i.e., fingertip and PIN log-in), secured laptop only accessible to me for a minimum of 5 years, per Walden University protocol to protect the identity of participants. Non-digital data is stored and secured in a locked file cabinet in my home office. Per Walden University protocol, after reaching the 5-year post-completion period, all digital files will be deleted from the secured laptop, including deletion from the recycle bin and online cloud services; all non-digital data will be destroyed.

Data Collection

The data collection instrument I used consisted of Walden doctoral committee-approved interview~~s~~ questions (Appendix B) guided by the approved interview protocol, which strengthened validity and reliability. The interview questions were revised per the Walden doctoral study committee and Walden University research review recommendations. The primary data collection methods were open-ended, 45-60-minute interviews using Zoom Business Video Conferencing to answer the research question. A reflective journal was used to document field notes during the interviews. The reflective

journal documented each step of the data collection and analysis process (Amankwaa, 2016; Havlik, 2019). Interviews with rural educators revealed problems and successful outcomes with the integration of BT that impact curriculum delivery.

Interviewing face-to-face or via videoconferencing is a powerful way of getting insights into participants' experiences and perceptions (Alshenqeeti, 2014; Foley et al., 2021; Khan, 2022). Interviews can provide differing perspectives (Creswell & Báez, 2020). Yeong et al. (2018) recommended using interview protocols to assist researchers in collecting quality interview data and avoiding deviation from the research goals. In interviews, a researcher should not harm, show respect and honesty, and ask relevant questions (Iphofen & Tolich, 2018). Researchers should avoid personal presumptions to ensure reliable data collection (Yin, 2018).

Open-ended questioning allows the researcher to access the perspective of the person being interviewed to find out what cannot be observed and to facilitate data analysis (Patton, 1980; Roberts, 2020). The interview questions were designed to probe and elicit information from participants to obtain a detailed picture of how rural elementary teachers integrated BT into their classroom instruction. Probing delves into participant issues, deepens responses, elucidates, and increases the richness of data (DeJonckheere & Vaughn, 2019; Patton, 1980).

The participant interviews were conducted with participant consent via Zoom Business Video Conferencing at a previously agreed date and time. Although the Zoom Business plan can transcribe interviews, I also recorded the interviews using an audio tape recorder in the event I encountered technical difficulties. Participants were made

aware of the audio tape recorder, and permission for this use was granted. Each transcript was thoroughly reviewed along with the audio recording to ensure accuracy, avoid researcher bias, and to maintain ethical standards. The interview session began with a brief introduction informing study objectives and reminding each participant that participation is voluntary, and they could withdraw at any time. Participants were assured of the confidentiality measures taken to protect their identity and given time to answer interview questions during the interviews. Finally, after the interview session ended, participants were thanked for their time and participation. Participants were also informed that they would receive an email requesting their review of the findings.

Sufficiency of Data Collection

For this study, an anticipated eight to 10 rural elementary school teachers were initially planned for interviews at two rural school districts. However, due to the Covid-19 pandemic, five rural elementary school teachers of grade levels ranging from K-5 at one rural school site were interviewed. The five participants were sufficient to represent how BT was integrated into classroom instruction. The interviews yielded robust and detailed data from the responses to represent the perceptions of the rural elementary teachers and to answer the research question. The interview data provided a rich description of teachers' experiences with integrating BT into classroom instruction. Data saturation was obtained after interview questions attained no differing answers.

The interview data generated an ample rendition of the participants' experiences with the integration of BT into their classroom instruction. Transcribed interview data was reviewed multiple times and organized to conduct a preliminary exploratory analysis.

The organized data produced a sense of direction and strategies surfaced on how to proceed with the data analysis. The big picture was obtained by mapping out all the data collected. Member checking was established by having participants check the accuracy of reported findings by viewing an emailed summary of the findings obtained and asking the participants to comment on the quotes. Candela (2019) contends member checking should not only be about establishing validity in a study but also as a reflective experience.

Participants' review of their interview transcripts ensured that the researchers' bias was not reflected in the data. In addition to the participants' review of the findings, researchers' notes of crucial details and non-verbal gestures were recorded in a reflective journal during each interview. Continuous entries of each step or recorded phase of the data collection process were also recorded in a digital doctoral journal. Reliability and validity were established by the process of conducting multiple and thorough reviews of interview transcripts, member-checking, and recording notes in a reflective journal.

Role of the Researcher

My role as a researcher was to conduct an ethical study in a professional manner. As a preceding educator, I built rapport and established an engaged, professional relationship with the teacher participants. In qualitative research, the researcher's role is to attempt to "gather accurate information directly from key informants" (Ahlin, 2019, p. 3). I have no experience with the BT framework, nor am I affiliated, employed, or have acquaintance with any school faculty at the rural study site. These factors could affect data collection as using language in an interview question could prompt participants to

give specific answers. This was avoided by following the interview protocol (Appendix B). My sole interest as a researcher was learning how rural elementary teachers integrated BT in their classroom instruction to answer the research question.

Data Analysis Procedures

The goal of this project study was to investigate how rural elementary school teachers integrated the BT framework in classroom instruction. I analyzed data inductively, which means verbal and written material was organized and coded to reduce the volume of material into manageable components to identify patterns and emerging themes. The data analysis procedures included preparing and organizing data, coding and identifying themes, and finally, interpreting and reporting the findings.

Even though the Zoom Video Conferencing Business plan version generates a transcript of the interview meeting, multiple and thorough reviews of the transcripts were conducted and compared with the voice recording for accuracy. After the data collection of interview transcripts was completed, the data analysis process began by looking at recurrent patterns and themes. The research question and the theoretical framework guided the data analysis process and coding analysis followed the data review.

Saldaña (2016) noted that coding methods are organized into first and second coding cycles. NVivo software was used for the first coding cycle, which consisted of a word frequency count. I found the NVivo software to be more effective for larger volumes of data, so I shifted to manual coding. All transcript data were copied to a Word document with three columns. The participant classification was at the top of the page to identify participants, and interview transcript data were in the middle column. Since I

shifted to manual coding, I used In-Vivo interview responses for the first cycle of coding to the right side of the transcripts. Additionally, Saldaña (2016) explains that In-Vivo is an emergent coding method using a participant's actual language to describe meaning in the text. Pattern coding techniques were used for the second cycle on the left side of the transcripts to compare In-Vivo codes and to capture emerging themes (Saldaña, 2016).

Data was mapped out by creating a large wall-sized visual wall chart that displayed participant classification and responses (Section 2, Table 2). I used colored markers to code emerging themes and to distinguish each participant's responses. According to Saldaña (2016), "data are not coded, they are recoded" (p. 68). Hatch (2002) notes that "even when electronic devices are used, data has no significance until the human intelligence of the researcher processes it" (p. 7). Table 2 depicts the example of the wall chart mapping used during data analysis.

Table 2

Example of Wall Chart Mapping

Participant	Interview Question 1	Interview Question 2	Interview Question 3
	I am interested in learning about how you integrated BT in your classroom instruction. Can you please tell me more about how you integrated the Beyond Textbooks framework in your classroom instruction?	Can you give me an example of the steps that were involved with integrating BT in your classroom instruction? What did you do to integrate BT in language arts, mathematics, and/or social studies?	What instructional practices and strategies did you implement in your classroom instruction?
RS1 Response	The BT service provides.	In my social studies classroom……	I used ……
RS2 Response	We (as a school) integrated Beyond Textbooks Framework ……	Once our school ….	Because….

Section 2, Table 2, illustrates the wall chart mapping. There were 11 interview questions and five participant answers. The wall chart mapping allowed for a “whole picture” visual of data collected from the interviews.

Five coding phases were used to reduce the coding process and identify emergent themes. Phase one consisted of preparing and organizing the transcript data by cutting and pasting all sheets together to create the wall map. I used rubber cement to glue this chart to a wall. I reviewed data horizontally, highlighting keywords with a yellow highlighter. I used different highlighter colors to represent codes. The yellow highlighter identified keywords related to the research question. The pink highlighter identified participant verbatim related to the keywords, which also helped with the writing of findings. The orange highlighter identified participant verbatim related to challenges.

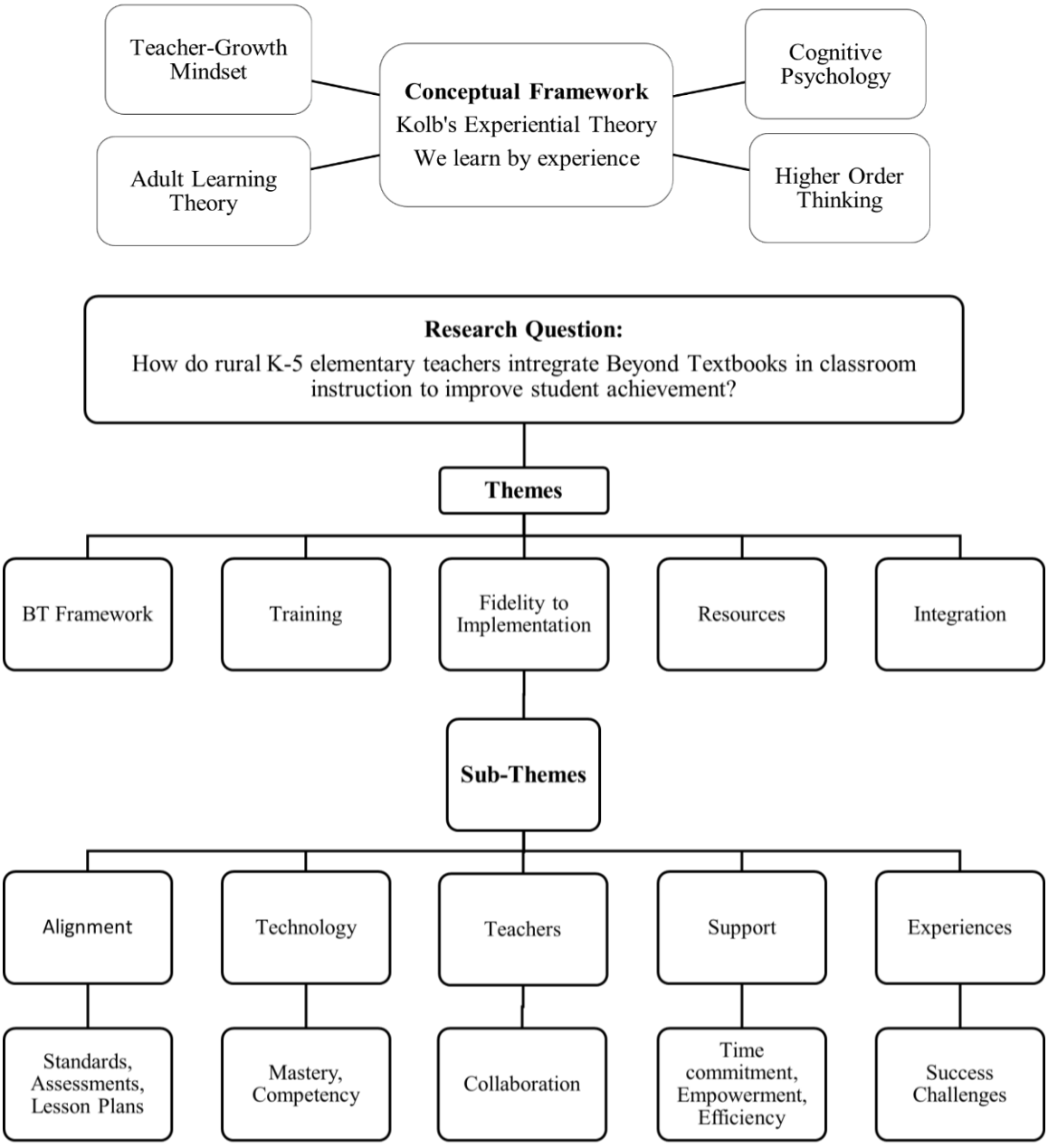
Phase two was the development of a coding system. I reviewed keywords in a visual, holistic manner (Section 2, Figure 1. BT Model diagram). The BT model was developed as a visual, graphical tool while organizing the identified themes. Phase three was for reviewing and condensing data: the recoding of data and assigning codes. The emergent themes of framework, training, fidelity, resources, and challenges became apparent. Phase four was the recumbent review of data. The blue highlighter identified additional verbatim keywords and identified recurrent themes. Phase five revealed additional data insights from a thorough review of the interview questions. By assigning codes with distinct colors, I found overlapping data that reinforced the hierarchy of themes. *Framework* and *integration practices* had yellow, blue, and pink highlighted

data. *Training* had yellow, blue, and pink highlighted data. *Fidelity* and *resources* had blue and pink highlighted data. *Challenges* had orange highlighted data.

After all the data were coded, the themes or patterns were organized to gain a deeper understanding of the findings. All data spreadsheets generated were reviewed multiple times to ensure all common themes were properly documented (Section 2, Table 3). Based on reviewing the keywords in a visual, holistic manner, I developed the BT Model diagram (Section 2, Figure 1. BT Model diagram) from the themes that emerged during data analysis.

Figure 1

Example of the BT Model



Interview Data Analysis

After receiving Walden University IRB approval (06-02-21-0305107), five teacher participants were interviewed. This sample size was sufficient to obtain data saturation and to answer the research question with detailed descriptions of experiences integrating BT in classroom instruction. Zoom video conferencing meetings were scheduled with the five teachers reiterating that their participation was voluntary, and they could withdraw at any time. Each Zoom interview was also recorded using a voice recorder with each participant's permission as an additional backup to minimize technical difficulties. I took notes in a reflective journal to document non-verbal gestures and record my thoughts. I also documented each step of the data analysis process in a digital doctoral journal. An example of the codes and themes that emerged during data analysis is depicted in (Section 2, Table 3).

I assigned a pseudonym to each participant as follows: RS for the rural study site and the numbers 1, 2, 3, 4, and 5 for the participants (e.g., RS-1, RS-2, RS-3, RS-4, and RS-5). I am the only person who knows the identity of each participant and shall, therefore, not reveal their identity in the findings or to any administrator or school faculty member from the rural site or elsewhere at any time. Interview data from the transcripts were organized on a Microsoft Word document to answer the research question on how teachers integrate BT into classroom instruction. Table 3 illustrates an example of data analysis depicting the codes and themes that emerged.

Table 3

Examples of Data Analysis: Codes and Themes

Interview Questions	Codes	Themes
Q1: I am interested in learning about how you integrated BT in your classroom instruction. Can you please tell me more about how you integrated the Beyond Textbooks framework in your classroom instruction?	Curriculum calenda	Framework
	Pacing calendar	Framework
	Classroom planning	Integration
	Use BT as structured	Fidelity
Q2: Can you give me an example of the steps that were involved with integrating BT in your classroom instruction? What did you do to integrate BT in language arts, mathematics, and/or social studies?	Lesson planning	Framework
	Create lessons	Integration
	Weekly assessments	Integration
	Grammar reviews	Resources
	Teacher submitted lessons	Resources
Q3: What instructional practices and strategies did you implement in your classroom instruction?	Used interactive flip charts	Resources
	Teacher submitted videos, links, PowerPoints	Resources

Data Analysis Results

The conceptual framework of Kolb (1984) was used to inform these results. Kolb's (1984) experiential learning theory consists of learning from experience. The interview questions were based on the constructs from the experiential learning theory to inform the analysis of these results. RQ1: How do rural K–5 elementary teachers integrate Beyond Textbooks in classroom instruction to improve student academic achievement? The participants were asked 11 interview questions to answer the research question.

The results indicated effective integration practices and challenges associated with integrating a digital program. Five themes emerged: (a) the Beyond Textbooks framework, (b) training, (c) fidelity to implementation, (d) resources, and (e) integration (Section 2, Figure 1). The five themes are described with detail in the findings. Five subthemes also emerged within the category of the BT framework (Section 2, Figure 1). The subthemes are: (a) alignment of state standards, assessments, and lesson plans within the BT framework, (b) mastery and competency of digital technology, (c) time, empowerment, and efficiency of BT integration processes, (d) support available to assist with the integration of BT, and (e) experiences with the integration of BT: successful outcomes and challenges presented.

The five subthemes connect and support the major themes within the smaller categories that emerged to answer the research question posed while also creating a continuous coherence of components with the integration of the BT framework (Section 2, Figure 1). Within the five subthemes, five smaller categories emerged supporting and connecting the themes with the subthemes to create a continuous system of integration components. Finally, note how all five subthemes connect with each other and also connect with the five themes.

The first theme was that the Beyond Textbooks framework was easy to use and to integrate into classroom instruction. Beyond Textbooks is an entire year of curriculum integrated into the digital program. Beyond Textbooks facilitates teacher lesson planning by providing daily structured curriculum and assessments that are aligned with state

standards and testing. Participants described the integration practices used in their classroom instruction using the BT framework to answer the research question.

The second theme was the training required to use Beyond Textbooks effectively. Although teachers had different levels of technology skills, teacher training on integrating Beyond Textbooks was critical to successfully integrating the framework into classroom instruction. Mentor support was elemental for assistance and guidance in integrating BT within the classroom.

The third theme was fidelity to implementation. Fidelity is crucial to successfully integrating a digital program such as the Beyond Textbooks framework with positive student learning outcomes. Educator participants integrating Beyond Textbooks in their classroom instruction reported that fidelity to implementation played an integral role in the program's overall success.

The fourth theme was the resources available for the participants to integrate BT into their classroom instruction. Beyond Textbooks is loaded with teacher resources such as lesson plans uploaded into the program by educators who have used the lesson plan activity and proven to be effective in their classroom instruction. In addition, educators using Beyond Textbooks can use the contributed resources for their daily lesson planning or may contribute by uploading an activity that other educators can use.

The fifth theme was challenges participants faced with the integration of Beyond Textbooks in their classroom instruction. Although Beyond Textbooks was reported to be easy to use, some participants were presented with challenges integrating BT. The need to focus on these challenges was evident and addressed in the project (Appendix A) as

other instructors could be faced with these same challenges while integrating BT. The focus of the project was to help instructors to successfully integrate BT in classroom instruction.

Theme 1: The Beyond Textbooks framework was easy to use and to integrate into classroom instruction.

All participants that integrated Beyond Textbooks into their classroom instruction stated that the program was easy to use, resulting in a noticeable improvement in student learning. A curriculum calendar, lesson plan activities that further facilitate instruction, and assessments are integrated into the Beyond Textbooks framework. The participants reported that integrating Beyond Textbooks in their instruction dramatically reduced their daily classroom workload, allowing more time for instruction and management and to guide students in tracking their educational progress. Additionally, student access to their progress positively affects student learning, self-esteem, and motivation.

The ease of using BT in classroom instruction was evident in the following participant responses to the interview question. All participants shared similar responses and further elaborated on the integration procedures. All participants stated how they integrated Beyond Textbooks in their classroom instruction. Participant RS1 stated, “The BT service provides a curriculum calendar that I use for classroom planning purposes. In addition, it provides essential questions that I use to frame lessons for students.” Participant RS2 stated the following about the BT framework and the curriculum calendar:

> We looked at our pacing calendar and scope and sequence for the first quarter and started planning and creating lesson plans using BT materials, websites, and suggestions. The subjects of ELA, Math, and Social Studies were the easiest to integrate BT. The websites, articles and lesson suggestions were excellent. We (as a school) integrated Beyond Textbooks Framework into our classroom like an "on and off" switch.

While participant RS2 shared how the BT framework was easy to use as an "on and off" switch. Participant RS3 further elaborated on the BT framework stating:

> Easy to use. Very user friendly. BT paces out the calendar for the whole year. The Galileo or the AZ Merit formal assessments is mapped out. The entire year is mapped out including all the standards. BT is a solid framework that we use and all the little bricks kind of like a house…. all the little bricks form the framework.

Participant RS4 detailed the BT framework, the pacing, and the organization of lessons with the following statement:

> I basically used the BT framework as a planning guide. I also used the BT unwrapped documents, which served as an outline to help me organize my lessons.

Participant RS4 further described the steps taken to integrate BT into classroom instruction. Example of some of the steps I followed as I integrated BT in my instruction:

> 1) First, I referred to the BT-provided chronological calendar and located the pertinent week. 2) Next, I located the BT Unwrapped Document for the particular lesson and standard I was going to be teaching. 3) The next place is the District Formative Assessments section, or DFA's, which I would consider using as

> pretests and post-assessments to be administered before and after instruction of standard-based material. 4) Throughout my instruction of ELA concepts, I frequently made use of the BT Grammar Reviews, to assess students' grammar, spelling, punctuation, and capitalization (writing skills). I used the BT Daily Math Skills (DMS) section to assess and review students' current and ongoing basic math skills. 5) Finally, I always referred to the BT's section of Teacher-Submitted Resources for materials and lessons which I could use in my classroom instruction. There was always a great variety of useful resources here.

Participant RS5 stated, "I used the calendar to determine when and how long I would teach a particular standard and/ or lesson. It was directly correlated to the Arizona State Standards that needed to be taught."

To summarize, all participants referred to the BT curriculum calendar as a planning guide which includes standards and assessments. Similarly, the curriculum calendar was also considered a pacing guide by participants RS2, RS3, RS4, and RS5. All responses described how the curriculum calendar was used for instruction and for creating lesson plans or accessing the Teacher Submitted Resources section for materials or lessons.

All participants used Beyond Textbooks in their daily classroom instruction. Some teachers expressed using digital tools in addition to BT. Most teacher participants used Smartboards as an additional resource to enhance instructional activities. Teachers stated feeling comfortable with the use of incorporating digital tools with Beyond Textbooks. Participant RS2 stated, "I relied heavily on my Promethean Board to deliver,

display, research and give direct instruction from BT. There are many interactive flipcharts to use for all subject areas. Using these made engagement easy and effective." While participant RS2 used the Promethean Board and interactive flipcharts to deliver instruction, participant RS3 elaborated on the digital tools used stating:

> In science, BT provided really useful PowerPoints, links to YouTube, Incorporate Reworks from BT, and Readworks.org. I interact with BT daily for math, grammar, social studies, and science in the classroom and kids are interacting with it daily.

In synthesis, from these participant responses it is evident the digital tools were identified as effective ways to impart lessons into daily classroom instruction. Digital tools also provide resourceful avenues for engagement and interaction for both the instructor and the students. Participants' use of digital tools prompted creative ways to impart and improve instruction.

Theme 2: Training required to use Beyond Textbooks effectively.

Participants reported that teacher training to integrate BT in their classroom instruction was thorough and effective. Rurality and minimal access to offsite technology support besides the initial BT training brought about colleague support. Participants also helped each other with training as was evident in the following statements. Participant RS1 stated, "I was trained in BT and my district provided training by the first day. The training showed me how to find the resources provided." Although it was evident that participant RS1 was satisfied with the BT training received, participant RS2 shared a

different perspective from the lens of being a lead teacher assisting other teachers with different mastery levels of technology skills stating:

> I did work with teachers who had little to no experience working within the "online" arena and as the lead teacher, we met daily to communicate, practice and research BT and how to best use in their direct instruction within the classroom.

While participants RS1and RS2 shared their experiences with the BT trainings, participant RS3 provided further detailed description on the BT training stating:

> The BT presenters showed us PowerPoints and walked us step by step. Training was approached as if a new user, walking us through each component and focused on the main components, the meat of that program. Trained us how to open the standards, how to open the unwrapped documents, how to use them, how to assess the students. Directed us on how to provide resources to be included in their program. Walked us through the whole process of what we need in order to use the BT program effectively in the classroom. When you're done with them you feel really confident that you can use BT in the classroom. It's a large program with a lot of information. It's up to us to go back and just kind of start using the other little components that would help us with more resources or more specialized resources…but everything is provided within the program.

Just as participant RS3 detailed the training process, participant RS4 elaborated on the experiences with the BT training stating:

> My experiences with the BT training were always instructional, relevant, and quite practical. It seems as if every year we were provided with a "refresher" or

> review of the BT Framework, there were some new resources or tools teachers, and students could both benefit from. It was always useful to learn about these new additions to the framework. This additional training only helped to enhance my use of the BT framework in my classroom instruction.

Participant RS5 shares the BT training experience as well as additional classroom management skills stating:

> I actually enjoyed the BT training and found them very helpful in the classroom. The training was easy to access and understand. There were multiple trainings on classroom management, teaching strategies, and how to deal with behavioral problems.

In summary, evidence from the above participant statements suggests that even though BT is easy to use, colleague support was necessary for teachers who needed additional technological support. Besides the initial BT and follow-up training courses, colleague support was critical. Evidence from the statement of teacher leader RS2 identified colleagues as working together to improve technological skills. Collaboration amongst colleagues also helps create effective technological learning experiences.

Theme 3: Fidelity to implementation of BT.

Participants reported that the BT program provides appropriate pacing and structure and, when integrated with fidelity, can produce positive academic enrichment for students and teacher mindset growth. Fidelity to integration is key to the successful implementation of a new curriculum program. For instance, evidence of fidelity to integration was supported by the following participant statements. Participant RS1 stated,

"I just started using the framework as structured for daily use." Participant RS3 elaborated on the positive outcome of following BT with fidelity stating:

> I have a huge success story; BT was new to us. They had trained us, and they were very clear that we had to follow it diligently and precisely and it was so exciting to use, and it had so many options and so many resources that I really wanted to push my students. I really followed it to a tee. I followed the calendar; I followed the resources. I did my best. I pushed my students to the limit. That year was the last year that my students had to take the standardized test called AIMS test that was the last year they did away with it. I believe almost 70% of my students passed the AIMS test and that was so huge. I remember the principal at the time called me and said you're not gonna believe this, we got 70%, we passed the AIMS and it was such a high data for us. I attributed it to really using the BT and sticking to it and really being faithful to everything that it said and all the resources.

While participant RS3 elaborated on how following BT with fidelity brought about a success story, participant RS4 shared the experiences encountered with fidelity to implementation of BT by further adding collaboration among staff stating:

> I adhered as closely as I could to the suggested pacing for instruction that BT provided to assist me as I wrote and applied my weekly and monthly lesson plans. Some teachers experienced a learning curve with BT and did not readily accept the curriculum. After several collaborative meetings discussing and using BT, we all became up to speed at different levels of expertise with BT. We continued to grow and learn together.

To synthesize, the BT framework has positive outcomes when integrated with fidelity. Positive outcomes boost faculty morale. According to Kirti & Goyal (2022), organizations that have engaged members who are passionate, enthusiastic, and self-motivated outperform in terms of production and employee turnover. Participant RS4 provided an insight into positive teacher mindset growth while collaborating and learning BT among colleagues.

Theme 4: The resources available to integrate BT in classroom instruction.

All participants reported that the BT framework has abundant lesson plans, assessments, instructional support, and supplemental resources to integrate BT successfully in classroom instruction. Educators using BT can access lesson plan activities that educators from their state and other states have contributed to. Lessons, activities, and materials can be accessed in the Teacher Submitted Resources section. Participant RS3 elaborated on using resources within and outside of BT to deliver instruction in the classroom by stating:

> There are teacher provided resources with lesson plans and assessments from all over the nation who are enrolled in BT. Once I know the standard and once I know the type of resources I need to use, I can go outside BT. I can go through my own personal resources to deliver my lesson. We're free to look outside BT to gather even more resources. BT is incredibly helpful so that we don't have to reinvent the wheel. So many teachers from all over the country that enrolled in BT provide research-based resources that are uploaded, and we are free to use them.

Participant RS5 commented on the resources available through BT and continued by sharing student's preference of lesson activity and how this activity positively influenced students' learning by stating:

> BT had a lot of resources that I was able to utilize such as lesson plans, worksheets, PowerPoints, and activities. My students especially liked the projects we would have for particular standards. It gave them the opportunity to show what they have learned, while still practicing the skill and being able to help their classmates grasp a deeper understanding.

To summarize, even though BT has an abundance of integrated resources available to ease the workload of lesson planning and assessments, teachers are free to look for additional resources outside of BT. Teachers have the freedom to be creative on the delivery of their daily lessons. Teachers also have the option of contributing a lesson plan activity to the section of Teacher-Submitted Resources so other educators can access for their classroom instruction.

Theme 5: Challenges faced with the integration of Beyond Textbooks in classroom instruction.

Although all teacher participants received the initial training from BT staff, some instructors faced challenges with the integration of BT. Additionally, some of the challenges participants faced were due to proficiency levels with technology use while others were issues with the program. Despite the challenges, participants shared strategies that helped with the integration of BT and are as follows.

Participant RS4 explained the difficulties faced while integrating BT and also shared the strategies used to overcome the challenges stating:

> Some of the challenges I experienced in the integration of BT in my classroom instruction were the time constraints for the optimal coverage of the material and concepts as prescribed by the BT framework. As a teacher, I frequently had to extend the instructional time given to material to the following week, which also delayed the evaluation of the mastery of the concepts and skills. Another challenge was the complexity and depth of knowledge required in the district formative assessments. I feel they were well above our students' level of comprehension and educational preparation. The ways in which I met and tried to overcome these challenges were by making use of the variety of materials and resources which most adequately matched the needs of my particular students' needs and instructional levels and learning styles. The way I did this was to modify and simplify the materials and resources, making use of scaffolding and chunking in their presentation. With respect to how I overcame the issue of time constraints, I sometimes had to use my own pacing guide and was realistic in light of my students' needs.

While participant RS4 faced difficulties with time constraints and the complexity of knowledge required for the district formative assessment, participant RS5 had a differing problem with BT stating:

> The main challenge that I faced while trying to implement BT in my classroom was relying too heavily on it. I relied heavily on BT as it was the only resource

> that I was taught and familiar with quickly. Some of the standards that were scheduled on BT were not main standards that needed to be taught so that caused my teaching of the standards to be off. I was able to revise and fix this problem as I caught it in time but that would have to be the biggest challenge. I overcame this challenge by going to the main Arizona Standards and backtracking and recalibrating the standards that were taught versus what needed to be taught. I was able to realign my schedule and get the students back on track.

Additionally, participant RS5 encountered difficulties in other areas of BT and further stated:

> There are not a lot of resources for a Social Studies classroom. For example, in the curriculum calendar, History is just a list of objectives while Math or English has it planned week by week. In addition, there are no assessments generated so you have to create a lot of your own materials.

In synthesis, some teachers faced challenges while integrating BT in their classroom instruction. As evidenced, the challenges were comprised of lack of resources in the subjects of Social Studies and History, time constraints, the complexity and depth of knowledge required in the district formative assessments and relying too heavily on BT as the only teaching resource. The participants shared their experiences and described how they overcame the challenges. Of note, BT is constantly being updated, and the difficulties described by the participants at the time of this project study may have been revised by the BT curriculum team to improve the use of BT.

Summary of Themes

The first theme is that the Beyond Textbooks framework was easy to use and to integrate in classroom instruction. Participants described the integration practices applied in their classroom instruction using the BT framework to answer the research question. Additionally, features of the BT framework are the integrated curriculum, lesson plans and activities, instructional resources, and assessments.

The second theme is the training required to integrate BT effectively. All participants reported that the training received to integrate BT was very clear, thorough, and easy to follow. In addition, participants reported that the BT presenters described all the components and the whole process of integration to use the BT program effectively in the classroom.

The third theme is fidelity to implementation. Participants reported successful integration and positive outcomes when BT was integrated with fidelity. Beyond Textbooks can improve student academic achievement when educators implement the program with fidelity. Furthermore, following integration procedures with fidelity is critical to obtaining positive BT outcomes.

The fourth theme is the resources available for the participants to integrate BT into their classroom instruction. All participants reported that the BT framework has a resource bank of lesson plans, activities, assessments, instructional support, and supplemental resources to integrate BT successfully in classroom instruction. In addition, educators using BT can access lesson plan activities that educators from their state and other states have contributed to. The resources available are: (a) teacher provided lesson

plans and assessments from all over the nation who are enrolled in BT, (b) educators can utilize uploaded lesson plans, worksheets, PowerPoints, and activities, and (c) freedom to go on the internet and look for resources that are not in BT to deliver a lesson.

The fifth theme is the challenges the participants faced with integrating Beyond Textbooks in their classroom instruction. Participants use BT to facilitate lesson planning and for instructional practices; however, they shared the challenges encountered with the integration of BT. Among the challenges participants faced were (a) time constraints, (b) no assessments generated for specific classes, (c) no resources for social studies, and (d) relying too heavily on BT as the only resource. Table 3 (Section 2, Table 3) illustrates the summary of themes that emerged during data analysis.

Discrepant Cases

Discrepant cases examine opposing and alternative theories for a phenomenon being investigated for a more substantial justification of conclusions (Baškarada, 2014; Miles et al., 2018). In synthesis, discrepant cases are instances in the data collection that oppose, differ, or vary from the data analyzed in the identified patterns and themes. Discrepant cases could help school district administrators with alternative decision-making processes with the integration of BT on classroom instruction and technology integration. Discrepant cases that oppose the theme(s) were considered. Since no negative data was discovered, no further investigation was necessary.

Evidence of Quality of Data

To properly document how rural elementary teachers integrated BT into their classroom instruction, this study established trustworthiness through an approved

interview protocol. The Walden University doctoral committee, overlooking this study revised and approved the interview protocol to ensure credibility and quality. In addition, this project study further established credibility using member checking and the Amankwaa (2016) trustworthiness protocol to control researcher bias.

Amankwaa (2016) proposed a protocol to address the evidence of rigor within a qualitative proposal, including dates and times of trustworthiness actions. The Amankwaa (2016) trustworthiness protocol was used for accountability and to properly document all research work by creating two columns that specified the planned trustworthiness action and the date the work was completed to further authenticate the rigor of the research. For member checking, findings were emailed to the teacher participants to check for accuracy of accounts. Member checking is the process of returning findings so that participants can check the accuracy of accounts to ensure responses identify experiences accurately (Creswell, 2012). For this project study, member checking was selected for credibility purposes. Furthermore, member checking validates the accuracy of interview data to ensure a true reflection of how rural elementary teachers integrated BT into their classroom instruction.

To ensure quality research, a Walden University doctoral study committee-approved interview protocol was utilized, and member checking conducted to assure the credibility of findings. Findings were emailed to the participants to verify their accuracy. Research fidelity in education is critical as the findings can be used to determine how rural elementary teachers integrated BT into their classroom instruction (Merriam, 1995).

Limitations of the Findings

Due to the Covid-19 pandemic, this project study is limited to five teacher participants and one rural study site. The total number of elementary teachers at this rural study site is six. With the assistance of the rural site program director, the six elementary teachers ranging from grades K-5 were identified as meeting the selection criteria. The selection criteria consisted of (a) at least 2 years teaching experience at the study site, (b) state certified, and (c) having integrated BT in classroom instruction (Section 2, Table 1). Five of the six potential teacher participants identified responded to the invitation to participate in this study. The years taught or years taught using BT was not included in the interview questions. The rural site program director identified the teachers that met the criteria selection and provided the email contact information. Of the five participants, only one teacher participant returned to teach at this rural study site after the Covid-19 pandemic. The program director facilitating and assisting this researcher also did not return after the pandemic (Study site website, 2023).

The small size of study participants limited the transferability of this project study results. Future research with a larger sample size is recommended. The transferability of the findings beyond the rural study site has the potential to produce research results transferable to other educational settings. The findings might be transferable to other rural schools with similar teacher participant populations. However, there is no guarantee that the results will be the same in every rural setting as there are limitations of transferability when transferring results of one study to a different setting or context. According to Nassaji (2020) transferability describes “the extent to which the

interpretation or conclusions of a study can be transferable to other similar contexts" and further continues stating that "qualitative research is interpretative, and the participants are often small in number and not representative of the population thus the findings cannot be generalized" (p. 428). Furthermore, a follow-up study in a similar setting post the Covid-19 pandemic is recommended to further contend transferability of the findings.

Conclusion

Section 2 presented a thorough description of the qualitative methodology, research design and approach, participants, data collection, and data analysis procedures. This qualitative research design stemmed from the problem of how rural elementary teachers integrated BT into their classroom instruction. A basic qualitative approach was selected as the most appropriate for this study to understand and learn how rural elementary teachers integrated BT into their classroom instruction, as this topic had yet to be researched. The research question guiding this study was exploratory to facilitate the investigation of how rural elementary teachers integrated BT into their classroom instruction.

After IRB approval, five purposefully selected teachers ranging from grades K-5 were interviewed. The interview transcript data was organized and coded to generate themes and answer the research question. The four components of Kolb's experiential learning theory were used to further explain how rural elementary teachers integrated BT into classroom instruction. Five themes emerged from the coding process (Section 2, Table 3). The first theme was that the Beyond Textbooks framework was easy to use and to integrate into classroom instruction. The second theme was the training required to

integrate BT effectively. The third theme was fidelity to implementation. The fourth theme was the resources available for the participants to integrate BT into their classroom instruction. The fifth theme was the challenges the participants faced integrating BT in their classroom instruction.

Section 3 introduces the project based on findings from the research. Project goals, rationale, literature review, project description, project evaluation plan, and project implications are presented. The focal point of the project study is described in detail. Section 4 contains reflections and directions for future research, followed by the conclusions of this doctoral project study.

The Project

The findings from this project study suggested a need for additional professional development focused on the challenges teachers faced while integrating BT that could help other educators faced with similar implementation issues. In consideration of these challenges, I developed a 3-day professional development project on the integration of Beyond Textbooks on classroom instruction (see Appendix A). The professional development project is introduced as a PowerPoint presentation designed to serve as supplemental BT training for BT staff, administrators, teacher leaders, educators, and curriculum developers throughout a school district.

The 3-day professional development curriculum provides teachers with evidence-based practices, strategies for facilitating integration, performance assessment sessions, activities with guided training, and opportunities to learn about the resource button. Professional development sessions also include opportunities to learn from colleagues

and their experiences integrating BT as additional experiences are welcomed and shared. Anticipated feedback will help refine this professional development project.

Section 3: The Project

Introduction

This section describes the project that was developed, along with the project goals, resources, supports, potential barriers and solutions, implications and timetable, responsibilities, and evaluation plan. I chose professional development as a project to address the challenges participants faced with integrating BT, as this piece can facilitate the successful integration of BT by other teachers and schools. The professional development project was developed as a supplemental BT training tool, which can be used by administrators, teacher leaders, or BT staff, since the project focused on the challenges participants faced while integrating BT in their classroom instruction.

Participants reported overall challenges with (a) training, (b) level of technology proficiency (hence mentorship amongst teacher participants), (c) learning resource buttons available, and (d) time to learn technology as the major challenging factors to integrating BT. Teachers faced challenges when integrating BT in classroom instruction and needed extra PD to facilitate the integration of BT in the classroom. Consequently, this prompted the need to concentrate on challenges as the focal point of the project. Examples of the challenges are as follows. Participant RS2 stated, “Some teachers experienced a learning curve with BT and did not readily accept the curriculum.” Participant RS3 stated, “It takes time to learn technology. I’m always finding a button for something. In our school, we did have at least one technology teacher that would help us whenever we needed something.” Participant RS4 stated, “Some of the challenges I experienced in the integration of BT in my classroom instruction were the time

constraints for the optimal coverage of the material and concepts as prescribed by the BT framework." Participant RS5 further stated, "Having a BT specialist would be very beneficial as they could assist with any BT technical issues and help train teachers on the different aspects that BT offers."

To summarize, this project was developed based on the overall challenges that the participants faced with the integration of BT. This project is an effort to help other teachers to successfully integrate BT in their classroom instruction. Evidence that this project should be based on professional development were the level of technology proficiency amongst teachers, use of the learning resource buttons available, and time to learn technology as these were the major challenging factors to integrating BT.

The Project: Professional Development

Based on the themes and the challenges teacher participants faced while integrating BT, a 3-day professional development session was created (Appendix A) to assist in the successful replication of BT. Professional development in the areas of challenge associated with the integration of BT is vital to assist teachers in better understanding how the BT framework can be applied to classroom instruction. Additionally, educators' success in the integration of BT can positively impact student academic success.

The 3-day professional development project aims to ensure educators understand how to integrate BT in their classroom instruction. The goals are to assess the technology level of each teacher and provide a knowledge base from the challenges rural teachers previously faced, while also integrating BT that will assist teachers in the successful

integration of BT. The professional development sessions will focus on assisting teachers with best practices critical to integrating BT with guidance, reinforcing BT resources, and helping ease stress while learning a new curriculum framework.

Rationale

The BT framework was developed to facilitate classroom instruction and to promote student academic achievement. While BT administrators provide ample training, resources, and professional development, the findings suggest reinforcing the BT framework through the lens of teachers' challenges when integrating BT. Professional development based on the research findings from this study will assist administrators and teachers with an understanding of the challenges faced with the integration of BT. In addition, administrators and educators can use this 3-day professional development project as a guide in the integration of BT at their school and classrooms.

Review of the Literature

The literature reviewed in this section corresponds to the findings supporting teacher training and fidelity to implementation to assist educators in integrating the BT digital program. The search was limited to peer-reviewed articles published within the last five years using ERIC, Google Scholar, EBSCO, and SAGE publication databases unless it pertained to the PELP Coherence Framework. I located 40 articles for this review. The search terms included *professional development, teacher preparation, fidelity to implementation, coherence,* and *factors associated with teachers' use of digital technology in the classroom.* This literature review touches on topics related to integrating innovative technology in the classroom.

Teacher Preparation in Technology Skills

Teachers use technology skills while integrating BT in their classrooms; however, some educators need to be more proficient in technology use. This leads to challenges integrating technology programs in classroom instruction. Caena and Redecker (2019) state, “In many cases, teachers are unsure about how digital technologies can and should be integrated into education” (p. 361). Caena and Redecker (2019) also mention that teachers must be competent in technology to confront 21st-century challenges to best empower 21st-century learners. The technology skill level of each teacher, adaptation to BT integration, teacher preparation, fidelity to implementation, and the application of professional development training all determine the successful integration of BT in classroom instruction. There is a relationship between technology skill level, adaptation to technology, and professional development training for the successful integration of new technology (Winter et al., 2021). Teacher preparation in technology use in the classroom, availability of technical support, and continuous professional development are factors in successfully using technology in favor of unexpected changes in instruction.

Darling-Hammond and Hyler (2020) mention that the Covid-19 pandemic brought an unexpected mix of online, hybrid, and in-person instruction. This mix of classroom instruction was noticeable in each teacher’s ability to use technology in students’ distance learning during the pandemic. Trust and Whalen (2020) indicate that “the global pandemic exposed a significant teacher preparation and training gap for emergency remote teaching” (p. 189). DeCoito and Richardson (2018) stated,

"technology cannot be effective in the classroom without teachers who are knowledgeable in technology and its implementation" (p. 362).

Need for Professional Development

While the Covid-19 pandemic brought changes to in-person classroom instruction, it also changed online professional development courses. Hartshorne et al. (2020) mention that during the pandemic, teacher educators created online professional development courses for preservice teachers. Bragg and Walsh (2021) also studied about online professional development for teachers, and their findings suggest that "online professional development for teachers positively impacts their content knowledge; pedagogical content knowledge; beliefs about teaching; self-efficacy; and instructional practices, is well-timed and highly relevant" (p. 1). Furthermore, the impact of the Covid-19 global pandemic on teacher education and classroom instruction continues to be researched. Karlberg and Bezzina (2022) studied the professional development needs of beginning and experienced teachers, concluding that "classrooms are becoming more diverse, identifying special education, technology-enhanced learning, handling behavior concerns, and teaching migrant children as the four main areas revealing the changes" (p. 638). Karlberg and Bezzina (2022) also note that experienced teachers felt less than beginning teachers when educating gifted children (p. 638).

Caena and Redecker (2019) studied the European Framework for the Digital Competence of Educators (DigCompEdu) and recommended learning more about digital teaching competence by taking the anonymous online self-assessment instrument at https://ec.europa.eu/jrc/en/digcompedu/self-assessment. Caena and Redecker (2019)

further mention that “the DigCompEdu framework helps educators reflectively learn their competency levels and professional development goals” (p. 366). Kuk and Holst (2018) note that reflection is elemental to experiential and adult learning theory. Basantes-Andrade et al. (2020) define digital competence as “the set of techno-pedagogical and communicational skills that allow teachers to function effectively within the educational contexts that new technologies generate” (p. 205).

Coherence in Implementation of New Programs

Coherence in the implementation of new programs can only be achieved if administration, faculty, and staff are in overall agreement. The successful implementation process at all district levels was reviewed in the book, *Cases in public education leadership: Managing school districts for high performance* by Childress et al. (2007). Childress, et al. (2007) studied 19 cases and organized data into five themes: making coherence concrete; finding and supporting personnel; building a high-performing organization; managing schools across differences; and sustaining high performance over time. The authors found that coherence at all district levels was necessary for district-wide implementation of an instructional program to be successful. Childress et al. (2007) support district-wide improvement strategies by strengthening coherence among actions in curricular review, strategic planning, professional development policy, and teacher performance expectations. For an effective transition to a new instructional program, there must be management and coherence among all activities (Benton, 2017).

Coherence is essential in organizing and managing a new instructional program at the district level. For example, Harvard Business School (HBS) and Harvard Graduate

School of Education (HGSE) launched the Public Education Leadership Project (PELP) using the congruence model developed by Tushman and O'Reilly (2002) to improve the management and leadership competencies of public-school leaders. The PELP Coherence Framework emerged from interactions with hundreds of U. S. public school leaders to implement improvement strategies effectively and was designed to support the challenges of management and leadership in public education, while also strengthening coherence and alignment at all levels (Public Education Leadership Project, (n.d.).

The Harvard Graduate School of Education and the Harvard Business School examined how the art and science of management could benefit public schools to improve student performance resulting in the development of the Public Education Leadership Project (PELP) Coherence Framework (n.d.). The PELP Coherence Framework is designed to help leaders effectively manage and support the implementation of district-wide improvement strategies by strengthening the coherence and guiding actions at the district, school, and classroom levels in the pursuit of high levels of achievement for all students (Childress et. al., 2007). Furthermore, the Public Education Leadership Project at Harvard University (n.d.) described the PELP Coherence Framework as a framework that identifies the organizational elements critical to high performance, while posing a series of diagnostic questions about each element to bring the elements into coherence with the strategy and with each other.

Coherence can be attained through transparency, clarity, the precision of practice, monitoring progress, and continually making corrections (Fullan & Quinn, 2016). Nordine et al. (2021) contend that teacher education programs must first be coherent.

Understanding the implications and management of the implementation of BT as a new digital curriculum program will further assist school districts in contemplating its purchase. For a smooth transition to the BT framework, district-wide coherence among the entire staff and organizational and computer knowledge of Microsoft Office ™, iWork ’08, or Office ™ files is required (Beyond Textbooks, n.d.).

Ford (2018) and Stains and Vickey (2017) recommend a framework to assess teacher perceptions when implementing an intervention with fidelity. The PELP Coherence Framework identifies the key elements of a coherent system for instructional improvement with the implementation of a new district-wide program put into practice at all faculty levels (PELP, Harvard University, n.d.). Understanding the management and coherence behind the integration of BT can help other schools fully understand the practical and consistent teaching practices that provide students with consistent curriculum-aligned experiences. Coherence can be facilitated by looking at the management objective to achieve instructional improvement to implement a new district-wide program successfully.

When integrating a new instructional program such as BT, the curriculum, instructional practices, and processes, as well as faculty professional development need to be explored for evidence of fidelity to see how closely the implementation process aligns to the way the program was intended and designed. With careful review, student academic outcomes can be correctly accredited to evidence-based instructional programs when other contributing factors could be present (Stains & Vickey, 2017). Even though teacher adaptation to instructional strategies and interventions is expected, implementing

these with higher fidelity produces more successful results (Quinn & Kim, 2017). A theory-practice gap exists in the effective practice of instructional strategies and how teachers perceive the frequency in which instructional strategies are used (Ford, 2018), which suggests that increased progress emerges from a stronger connection between practice and frequency. Therefore, it is imperative to implement a program or intervention as intended with fidelity to increase desired outcomes (Harn et al., 2017). Details on how the PELP Coherence Framework enhanced this study are explained.

Because this study concentrated on identifying integration procedures, I used the PELP Coherence Framework to delve deeper to identify the critical elements of a coherent system for instructional improvement with the integration of a new district-wide program put into practice at all faculty levels (PELP Harvard University, 2020). By understanding the governance and coherence behind the integration of BT in classroom instruction, rural educators can articulate the formation of new teaching practices that provide students with consistent curriculum-aligned experiences.

Each sphere around the instructional core: (student, teacher, and content) contains factors that assist with achieving coherence by connecting the instructional core with a district-wide strategy for improvement and theory of change (Section 3, Figure 2). Each element reinforces the other and is designed to help leaders implement an improvement strategy by strengthening coherence among district, school, and classroom actions. For example, the Public Educational Leadership Project at Harvard University and (Childress et al., 2007; Peacock, Wong, & Reker, 1993; Tushman & O'Reilly, 2007), mention that key framework elements include: instructional core, theory of change, strategy,

stakeholders, culture, structure, systems, resources, and environment, suggesting that the congruence or alignment are the drivers of high performance and success.

Figure 2

The Harvard PELP Coherence Framework

Note: Adapted from Tushman and O'Reilly's Congruence Model, 2002

The Harvard PELP Coherence Framework identifies the key elements critical to high performance. Public Education Leadership Project at Harvard University. *Coherence Framework.* Retrieved May 10, 2022, from https://pelp.fas.harvard.edu/coherence-framework.

After completing the coding process, the themes and subthemes were organized to gain a deeper understanding of the findings. The final step was to review the congruence

of instructional practices using the PELP Coherence Framework to further investigate the research question further. Evidence from the data further provided answers as to whether there is congruence between the integration of BT on classroom instruction with a district-wide innovation. In education, research fidelity is critical as the findings can determine how to improve practices (Merriam, 1995), as in the case of the BT program affecting student academic success. Furthermore, the rural study site provided sufficient data on the integration of BT in classroom instruction to corroborate with the PELP Coherence Framework. Finally, coherence in the integration practices of BT can promote social change that can benefit other school districts.

Project Description

The participants in this project study reported that Beyond Textbooks was easy to integrate into classroom instruction, yet some teachers faced challenges. Although BT administrators provide training and professional development sessions with the purchase of BT, the inclusion of the challenges faced by the participants can provide more robust BT training. Professional development sessions that include these challenges can contribute to the successful integration of BT. Professional development sessions based on the challenges will help guide educators in the integration of BT in their classroom instruction. Professional development stemming from the challenges has the potential to (a) assist other teachers in the integration of BT, (b) assist administrators with knowledge of each teacher's technological skill level, and (c) provide research-based best practices on the integration of BT in classroom instruction. In addition, the 3-day professional

development project was developed as a reference guide for administrators and educators who are integrating BT or are facing challenges integrating BT (Appendix A).

The 3-day professional development project aims to ensure educators understand how to integrate BT in their classroom instruction. The goals of the PD are to assess the technological level of each teacher to provide extra technology support, share findings of the project study, and to provide a knowledge base from the challenges rural teachers previously faced while integrating BT. The PD sessions are designed to assist teachers in successfully integrating BT. The overall PD plan consists of 3 days of interaction with educators on the findings of this research study, evidence-based instructional practices, and how to integrate BT in their classroom instruction successfully. The PD sessions will be used by administrators and teacher leaders that impart BT training sessions at their schools.

The three PD sessions were developed for instructional training over the course of three days. The targeted audience for the PD sessions is elementary teachers. Day 1- Session 1: I will present the findings of this project study and the challenges teachers encountered while integrating BT to increase teacher's knowledge of how to use the BT framework effectively. Day 2 – Session 2: provides evidence-based best practices obtained from this study and focuses on incorporating activities that will help teachers practice integrating BT in classroom instruction. Day 3- Session 3: review findings, challenges, and fidelity to integration.

Project Agenda

For the professional development project (Appendix A), three sessions were planned for 3 days with consideration of the research question: How do rural K–5 elementary teachers integrate Beyond Textbooks in classroom instruction to improve student academic achievement? The intention is to reinforce the BT framework and for administrators and educators to benefit from these sessions. The sessions were organized and created in the following order:

Session 1: Presents the findings of this project study and the challenges some teachers faced while integrating BT. The technology level of each teacher is evaluated through observation and with a sample of BT use in the form of a performance assessment. Differences in proficiency of technology level were evident in the findings so this piece is critical to the successful integration of BT and to promote teacher confidence in technology use in the classroom.

Session 2: Review assessment of each teacher's technology level and explore available BT resources. Share current evidence-based best practices from this study on the effective integration of BT and incorporate activities that will help teachers practice integrating BT in their classroom instruction. Provide teachers with guided training opportunities to learn information in the resource button.

Session 3: Reinforce the BT framework by reviewing findings, challenges, and fidelity to integration by ensuring educators are aware of the beneficial effects fidelity to integration has on students' academic achievement and successful implementation. Give teachers opportunities to share experiences with this PD project as well as to share

experiences integrating BT in their classrooms that were not addressed. Note any additional strategies that can be added to this PD project. Lastly, ask teachers if they have any questions.

Potential Resources and Existing Supports

The resources needed to conduct the PD sessions for coherence when integrating a school wide technology program consists of collaboration from administrators, curriculum developers, and teacher leaders in the engagement of planning. As teachers will be involved and committed to three days of PD sessions, it is imperative to plan and schedule accordingly. Materials needed for the PD sessions are equipment to display the PowerPoint presentations, ice breaker materials, handouts, and a computer(s) with BT installed to assess teachers' technology skill level. Rural schools' funding is limited and depends on administrative support and collaboration to present the PD sessions.

Potential Barriers and Solutions

Administrator collaboration and support are imperative for the PD sessions. A potential barrier to providing PD sessions could be the scheduling of teachers' time away from classroom instruction. With an anticipated preplanned budget projected a year in advance, funding to provide PD training can be a barrier. A possible solution would be to request external funding, such as applying for a federal government grant to support PD training.

Project Implementation and Timetable

The PD project was created and developed for three sessions over the course of three consecutive days. Since the intended audience is teachers, each session consists of a

regular school day between 8:00 am and 3:30 pm. The three sessions are designed to be conducted in consecutive order to maintain consistency of information. The school administrator, this researcher, and staff will coordinate and schedule the three-day sessions.

Session 1 will present the findings of this project study and the challenges teachers encountered while integrating BT to increase teacher's knowledge of how to use the BT framework effectively. Session 2 provides evidence-based best practices from this study and focuses on incorporating activities that will help teachers practice integrating BT in classroom instruction. Session 3 reviews findings, challenges, and fidelity to integration.

Based on the PD plans of the participating rural school, the implementation of this PD project will be continually ongoing, monitored, and evaluated by the school administrator, program director, curriculum developers, and teacher leaders at the participating rural study site. This researcher will also monitor and evaluate this PD project. Consistent monitoring, evaluating, and revising this PD project based on PD feedback will further ensure successful integration of BT as well as to maintain the effectiveness of this PD project.

Roles and Responsibilities of Stakeholders

The roles and responsibilities of the administrator, program director, curriculum developer, teacher leaders, and teacher participants are as follows: Teachers integrating BT in their classroom instruction will meet to discuss the findings of this project study. The PD sessions will provide teachers with supplemental BT training and support for

successfully integrating the BT framework into classroom instruction. School administrators will support these teachers with the technology resources and materials needed. The program director, curriculum developer, and the teacher leaders will meet to discuss PD scheduling and assist the administrator with the resources and materials. The responsibility of this researcher is to meet with the stakeholders to schedule the PD session dates, assist with gathering resources and materials, and set up the meeting room. This researcher will provide the PD PowerPoint and any digital media or materials needed to facilitate the sessions.

Project Evaluation Plan

Project evaluation is imperative to monitor and track the effectiveness of the PD project. This researcher will evaluate the PD goals and project twice a year for the first year then yearly after that. Outcome-based and summative evaluations will be used to monitor and measure the effectiveness of the PD project and make modifications to the 3-day sessions. School administrators can monitor changes using summative and state assessments and provide feedback for improving this PD project. Teacher participants will complete researcher-based evaluation forms at the end of each PD session. Feedback from these educators is critical in assisting with adjustments to the PD project sessions.

Project Implications

The 3-day PD sessions will benefit elementary educators as they will gain knowledge of additional ways to successfully integrate BT in classroom instruction based on the experiences of the rural teacher participants who faced challenges while integrating BT. These educators will also benefit from opportunities to practice hands-on

BT applications during the 3-day PD sessions. Best teaching practices and strategies suggested by the rural teacher participants will also be beneficial as they can apply them to everyday classroom instruction. In addition, colleague mentoring during the PD sessions from proficient BT teachers is highly encouraged for those teachers who need more practice on integrating BT. Lastly, the findings from this study will benefit teachers with the knowledge and evidence based best practices on integrating BT that will help improve their classroom instruction and their students' overall academics.

The findings from this study can be used by administrators, program directors, curriculum developers, and teacher leaders with decision-making practices to support elementary educators in integrating BT into their daily instruction. Research-based best practices for integrating the BT digital curriculum innovation in rural settings could empower other similarly situated schools to learn how BT improved students' knowledge, instructional practices, assessments, and technology integration in classroom instruction. These findings can also motivate stakeholders to offer educators more PD opportunities to practice technology skills with the integration of BT. As educators grow more proficient in BT, students will be better prepared academically.

This project was developed as a solution to the research question. It was based on the challenges some teacher participants were presented with while integrating BT that could benefit other educators. The positive social change resulting from these findings can help other educators integrate a technology-based curriculum framework that has the potential to increase student academic achievement. In addition, a compilation of best practices can provide knowledge and help institutions seeking to transition into BT and

add to the scholarly research literature of BT integration, integrating digital innovations in classroom instruction, and technology integration of curriculum in rural settings. Another opportunity for supporting positive social change is by providing district leaders and educators with a compilation of evidence-based best practices, district-wide coherence management components, and integration processes that promote positive faculty experiences in transitioning to BT. Finally, positive faculty experiences transitioning into BT could create a positive environment and climate for students to learn and be more productive.

Summary

Based on the findings of this study, a 3-day PD project was created. A description of the PD project, goals, rationale, implementation and timetable, evaluation plan, and implications were presented. Section 4 presents the project strengths and limitations, recommendations for alternative approaches, scholarship, project development, and evaluation. Section 4 concludes with reflections, leadership and change, implications, applications, and directions for future research.

Section 4: Reflections and Conclusions

Section 4 includes a review of the study and presents the project's strengths, limitations, recommendations, evaluation, reflection, and directions for future research. The findings from the data analysis served as a guide in the development of the 3-day PD project, which provided a solution to the research question and produced research-based best practices stemming from teachers who faced challenges with the integration of BT. The findings can potentially assist administrators and educators with valuable information regarding the integration of BT in classroom instruction. As students benefit from improved instruction and overall academic achievement as a result of BT, students can also gain an awareness of the value of improved academic performance and increased self-esteem.

Project Strengths and Limitations

Teachers at a rural school district have been integrating the BT framework with successful results. The purpose of this study was to investigate how K-5 elementary teachers integrated the BT digital innovation into classroom instruction in such a way that fostered success in student academic achievement. Findings from this project study provided information on the integration of BT based on the experiences rural teachers encountered while integrating BT. The 3-day PD project was developed based on the five themes that emerged from the research question during data analysis. The first theme was that the Beyond Textbooks framework was easy to use and to integrate into classroom instruction. The second theme was the training required to integrate BT effectively. The third theme was fidelity to implementation. The fourth theme was the resources available

for the participants to integrate BT into their classroom instruction. The fifth theme was the challenges the participants faced integrating Beyond Textbooks into their classroom instruction.

The 3-day PD sessions are a project deliverable that builds upon the rural study site's mission and vision statement of being a collaborative academic community. High expectations are set, and scholars are prepared to graduate, provided with academic skills, and motivated to further their education. Educators attending these PD sessions will acquire knowledge on research-based best practices in integrating BT into classroom instruction. During these PD sessions, teachers will have opportunities to explore buttons on the BT program further, collaborate with other educators, apply new knowledge by using hands-on practice integrating BT. In addition, faculty can discuss and collaborate during the sessions to translate the research findings into practice.

This PD project was created as a solution generated from researching the problem of how rural K-5 elementary teachers integrated BT in classroom instruction to improve student academic achievement. This PD project was developed to assist teachers in implementing the BT framework and to help lessen challenges associated with the integration of BT. The initial intention of this PD project was focused on PD for the teacher participants at the rural study site, but it was also developed so that any administrator, curriculum developer, program director, and teacher leader can use this project as PD training when integrating BT, or as a follow-up to the initial training offered by BT staff. Challenges with integration are presented, and research-based best practices and strategies are shared as solutions. Administrators can also use this PD

project to assess the technology skill level of each teacher and offer more BT learning opportunities.

Recommendations for Alternative Approaches

The essence of this PD project was to share knowledge on how to integrate BT successfully in classroom instruction. An alternative approach would include additional BT learning opportunities during regularly scheduled staff training. At these staff meetings and as part of a collaborative community, teachers can discuss and share teaching strategies while integrating BT as a learning experience. This practice correlates with Kolb's (1984) learning theory's tenet, "we learn from experience." Another alternative would be teacher mentoring. Teachers take turns observing each other, offer teaching strategies, assist with the technology part of integrating BT, and provide colleagues with positive, constructive feedback.

Scholarship, Project Development, and Leadership and Change

While conducting this study, I gained knowledge on how the BT portal works, how BT is adopted district wide (correlates with PELP Coherence Framework), how teachers use BT in their classroom instruction, how teachers solve challenges integrating BT, how teachers mentor each other, Kolb's (1984) learning theory, "we learn from experience"), and how teachers using BT communicate and collaborate with colleagues across their own district and across the state(s). I can apply this knowledge in my professional role as an educator. The rural study site and other schools will benefit from the findings and the PD sessions pertaining to this study. While conducting this project study, I also acquired knowledge in data collection, data analysis, presenting findings,

and formulating a project. Summative evaluations will be applied to evaluate the 3-day PD sessions while project evaluation will be used to evaluate the effectiveness of the PD project. At the end of each PD session, evaluations will be completed by the teachers in attendance. Feedback from stakeholders will facilitate adjustments to the content of these PD sessions.

As a rural and certified bilingual educator, I strive to learn new ways to teach and apply new knowledge to classroom instruction to increase student motivation and academics. Educators are increasing the use of technology to impart classroom instruction, so it is imperative to learn how to use innovative technology and digital programs and assist colleagues in learning how to integrate technology successfully. The findings of this project study present learning and teaching opportunities at monthly staff meetings to share experiences integrating BT. Although the BT framework provides opportunities for mentoring among colleagues, I will mentor colleagues and share experiences and strategies on increasing technology skills and successful integration of BT. In addition, I will update the PD sessions and provide mentoring based on feedback from teachers integrating BT. Finally, as an educator and researcher, I have learned how to apply the 3-day PD sessions to various educational settings.

Reflection on Importance of the Work

Although this doctoral journey has involved much perseverance and dedication, it has been rewarding and fulfilling! This doctoral journey positively affects my future educator, researcher, and leadership endeavors. As a novice scholar and researcher, I was confronted with challenges and frustrations that made me reflect on whether to continue

with this work, yet defeat was not an option; instead, an opportunity to push forward. I learned how to question a research problem, search for answers while analyzing data, and integrate each component, such as the conceptual framework (the theory), the problem (research question), the themes and subthemes, the school mission statement, the project stemming from the study, and the presentation of the study. I revised the 3-day PD sessions various times to align with the findings. Basing the PD on challenges the teachers faced while integrating BT would be most beneficial to successfully integrating the framework. While planning and developing the PD sessions were time-consuming, this PD project has also allowed me to grow as a project developer. As I near the end of this journey, I realize how much I have grown as a writer and researcher that will enable me to help other colleagues.

Implications, Applications, and Directions for Future Research

As a novice researcher conducting this qualitative study during the challenging Covid-19 pandemic, I had to revise my study to interview a small sample of teachers via Zoom video conferencing. After the pandemic, this study could be replicated to include more teachers, more than one rural school, various educational settings, and a comparison between different schools and educators across the state(s) or a correlational study comparing different state achievement scores and BT integration. Additionally, a study involving how teachers integrate BT to include special needs students could also be of interest. Another interesting study could be about how BT can be exclusively used for remote teaching should another pandemic occur, student remote learning, or if BT use in high school settings increased the number of students' furthering their education.

A correlational study has been conducted by WestEd (2019) on using the BT framework to raise student achievement scores. The WestEd (2019) study compares Arizona state scores before and after the implementation of BT and found that BT is effective in raising state scores. A quantitative study comparing the state scores before and after the integration of this PD project is possible. A study using the mixed-methods research design could be conducted to investigate the effect of the 3-day PD sessions on state test scores by comparing test scores before and after the PD sessions for the quantitative portion and interview data from teachers for the qualitative portion.

Recommendations for future research exploration can include (a) a case study on the effects of the BT program on the graduation rates of high school students, (b) the effects of BT on high school students' continued education, (c) an evaluation of action plans, and (d) the effects of BT and long-term substitute teachers. Furthermore, future research can explore the effects of BT and special needs students, investigate if states that use different state standards affect the integration of BT and thus have affecting anticipated state test scores and lastly, the effectiveness of BT across states (East Coast vs West Coast).

Conclusion

The findings from this project study will benefit elementary school teachers and stakeholders. Integrating technology-based programs such as BT in the areas of curriculum, instruction, assessment, and professional development has clear implications for positive social change in numerous educational settings with knowledge about implementation protocols and effective instructional practices. Based on the success of

the rural study site, other rural schools adopting BT can experience positive results in increased success rates, improved retention, improved teacher preparation, increased academic achievement, and student learning through the replication of instructional practices and BT processes that the rural study site put into place.

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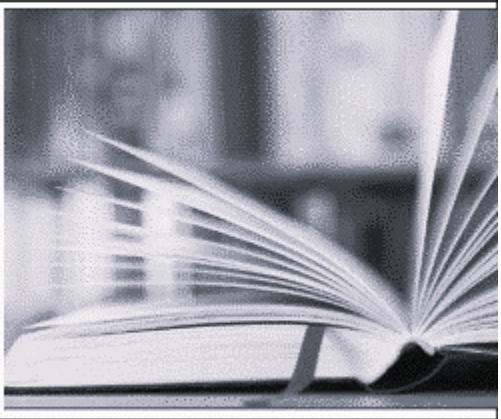
Appendix A: The Project

3-day Professional Development on the Integration of Beyond Textbooks on Classroom Instruction

Yolanda Noriega

3 DAY PROFESSIONAL DEVELOPMENT ON THE INTEGRATION OF BEYOND TEXTBOOKS ON CLASSROOM INSTRUCTION



Presentation developed by Yolanda Noriega
Doctoral Student
Walden University

Overall Presentation

- Day 1: Present findings and challenges.
- Day 2: Provide evidence -based best practices on the integration of Beyond Textbooks on classroom instruction.
- Day 3: Reinforce the BT framework by reviewing findings, challenges, and fidelity to integration.

Goals of the 3-Day Professional Development

- To provide teachers with evidence -based based practices on the integration of BT in classroom instruction.
- To facilitate the integration of BT in classroom instruction.
- To foster reinforcement of BT resources.
- To ensure educators understand how to integrate BT.

3-Day Professional Development Agenda

Session 1: Present the findings of this project study as well as the challenges teachers encountered while integrating BT. Assess the technology level of each teacher through observation of performance assessment.

Session 2: Review assessment of technology level of each teacher and BT resources available. Present evidence-based best practices obtained from this study on the effective integration of BT and incorporate activities that will help teachers practice integrating BT in their classroom instruction. Provide teachers with guided training opportunities to learn information in the resource button.

Session 3: Reinforce the BT framework by reviewing findings, challenges, and fidelity to integration by ensuring educators are aware of the beneficial effects fidelity to integration has on students' academic achievement and successful implementation.

Day 1

- Welcome, sign in, and introductions. Provide snacks.
- Ice breaker of choice
- Building rapport with audience
- Present project study, findings, and challenges
- Assess the technology level of each teacher through observation of performance assessment.

Ice Breaker – The Marshmallow Game

- The goal of this icebreaker is to build the tallest freestanding structure made up of spaghetti, string, tape, and a marshmallow.
- The structure has to end with a marshmallow on top.

Here's how to play:

- Divide group into teams of four.
- Hand each group: 20 sticks of spaghetti, one yard of tape, one yard of string, and one marshmallow.
- Set a timer for 18 minutes. After the 18 minutes, the team with the tallest standing structure wins!
- This is a great teambuilding exercise and also forces your teammates to cooperate with each other.
- I also recommend giving out a prize to the winning team – stacking uncooked spaghetti is definitely not an easy task!
- This icebreaker was originally introduced by Tom Wujec, who made a TED talk about it which you can check out here:

Read more at: https://www.scienceofpeople.com/meeting-icebreakers/

Introduction to the Project Study

- Elementary school teachers at a rural school district in southeastern Arizona integrated the Beyond Textbooks framework in their classroom instruction that relates to academic achievement.
- The purpose of the project study was to explore how Beyond Textbooks was integrated that relates to student academic achievement.
- The project study was guided by David Kolb's experiential learning theory, "we learn from experience"

Project Study Findings

- The findings revealed the Beyond Textbooks framework, teacher training, resources, and fidelity to implementation have the potential to assist educators with the integration of Beyond Textbooks.
- The results indicated effective integration practices as well as challenges associated with integrating a digital program. The five themes that emerged are: (a) the Beyond Textbooks framework, (b) teacher training, (c) fidelity to implementation, (d) resources, and (e) integration.
- Five subthemes also emerged within the category of the BT framework. The subthemes are: (a) alignment of state standards, assessments, and lesson plans within the BT framework, (b) mastery and competency of digital technology, (c) time, empowerment, and efficiency of BT integration processes, (d) support available to assist with the integration of BT, and (e) experiences with the integration of BT.

Challenges

Participants reported challenges with:

- training,
- level of technology proficiency (hence mentorship amongst teacher participants),
- learning resource buttons available, and
- time to learn technology as the major challenging factors to integrating BT.

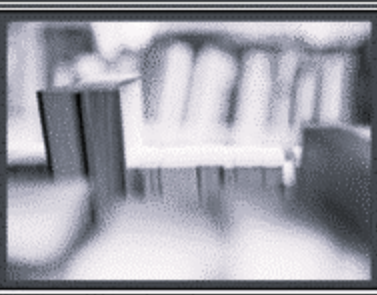
Performance Assessment Protocol

- Be respectful! Teachers are at different technology skill levels.
- Even though participants reported BT as easy to use, the overall goal is to help teachers feel comfortable using BT.
- First ask each teacher what they would like to learn about BT and what their challenge is.
- Using a laptop, have teachers create a simple lesson plan, then increase level to include resource buttons.
- Assess technology level using BT based on the lesson plan created.
- Develop an individualized plan with each teacher. Create a simple, step -by-step sheet for teachers needing extra support.

Self Reflection

- What did I learn today and how can I apply this new knowledge to my everyday lessons?
- I will reflect and write down challenges I faced while integrating BT in classroom instruction to share with my colleagues.
- I will reflect and write down what I want to learn about BT and any questions to share during day 2 session.

DAY 2 – EVIDENCE-BASED BEST PRACTICES



Day 2

- Welcome, sign in, and address questions. Provide snacks.
- Share challenges faced with BT during the performance assessment or during the integration of BT.
- Introduce strategies teacher participants in the project study used to integrate BT in their classroom instruction.
- Reinforce BT to those teachers needing extra time to learn BT and resource buttons.
- Invite teachers that are proficient in technology skills to help teachers needing extra time or creating step-by-step sheets.

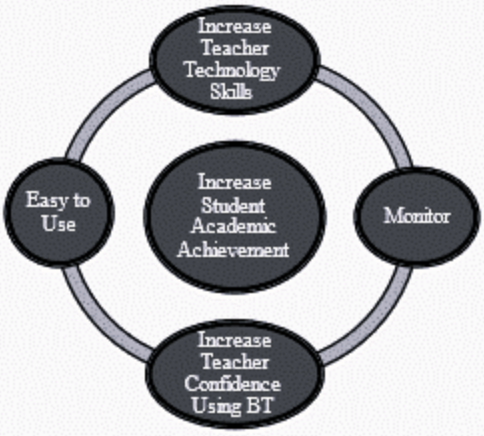
Strategies for BT in Classroom Instruction

Challenge	Evidencebased best practices
Time Constraints	• Use own pacing guide. • Extend instructional time. • Explore new resources buttons.
Complexity of district formative assessments	• Use variety of materials and resources which most adequately match student needs. • Modify and simplify materials and resources.
Relying too heavily on BT State standard may be off	• Review state standard indicated on BT. • Revise by going to main State Standard and recalibrate to what needed to be taught.

Resource Button Activity

- Teachers will have the opportunity to learn and practice resource buttons.
- Teachers can address their technology challenges and what they would like to learn during this activity.
- Teachers proficient in technology skill levels and familiar using BT are invited to assist or to create step-by-step sheets.

Why Use BT in Classroom Instruction

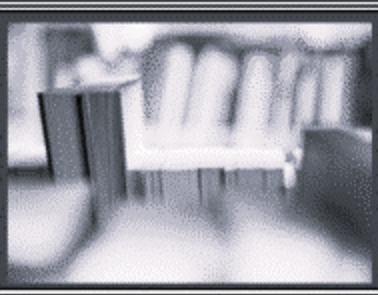


Note: BT administrators monitor BT use by individual school and teacher.

Self Reflection

- What did I learn today and how can I apply this new knowledge to my everyday lesson planning?
- I will reflect and write down challenges I faced using resource buttons or the buttons that will facilitate lesson planning.
- I will reflect and write down what I want to learn about BT and any questions to share during day 3 session.

DAY 3 – FIDELITY TO IMPLEMENTATION



Review Findings and Challenges

Findings	Challenges
• Beyond Textbooks framework	• Time constraints
• Teacher training – different technology skill levels of teachers	• Complexity of district formative assessments
• Fidelity to implementation	• Relying too heavily on BT
• Resources	• State standard may be off on BT
• Integration	

Fidelity to Implementation

What is fidelity to implementation?

- Performing a task as designed or intended to be performed to achieve the same positive outcomes.
- Educator participants integrating Beyond Textbooks in their classroom instruction reported that fidelity to implementation played an integral role in the overall success of the program.
- Participants reported that the BT program provides appropriate pacing, structure, and when integrated with fidelity can produce positive academic enrichment for students as well as teacher mindset growth.

Mastering Fidelity to Implementation

Fidelity to implementation was mastered by:

(a) using the framework as structured,

(b) adhering as closely as possible to the suggested pacing for instruction,

(c) following BT diligently and precisely,

(d) following the curriculum calendar, and

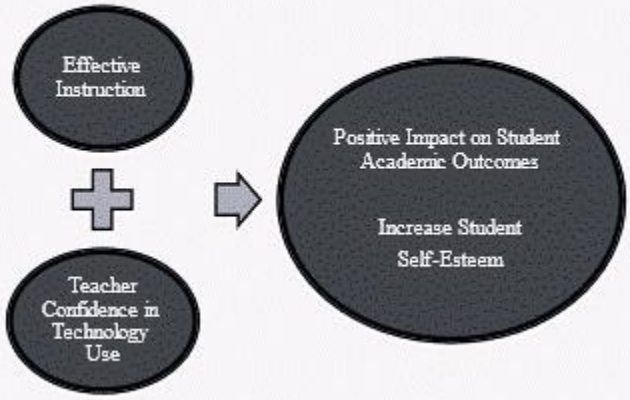
(e) using BT and sticking to it and really being faithful to everything and all the resources.

Fidelity to Implementation

Fidelity to implementation is a key element to successfully integrate a digital program such as the Beyond Textbooks framework with positive learning outcomes for students.

Melanie Barwick (2014). Fidelity and Implementation. https://www.youtube.com/watch?v=n0fQxh74OOk

Benefits of Fidelity to Implementation



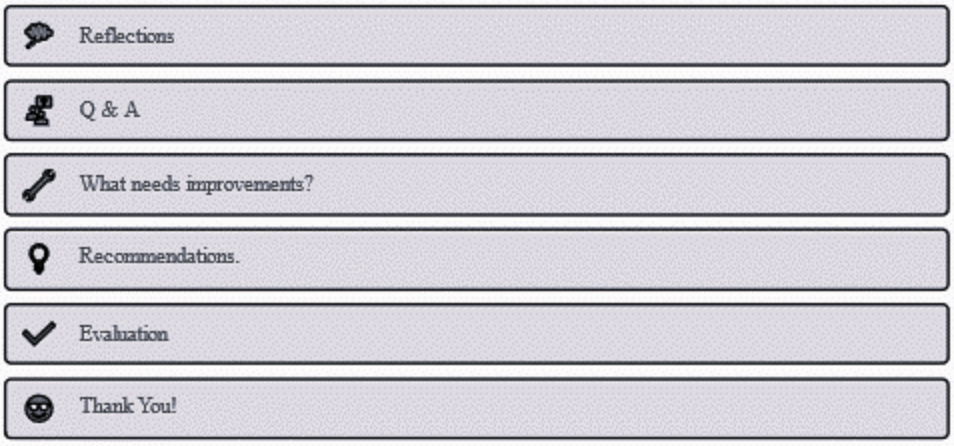
Recommendations for Administrators

1. Continuously monitor BT use at your school (contact BT Administrator).
2. Based on the performance assessment, offer teachers needing to reach proficiency in technology, hands-on learning opportunities.
3. Develop a peer mentorship for teachers needing extra time to be familiar with BT.
4. Conduct surveys with teachers twice a year to determine if improvements are necessary.
5. Closely analyze data from surveys as well as student assessments for changes.
6. Be consistent! Administrator consistency influences the successful integration of BT.
7. Contact this researcher at : yolanda1@arizona.edu to update this 3day professional development project as challenges not yet identified are possible.

Recommendations for Teachers

- Ask for extra help if needed with technology proficiency.
- Offer peer support and assist in creating step -by-step sheets.
- Share strategies of how you managed challenges or what helped you with colleagues.
- Contribute lesson plans on the BT site.
- Participate in hands -on BT training.
- Create opportunities to discover resource buttons and apply to lesson planning and classroom instruction.

Evaluation Feedback



For Presenter

- Take observation notes during the 3 days.
- Reflect on the 3-day presentation.
- Provide teachers with an evaluation to gain insight on which areas of the presentation need improvement?
- Reflect on the teacher feedback.
- Create an intervention plan of action based on the feedback.
- Monitor the intervention.

References

Melanie Barwick (2014). Fidelity and Implementation. Retrieved on October 26,2022 from https://www.youtube.com/watch?v=n0fQxh74OOk

Appendix B: Interview Protocol/Interview Questions

Interview Protocol

I obtained Walden University IRB approval before contacting participants. Upon approval, I contacted the school program director designated by the administrator for assistance in selecting participants that meet the criteria.

Researcher-Participant Relationship: I do not know any of the participants at the rural school district, so I will spend the first minutes building rapport and trust by introducing myself on a personal and professional level and getting to know the participant better.

Procedures:

- The date and time for the Zoom conference meeting will be previously scheduled.
- Greet participants at the beginning of the Zoom meeting. Spend the first minutes on introductions and building rapport with the participant. Provide participant with contact info.
- Introduce the project study and the purpose of the study.
- Remind participants that participation is voluntary, and the interview will last between 45-60 minutes.
- Briefly review the participant informed consent form with the participant.
- Answer any questions the participant may have about the study.
- Assign participant classification (to assure confidentiality and privacy). Assure the participant of confidentiality.
- Upon start of Zoom meeting, state date and time, and identify the participant's pseudonym.
- Conduct the interview meeting with professionalism.
- Discuss procedures for member checking.
- Inform the participant that the interview session has ended and state "end session."
- Thank the participants for their time and valuable contribution to the study. Send a gift card in appreciation.
- Secure interview protocols and Zoom transcripts in a lockable file cabinet or briefcase.

Interview Questions

1. I am interested in learning about how you integrated BT in your classroom instruction. Can you please tell me more about how you integrated the Beyond Textbooks framework in your classroom instruction?

2. Can you give me an example of the steps that were involved with integrating BT in your classroom instruction? What did you do to integrate BT in language arts, mathematics, social studies, and/or social studies?

3. What instructional practices and strategies did you implement in your classroom instruction?

4. What were your experiences with the BT training? Did you need any extra training? If yes, please explain how this training assisted you to integrate BT in your instruction? If not, please explain what training you need to integrate BT?

5. Please describe any challenges you may have experienced integrating BT in your classroom instruction. How did you overcome the challenges?

6. Please describe any successes you had integrating BT in your classroom instruction.

7. What technology is available to integrate BT? What technology is needed? How was technology used to integrate BT?

8. What resources are available to assist you to integrate BT? Are these resources sufficient to help you with integrating BT? If not, what would you recommend to help you integrate BT?

9. Is there a district or building BT specialist who is skillful in integrating BT? If yes, have you contacted this person for assistance? Please explain what you learned from this specialist and how you applied this information to integrate BT. If no, would a district or building BT specialist be helpful to integrate BT? If yes, please explain.

10. Looking back, from when you first began to integrate BT in your classroom instruction, what would you do differently to integrate BT?

11. Is there anything else you would like to share to help me understand how you integrated BT in your classroom instruction?