A PHENOMENOLOGICAL STUDY OF TEACHERS' LIVED EXPERIENCES WITH CELL PHONES IN THE CLASSROOM

by

Matthew Dado

Liberty University

A Dissertation Presented in Partial Fulfillment

Of the Requirements for the Degree

Doctor of Philosophy

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APPROVED BY:

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Abstract

The purpose of this phenomenological study was to discover high school teachers' experiences with cell phones in the classrooms during instructional time at Quaker High School. The theory guiding this study is Jean Piaget's constructivism theory, as it argues that knowledge is produced, and meaning is formed through the experiences of one's physical or mental actions in their environment. The methodology for this dissertation includes a study design that utilizes a phenomenological study method and consists of thirteen teachers from various backgrounds and locations. The setting for the study is a high school in Pittsburgh, PA. The data collection and analysis approach includes semi-structured interviews, focus group interviews, and document analysis. The data were analyzed using coding methods consisting of initial coding and NVivo coding practices. The data were searched for patterns, insights, or concepts. The approaches high school teachers use for instructing students with cell phones during teaching periods were the focus of this dissertation. Notably, the findings illuminate how cell phone usage in classrooms impacts the scope of teachers' autonomy in regulating such use and how it changes instructional methods. The research contributes to understanding how high school teachers navigate the challenges and opportunities presented by cell phones during instructional time.

Keywords: cell phones in the classroom, smartphone use, instructional design, educational technology

Dedication

This work is dedicated to all teachers impacting their students' lives and the students in the classroom trying to make a better life for themselves and their families. Also, I would not be who I am today without the support of my son and wife. They have been my biggest supporters throughout my educational journey, and I am forever grateful for their unconditional love and support. I could not have done this without them. To my son, Easton, you are my inspiration, and I hope your world will be as luminous as possible. I want to assist you in becoming the loving, considerate, Divine, and wise man I know you will one day become. You are God's miracle, and I love you more than anything. To my wife, Sarah, you have given me so much more than you will ever know: You have been someone I look up to, my encouragement, my teacher, and my sounding board. You are the best mother Easton could ever have and a remarkable wife. Finally, I am dedicating this work to future generations of students who will strive for excellence in their research and academic pursuits.

Acknowledgments

I would like first to acknowledge God; without Him, I would not have the knowledge and understanding required to complete anything. I want to recognize my Dissertation Chair, Dr. Bragg, and my committee member Dr. Hale, who worked tirelessly with me every step of the way and whose continued encouragement and support promptly ensured my degree's completion. I could not have done it without both!

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List of Abbreviations

Artificial Intelligence (AI)

Augmented reality (AR)

Bring Your Own Device (BYOD)

Educational technology (EdTech)

Fear of Missing Out (FoMO)

Global Positioning System (GPS)

Institutional Review Board (IRB)

Interactive Lecture in the Dissection Hall (ILDH)

International Society for Technology in Education (ISTE)

Learning management systems (LMS)

PowerPoint (PPT)

Problem-based learning (PBL)

Science, Technology, Engineering, and Mathematics (STEM)

Sending short message service (SMS)

Technology Integration Matrix (TIM)

CHAPTER ONE: INTRODUCTION

Overview

Media use has become so much a part of young adults' lives that many do not realize their level of dependence and addiction to their cell phones (Roberts et al., 2014). While teaching has many responsibilities, cell phones in the classroom add another layer. Cell phones can accelerate learning or distract students who access off-course content during instructional time. There is no universal school cell phone policy, and it is hard to determine how a school district should establish a policy to permit or remove cell phones from the classroom. No previous study explores how teachers manage cell phones in their classrooms when students are allowed to carry them throughout the day but require teacher permission to use them in the school and freely use them on the bus and at lunch. Even though concerns exist regarding cell phones' effect on teens, the data on teachers managing cell phone usage is sparse. The researcher explored the experiences of high school teachers with cell phones in the classrooms at Quaker High School.

Background

Historical Context

The instructional landscape has changed drastically throughout the last forty 40 years from continuous innovation by the human race. In 1973, Motorola unveiled the first mobile phone weighing 2.5 lbs; the DynaTAC 8000X only had enough battery life for 35 minutes of talking, storage for 30 phone numbers, stood nine inches tall, and at the cost of $4000 (equivalent to more than $10,000 today) (King, 2019; Kshetri & Voas, 2021; Murphy, 2013). Construction of higher-capacity mobile phone networks was necessary, and it took another 10 years from the initial launch for cell phones to reach saturation. Cell phone users grew to 2.7 million in 1989 (Sorte et al., 2020). Motorola released a 1lb flip phone called the MicroTAC,

making the device more accessible than the previous model, but cell phones were still mostly limited to well-off professionals (Berryman, 2011; Sorte et al., 2020). These two products became a precursor to more innovations throughout history. The fictional television character Zack Morris could be the first innovator to use the iconic "Brick Phone" in a school setting on the hit 90's sitcom *Saved By The Bell*. In the 1990s, some cell phones featured an MP3 player, Global Positioning System (GPS), cameras, touch screens, calendar, clock, calculator, address book, fax capabilities, emails, and limited internet access (Kshetri & Voas, 2021; Sorte et al., 2020). In the 1990s, all electronic devices (cell phones, pagers, and beepers) were banned from schools because it was associated with drug dealing (Katz, 2017).

Mobile devices continuously made advancements throughout the 1990s. Cell phones started to become cheaper and possess text message capabilities, and the 2001 3G network launch allowed for more information to be transmitted over a cellular network (King, 2019; Mishra, 2018). In the early 2000s, Blackberry was the king of mobile devices, but in 2007, Apple launched the iPhone with a pioneering large touchscreen display (Hokky & Bernardo, 2021). It was not until around 2008 when the Apple App Store and shortly after Android Marketplace (today's Google Play Store) when the application arrival unleashed mobile gaming and turned cell phones into smart computing devices (Hokky & Bernardo, 2021; Geradin & Katsifis, 2021).

After the Columbine High School massacre in 1999, the argument for cell phones being allowed into the classroom in the early 2000s stemmed from parents wanting to communicate with their children during an emergency. As the shooting occurred, many new organizations broadcasted the 911 calls made by students with cell phones to keep in touch with their parents (Daggett, 2020). Shortly after, in 2007, universities and K-12 schools rolled out alert systems for these situations to students who provided their contact information (Fox & Savage, 2009). The

effectiveness of receiving a text message in an emergency depends on students always possessing cell phones. Having students turn off their cell phones or leave them at home would not be effective in conjunction with these systems. Many schools reversed their past non-cell phone positions and allowed students for various safety reasons.

Since 2010, the major innovations in smartphones and mobile networks have continued to increase in all areas, leaving users wanting more screen time because technology-improved cell phones have become more accessible. Worldwide, the number of mobile phone users has increased from 5.57 billion in 2011 to 6.8 billion in 2019, with over 96% of Americans owning a cell phone (Singh et al., 2022). With the increase in cell phone ownership by American teens, the reliance and tendency to depend on these devices every minute of the day have left school districts and teachers trying to prevent cell phone use in the classroom. As the world of mobile phone technology continues to change rapidly, instruction and educational technology will soon follow. The evolution of modern cells forced school districts to constantly reevaluate between allowing cell phones or not allowing cell phones.

STEM education has been a buzzword for several years, and it stands for "science, technology, engineering, and mathematics.” The great STEM push into schools nationwide paved the way for accepting cell phones into the classrooms. Schaffhauser (2014) suggests someone spent a considerable amount trying "to discipline all the kids all the time," It subsided once students were permitted to use devices in school for academic purposes or between classes and lunch. When solving one problem, another is frequently created; phones being allowed in schools became a floodgate for students to use their devices openly without being reprimanded, and teachers cannot adequately monitor students' device usage around the clock. Tandon et al.

(2020) suggest whether cell phones contribute to children's cumulative 24-hour screen exposure during class or recess.

Implementing technology in education is essential and should allow students a leg up in the workforce or a smooth transition between school and work. New technology and in-demand skills will prepare students to become thinkers and questioners in an ever-evolving world. New technology empowers teachers to foster an inclusive learning environment where all students can engage and contribute (Lathan, 2020). In traditional teaching models, educators use STEM to bring multiple disciplines together. Students can simultaneously exercise both sides of their brains through this holistic approach while preparing for future careers (Lathan, 2020). Over the past twenty years, technology in education meant computers being used in schools or having a few computers in the classroom or a cart of computers shared between rooms. However, today, computing needs to be mobile so students can access material at home, allowing content to be taken to and from school. Before the Covid-19 pandemic, the one-to-one digital divide between schools was vast because each district had different local, state, and federal funding and network capabilities (Cullen, 2001; Selwyn & Facer, 2007; Van Dijk, 2006). Over the past few decades, the rapid launch of STEM in school districts, budget constraints, decreasing test scores, and more all opened a door for cell phones to be used in schools by students through Bring Your Own Device (BYOD) initiatives. Practitioners and decision-makers have increasingly turned to educational technology products as potential solutions to long-standing challenges (Hollands & Escueta, 2020). As with anything, the positives and negatives of BYOD integration exist. Throughout the history of educational technology, the same problems have continued to occur; some use the technology for its intended purpose, and others abuse the technology accessibility. The stark reality is that districts could not keep students from using their cell phones in school,

which led to the implementation of Bring Your Own Device (Schaffhauser, 2014). This adoption of devices forced districts to draft "Acceptable Use Policies" to hold students accountable, but the management is coming from the classroom teacher.

Additionally, computers or tablets are children's entertainment of choice during car rides at a young age (Green, 2018). The progression of digital reliance increases when children grow and have greater access to create accounts linking them to the world. Green (2018) found that "roughly 64% of kids had access to the Internet by their device, and 39% of them had a social media account by age 11" (p. 1); the impact devices have on learning should be considered. We have around-the-clock access to information through our "smart" devices and may not realize its impact on academics. Research by Peiró-Velert et al. (2014) supported that students with the highest academic performance were the youngest, slept more and had less screen time. Teachers need to supervise students with any technology, including mobile phones, with rules and expectations enforced by the school district's acceptable use policy to secure the instructional process for all learners.

Without argument, the internet and devices open many resources for learners. Post Covid-19, the digital divide may have become eliminated or narrowed exponentially since the rapid expansion of one-to-one device rollouts in K-12 schools across the United States to keep instruction following to students during remote learning days. Cell phones can have negative consequences on students' motivation and learning. The unsupervised use of technology in the classroom harms student learning (Hutcheon et al., 2019). In general, education has many distractions, compound cell phone convenience, and it creates another dimension. The impact of implementing a technology ban on students' experience within a course has unknown ramifications and needs further investigation (Hutcheon et al., 2019). As a result of affordable

device access, cell phone usage is more frequent at school, not only in spare time but also during instruction, with the teachers responsible for managing cell phones in their classrooms. The research aims to determine how high school teachers instruct students who possess cell phones during instructional time.

Social Context

Smartphone usage is problematic when users have difficulties controlling their use and, as a result, suffer impaired daily functioning for people across the globe (Busch & McCarthy, 2021). Emerging technologies allow students to reach their academic goals. However, the effects of prolonged cell phone usage are difficult to measure because the research suggests that participants must be more honest about their phone usage rather than having direct data. The adverse effects of smartphone addiction can be physical, psychological, social, and behavioral, with consequences such as headaches, hypertension, heart problems, eye problems, sleep disorders, academic anxiety, depression, suicidal ideation, mental health problems, and behavioral disorders such as fear of missing out (FoMO) (Alinejad et al., 2022). Excessive cellphone usage might harm students' academic performance. It could also lead to more severe consequences, such as dangerous driving (Busch & McCarthy, 2021). The perspectives and experiences gathered from high school teachers on instructing with cell phones in students' pockets will focus on how teachers may be using cell phones during instruction, attempting to limit distractions cell phones cause, and managing cell phones when students use them. Green (2018) describes our world as requiring instant gratification, and a cell phone is a significant part of our daily lives. Humans are connected more than ever, waking up and going to sleep with our devices. Mental health professionals are necessary in school settings to provide individual and group counseling activities to boost self-esteem for students and their families and prevent more

severe mobile phone addiction cases (Hoşoğlu, 2019). Fear of missing out tends to be the main reason for addiction to develop (Tunc & Akbay, 2019). Research studies have not provided an in-depth analysis of the classroom teacher's perspective regarding the effects of cell phones in the classroom and how they manage devices.

Theoretical Context

The guiding theory for the study is Jean Piaget's constructivism theory. Piaget's theory of constructivism argues that knowledge is produced, and meaning is formed through the experiences of one's physical or mental actions in their environment (Piaget, 1965). One of the easiest ways to understand constructivism is to associate learners as self-builders of knowledge. Teachers are facilitators who generate learning by creating the expected climate and utilizing the process of reflection to inform their teaching (Mahmud, 2013). Teacher observations and interactions in the classroom influence instructional design decisions and classroom management. Piaget (1965) explained that individuals are at the center of knowledge creation and acquisition. In a typical classroom, students set their acceptable behavior based on others around them. Students learn from their previous experiences, form their behaviors based on expectations, and acknowledge actions as unacceptable (Gentrup et al., 2020; Sprick et al., 2021). Along the same lines, teachers learn from previous experiences regarding cell phones in the classroom and establish norms for acceptable student behavior. The philosophical framework for this study is pragmatism because it best meets their needs and purposes and best addresses the research questions (Creswell, 2013). Pragmatism is "holding truth and value as determined by practical application and consequences (Osman & Saputra, 2019). The study concerns helpful knowledge and helps individuals solve practical problems (Osman & Saputra, 2019; Terepyshchyi et al., 2019).

Problem Statement

Teachers are responsible for instructing students and managing cell phone usage during instructional time on a day-to-day basis. Classroom management in the digital age can significantly challenge high school teachers to balance instruction with reprimanding students for being on their cell phones. (Mainil, 2022). Lower GPAs can be attributed to round the clock obtainability of cell phones (Stachowski, 2020). Many students have nomophobia, or NO MObile PHone PhoBIA, a psychological condition when people fear being away from mobile phone connectivity (Carels, 2019) and ultimately leading to attention issues, stress, and anxiety, as well as poor decision-making regarding cell phones when students have access to them in an educational setting (Akpan, 2017; Carels, 2019).

Educators must recognize the problems cell phones are causing during real-time instruction and then work to find ways to solve these problems without causing an interruption in instruction delivery. A nationwide survey of over 150 instructors uncovered that 74% permit mobile phones for basic classroom activities but need proper integration with teaching and learning (Stachowski, 2020).

The students using cell phones during instruction are texting, answering emails, searching social media, or for entertainment such as gaming or watching videos. These distractions resulted in missing fundamental instruction and diminished focus during class (Storch, 2020). Allowing students to use cell phones freely during instruction has been shown to reduce performance by 6.4% of a standard deviation compared to when students could not take their smartphones into the classroom; however, teachers who actively incorporated cell phones into the instructional design increase student performance resulting in a double-edged sword (Deng, 2022). Research concerning teachers' and students' perceptions of cell phone use in an instructional environment

has yet to address how high school teachers manage cell phones in the classroom. Minimal data is available regarding high school teachers' classroom management for cell phones; however, high school teachers offer exceptional insight into students' use of cell phones in the classroom based on the time spent with them and years of teaching experience.

Purpose Statement

The experiences of high school teachers at Quaker High School concerning cell phone use in classrooms were examined using a phenomenological approach. At this stage in the research, teachers' classroom cell phone tolerance will be generally defined as rules and expectations of cell phone usage during instructional time. The guiding theory for this study is Jean Piaget's Constructionism Theory, learning through experiences by continuously building new knowledge on their foundation of knowledge (Piaget, 1965; Joshi & Shukla, 2019). Piaget's theory of constructivism argues that knowledge is produced, and meaning is formed through the experiences of one's physical or mental actions in one's environment.

Significance of the Study

This research is crucial as it aims to uncover how high school teachers instruct students who possess cell phones during instructional time. Examining teachers' experiences will provide important information from the field to aid other teachers, administrators, and school board members in managing cell phones in classrooms and schools. Teachers are becoming accustomed to implementing digital technology into the classroom but are seldom prepared to keep unwanted technology out.

The guiding theory for the research study is Jean Piaget's Constructivism Theory, which holds that knowledge is best learned through reflection and active construction in the mind. The learner must consider everything taught and construct an interpretation based on past

experiences, personal views, and cultural background (Clark, 2018). Conclusions about things happening in the world can come from analyzing previous real-life experiences. It is about building a perspective about things and constructing meaning based on our experiences. Researchers (Pulliam, 2017; Santos et al., 2018; Sorte et al., 2020; Tatum et al., 2018) have conducted studies investigating the distractions students face with cell phones during school. Jean Piaget's Constructivism Theory was chosen for this study because teachers constantly learn from observing students' classroom learning. Teachers, as a general profession, are reflective and benefit from learning from other teachers' experiences and how these experiences can help others in the field of education.

There is a great benefit of adding teachers' perspectives to existing research. Teachers observe students a great deal of time throughout the day and are often aware if they use their cell phones for noninstructional tasks (Pulliam, 2017). Research is limited to university studies in understanding how high school teachers manage student cell phone usage during instructional time. However, a teacher's instruction while students possess cell phones in their bookbags or pockets directly relates to their previous experiences managing cell phones in the classroom.

From the instructional design standpoint, using 'zero' media and solely lecturing for the entire class period is not practical, but allowing students to work on projects or assignments during instructional time opens the possibility of a student becoming distracted by using their cell phone (Oke & Fernandes, 2020; Paek, 2012). Many students find themselves easily distracted by others or their cell phones during instructional time when left with too much independent learning time (Katz, 2017). Teachers who effectively keep students on task create a better learning environment for students to reach their full potential.

Research Questions.

Central Research Question

What are high school teachers' experiences instructing students who possess cell phones during instructional time?

Sub-Question One

How do cell phones in the classroom influence instruction?

Sub-Question Two

How do teachers feel about having the autonomy to allow students to use cell phones?

Sub-Question Three

How does cell phone usage transform instruction?

Definitions

1. *Bring-Your-Own-Device (BYOD)* - The phenomenon of using personal mobile devices connected to school networks to perform educational work. (Wan et al., 2015).
2. *Classroom technology* - Technology introduced to enhance a lesson, such as online resources, mobile applications, and hand-held devices, with the intention of classroom engagement (Zheng, 2020).
3. *Digital Divide* - The stratification in accessing and using a device and the Internet is tied to social inequalities (Van Dijk, 2006).
4. *High School Teacher* - For this phenomenological study, a teacher with less than 30 years of teaching across content areas in a high school classroom (DuPont, 2018).
5. *Nomophobia* - the name given to the discomfort of not having a digital connection to others (King et al., 2013).

Summary

Educators are embracing technology as a tool for instructional purposes. Over 81% of teachers agree that there is great value in using digital learning tools in the classroom (Walsh, 2020). The problem is that high school teachers are at the forefront of an increased student population who possess cell phones while in class, which have the potential to lead to digital distractions by design. How high school teachers instruct students who possess cell phones during their instructional time at Quaker High School and how cell phones transform instruction will be analyzed throughout this phenomenological study.

CHAPTER TWO: LITERATURE REVIEW

Overview

This chapter reviews numerous publications analyzing current literature on implementing technology in the classroom, specifically cell phones. The first section investigates Jean Piaget's Constructionism Theory as to the significance of the study while determining if the current gap requires further exploration. Then follows a synthesis of the literature on mobile devices, technology in education, and higher-quality learning experiences powered by multimedia. The chapter aims to build a foundational understanding of how high school teachers establish, monitor, and enforce their classroom cellphone policy.

Theoretical Framework

The guiding theory for this study is Jean Piaget's Constructivism Theory. Constructivism is a theory of education developed and a pedagogy of learning. Piaget's theory of constructivism argues that knowledge is produced, and meaning is formed through the experiences of one's physical or mental actions in one's environment. One of the easiest ways to understand constructivism is to associate learners as self-builders of knowledge. Teachers are facilitators who generate learning by creating the expected climate and utilizing the process (Mahmud, 2013). Learners will use their previous knowledge to form new ideas when encountering something new. Accommodation and assimilation are the core components of Piaget's theory of constructivism, which creates the birth of an individual's new knowledge. Accommodation reforms the world and new experiences into the present mental capacity, while assimilating causes an individual to incorporate new ventures into the old experiences (Netti & Nusantara, 2016). Furthermore, assimilation requires people to conceive how the world operates. However,

if things do not work within context, they must accommodate and reframe, generating new outlooks while altering their perceptions.

Outside of learning theories, Piaget's constructivism addresses how learning materializes, not focusing on what prompts learning. How the teacher instructs is very relevant to learning. This generation expects to participate actively through their media, hence the increased time spent on computers, gaming, and the Internet (Beyers, 2009). Comparatively, a constructivist approach encourages teachers to function as facilitators who support students throughout the learning process, taking the spotlight away from teachers and putting it upon the students responsible for their learning. Planning for this type of instruction is entirely different from the traditional learning model because it ensures resources are available but plans for the unknown. Beyers (2009) believes, "One of the primary functions of an education system is to convey and ensure a mastery of a set of knowledge, skills, attitudes, and values that a particular society regards as desirable" (p. 219). Instead of lecturing, teachers begin by asking questions, facilitating inquiry from students to come to a conclusion on their own instead of telling them the answers.

Unlike traditional learning approaches, teachers constantly converse with students, creating learning environments open to any direction depending upon the student's needs during the learning process (McKenney & Visscher, 2019). Piaget's theory of constructivism creates teachers who will challenge students by making them influential critical thinkers by creating products and not making the teacher merely a source of knowledge but by helping them form their knowledge. There are billions of people on our planet, and all individuals' learning styles differ for various reasons; however, when teachers are facilitators, they create agencies for all individuals. Millennials expect to choose what kind of education they buy, what, where, and how

they learn (Beyers, 2009). Diversity exists with constructivism since it is not a one-size-fits-all approach to learning, and instruction remains ambiguous.

Constructivism does not view individuals as empty vessels waiting for knowledge to pour in. Instead, to truly learn, individuals need to be active by creating and constantly inquiring throughout the learning process (Alismaiel et al., 2022). The purpose of education is naturally about learning, but it is often easy to criticize because of performance shortfalls. It is critical to look at teachers who may need to be made aware of the needs of the students they are educating. The constructivist approach can be helpful if adequately implemented but would require stripping many teachers' formal training away and providing them with new instructional models.

Mattar (2018), for instance, argues that "technological developments and cutting-edge software continuously alter the way learners access information, form knowledge, and interact with their instructors and peers" (p. 201). No matter the learning theory, it will only encompass some learners because of the various types of learners.

Consequently, the growing call for preparing students for the era of Industry 4.0 requires the students to develop critical thinking skills, and constructivism aligns with the maker movement in education. Many early childhood educators know Piaget's work on the stages of development. Nevertheless, teachers must familiarize themselves with constructivist models and, more specifically, how to implement a constructivist approach (Islami & Gustiana, 2021). Institutions have moved closer to the constructivist model in the past ten years because of the push for STEM, and the environment has shifted student education. Rather than how a student can memorize and recite information, constructivism emphasizes how individuals learn and think. Tomorrow's workforce will require employees with skills that change rapidly as new

technology changes how jobs are done. While industrials are moving toward apprenticeships and hands-on training, they look for education to follow suit, providing students with opportunities and confidence to solve new problems.

Related Literature

Jean Piaget's Constructionism Theory creates a theoretical framework for the study. In order to comprehend the contextual relevance of the research, a need exists for a comprehensive review of current corresponding research in the field. This study's contextual awareness and relevancy require a complete understanding of education technology across the United States, possible solutions to solve cell phone usage in schools, and how teachers establish cell phone policies in their classrooms.

Mobile Devices

Ample evidence exists to support that digital devices inside the classroom create distractions and diminish learning and student achievement. Mobile devices can mean cell phones, tablets, laptops, handheld games, or smartwatches, but it all begins with understanding mobile cellular devices.

According to Cha and Seo (2018), smartphones were used by 1.85 billion people in 2014, which is expected to be 2.32 billion in 2017 and 2.87 billion in 2020 as well, as phones are owned by 95% of Americans. Mobile phones make our lives easier as technology adds more capabilities to powerful mobile devices but makes classroom management harder for high school teachers whose students possess mobile devices. Saying young Americans are dependent on mobile phones is an understatement. Cell phone use compromises classroom relationships when non-instructional (Tatum et al., 2018; Cheong et al., 2016). Ultimately, humans are paying a

steep price; sleep deficit, anxiety, stress, and depression, all associated with internet abuse, have been related to mobile phone usage (De-Sola Gutiérrez et al., 2016).

While looking at present-day cell phones, the capabilities are limitless through the Internet and mobile applications, making it tough to put the cell phone down even for a minute. Hence, instructors who actively curb students' digital distractions encounter challenges that are often difficult to reconcile (Tatum et al., 2018; Cheong et al., 2016). Mobile devices make everything suddenly recordable and publishable to a social media platform. Connecting to people worldwide has advantages in linking similar interests when the interests are moral. There are many concerns about cell phones, especially regarding content that can be searched on the Internet from your palm and the amount of time people spend on their mobile devices. According to Kogan et al. (2020), "47.1% of the study subjects were using cell phones while driving, 21.9% had a habit of sending short message service (SMS), and 23.4% had sent SMS within 10 min before the accident (p. 319). Laws were passed to make it illegal for people to be on their cell phones while driving because too many drivers were distracted. However, cell phones distract students, affecting their future learning and placing them behind their nonbearing peers. Instructors can create a supportive climate for student participation by promoting the use of mobile devices under conditions where digital connections are purposefully timed to maintain students' focus on the subject content (Cheong et al., 2016; Gonzalez, 2015). For instance, during a specific time, clear rules could be set for using a particular software application (Cheong et al., 2016).

According to Gonzalez (2015), "Technological innovation has become the cornerstone of economic growth and competitiveness" (p. 147). The cell phone has transformed from a tool people in business use to communicate with others to a device every human cannot live put

down. The rise in mobile devices has regenerated debate on diversionary activities, learning, and attention due to students' "hyperconnected lives" (Anderson & Rainie, 2012). Whether connecting to social media, photography, gaming, or surfing the Internet, the cell phone has revolutionized how humans relate to the world. Instructors are now left responsible for teaching the content, ensuring students are reminded of appropriate technology use, and redirecting students' attention back to them and their course goals (Anderson & Rainie, 2012; Cheong et al., 2016). Cell phones were made to create connections but have negatively impacted relationships at home and in the classroom. It is a tool, and there are times when the device should be used, and the agency is unnecessary.

Cell Phone Use and Academic Performance

Media use has become a part of young adults' lives so much that many do not realize their level of dependence and addiction to their cell phones (Roberts et al., 2014). Teaching comes with many different responsibilities, and on top of everything going on in the classroom, leisure use of mobile technology does not end once students enter the classroom- this type of phenomenon is commonly referred to as digital distraction (McCoy, 2016; Tatum et al., 2018). High school students frequently use mobile devices for off-task during class when left unsupervised. Cell phones in the classroom can distract students during class time with unacceptable content or allow them to use the Internet to find assignment answers quickly without learning the content. Instructors need to be aware of how students' use of digital media is affected by contextual factors (Cheong et al., 2016; Roberts et al., 2014). Students either use technology to enhance learning or regurgitate information from the web without thoroughly learning the content. Despite concerns, the data on school cell phone usage is sparse. However, multiple researchers have raised concerns about the challenges of gaining students' attention

amidst a classroom filled with mobile devices (Rheingold, 2014; Roberts et al., 2014). The impact of teachers informing and directing the technological bomb dropped in classrooms has yet to be explored (Cheong et al., 2016).

Instructors regularly encounter students needing to be more focused on cell phones during class and raise concerns over the integrity of the classroom learning environment (Felisoni & Godoi, 2018; Flanigan & Babchuk, 2022). The stark reality is that districts could not keep students from using their cell phones in school, which led to the implementation of Bring Your Own Device (BYOD) (Schaffhauser, 2014). BYOD initiatives allow students to use devices they already own (e.g., a cell phone, tablet, or laptop) to submit responses via various applications instead of classroom clickers (Almasseri & Hojailan, 2019; Imazeki, 2014). This adoption of devices forced districts to draft "Acceptable Use Policies" to hold students accountable, but the management is coming from the classroom teacher. Schaffhauser (2014) suggests someone spent a considerable amount trying "to discipline all the kids all the time," It subsided once students were permitted to use devices in school for academic purposes or between classes and lunch. When solving one problem, another is frequently created; phones being allowed in schools is a floodgate for students to use their devices openly without reprimanding, and teachers cannot adequately monitor students' device usage. Tandon et al. (2020) suggest whether cell phone use during class or recess contributes to children's cumulative 24-hour screen exposure. Research by Peiró-Velert et al. (2014) supports that students with the highest academic performance were the youngest, slept more, and had less screen time.

The effects of prolonged cell phone usage are difficult to measure because the research suggests participants are surveyed and asked to be honest about their phone usage rather than having direct data. However, there is still evidence that excessive cellphone usage might harm

students' academic performance. Felisoni & Godoi (2018) suggest that Americans' share that own smartphones is now 77%, up from just 35% in 2011, and smartphones are nearly ubiquitous among younger adults, with 92% of Americans aged 18- to 29-year-olds owning one. Green (2018) describes our world as requiring instant gratification, and a cell phone is a significant part of our daily lives. People are connected more than ever, waking up and sleeping with mobile devices. Accordingly, Hoşoğlu (2019) states a need for mental health professionals working in school settings to provide individual and group counseling activities to boost self-esteem for students and their families to prevent more severe mobile phone addiction cases. Tunc & Akbay (2019) contribute much of the addiction to the fear of missing out. When time is spent using a cell phone instead of learning, academic performance is at stake.

Classroom Cell Phone Policies

Computers or tablets are children's entertainment of choice during car rides at a young age (Green, 2018). The progression of digital reliance increases when children grow and have greater access to create accounts linking them to the world. Green (2018) found that "roughly 64% of kids had access to the Internet by their device, and 39% of them had a social media account by age 11" (p. 1); the impact devices have on learning should be considered. People have around-the-clock access to information through our "smart" devices and may not realize its impact on academics.

Unsurprisingly, students use cell phones in class for off-task purposes such as texting friends, playing social media, playing games, surfing the Internet, listening to music, or watching videos (Demirbilek & Talan, 2018; Karlins, 2021; Pulliam, 2017). Numerous academic studies have reported problems associated with student use of cell phones in the classroom, with various strategies to dissuade students from using their cell phones in the classroom (Karlins, 2021;

Pulliam, 2017). Student cell phone usage in classrooms has not gone unnoticed by teachers because, in response, many teachers have established course policies and enforcement strategies designed to reduce cell phone usage (Karlins, 2021; Pulliam, 2017; Berry & Westfall, 2015). Few options exist for managing cell phones in the classroom: allow open access, limit academic purposes at the teacher's discretion, or eliminate them. Some teachers may simultaneously encourage students to use their phones during class for activity while discouraging them from using their phones for anything else (Cheong et al., 2016). A laissez-faire policy by not appearing to care or take issue with how cell phones are used within the classroom could create learning loss at an alarming rate (Finn & Ledbetter, 2013). Some teachers will have students turn off their cell phones or put them in an inaccessible location so classroom activities can go on without distractions (Cheong et al., 2016; Finn & Ledbetter, 2013; Tatum et al., 2018). Research studies have consistently found that cell phone usage during classes deleteriously impacts learning. However, teachers are often unwilling to ban usage because of solid student resistance and a desire to maintain a positive student-instructor relationship (Karlins, 2021; Roberts, 2016). Teachers are fighting a losing battle over controlling cell phones in the classroom because if students own cell phones, they cannot act responsibly (Roberts, 2016; Berry & Westfall, 2015).

Implementing a policy prohibiting student cell phone use is the only solution to the ongoing problem. However, the trick becomes choosing the suitable penalty to impose on those who violate it (Roberts, 2016). Classroom cell phone use might not be eliminated, but instituting a no cell phone policy with a grade penalty for violators can be very effective in preventing the use of cell phones in a classroom (Berry & Westfall, 2015). Finding a way to eliminate student cell phone use during class and not create an ill will on the part of the affected student population

is tricky, but involving students in the decision-making process has the potential to help acceptance (Karlins, 2021; Pulliam, 2017; Tatum et al., 2018). Some strategies can range from daily reminders about cell phone policies to reprimanding inappropriate behavior as it occurs to altering instructional design decisions to reduce the temptation of being off-task during class (Flanigan & Babchuk, 2022; McCoy, 2016).

Cell Phone Addiction

Cell phones can negatively affect students' motivation and learning when students possess a cell phone. Alexander Graham Bell's invention of the telephone rapidly increased communication speed and how messages are delivered. The over-reliance on mobile device use can result in becoming an addict because individuals lose control over their behavior despite harmful consequences (Mahapatra, 2019). Today, affordable mobile devices and expanding mobile networks increase students' connectivity. Cell phone usage began with wireless conversations but pivoted with mobile technology advancement; music, video, photography, games, Internet, and apps are readily available at users' fingertips. Without argument, the Internet and devices in education are many open resources for learners; however, Hutcheon et al. (2019) research suggests that the unsupervised use of technology in the classroom harms student learning. In general, education has many distractions, compound cell phone convenience, and it creates another dimension. The impact of implementing a technology ban on students' experience within a course has unknown ramifications and needs further investigation (Hutcheon et al., 2019). As a result of affordable device access, cell phone usage is more frequent at schools and universities, not only in spare time but also in instruction (Hutcheon et al., 2019; Mahapatra, 2019). Schools are now left with removing technology once seen to help students gain access to resources or allowing cell phones in the classroom with teacher discretion.

Media use has become so much a part of young adults' lives that many do not realize their level of dependence and addiction to their cell phones (Roberts et al., 2014). Teaching comes with many different responsibilities. Cell phones in the classroom can distract students during class time with non-permitted content or allow them to use the Internet to find assignment answers quickly without learning the content. No previous study explored the influence of cell phone use on high school students and its interference with their attention and academic performance. Students either use technology to enhance their learning or regurgitate information from the web without learning the content thoroughly.

Addiction is a learned behavior. In other words, people know how to engage in addictive behavior according to well-established learning principles. When discussing addiction, three fundamental learning theories can be paired: 1.) Classical conditioning is learning from an association; 2.) operant conditioning, which is learning from the result of the behavior; and 3.) social learning, which is learned by watching others. One example might be a student who plays games during a study hall. They would associate going to their study hall with time to play games on their cell phone, and that would be their paired association. Various research studies have indicated a strong positive relationship between loneliness and smartphone addiction among students who use smartphones to alleviate loneliness and remove themselves from the present (Mahapatra, 2019). Something promising would be that these types of behaviors have the potential to be unlearned and changed.

The impact of cell phone addiction on academic performance is complex. If attention is taken away from instruction, it would negatively affect learning. However, since we are in the digital age and our lives are filled with distractions, students may be becoming conditioned to multitask (Turatto et al., 2018). It is essential to recognize that cell phones have positive and

negative implications, but what outweighs the other is tough to distinguish. Many teachers view using digital devices for non-class purposes as an obstacle to classroom learning (Flanigan et al., 2018; Santos et al., 2014). Students who lost connectedness were likelier to access their cellular devices and spend more time on them during class (Felisoni et al., 2018; Reysen, 2021). Specifically, how cell phone addiction affects academic performance has yet to be clarified, so it is not apparent to what extent adverse effects range.

Technology in Education

Educational technology (EdTech) is a dynamic, evolving field, and as such, in identifying and mapping research patterns in this field, a systematic approach is required (Bozkurt, 2020). As with anything positive and negative of technology, integration exists. Throughout the history of educational technology, the same problems have continued to occur; some embrace the technology, and others will not conform.

History continues to repeat along these lines, and educators need more time to get comfortable with technology. It is quick to change. Becoming comfortable with a piece of technology in education is something that is most often short-lived. One negative of technology integration is providing teachers with enough training to be comfortable using technology in the classroom. Research suggests a high correlation between academic performance when technology is used in the classroom without distractions. Despite this, cell phone usage during instruction has shown a higher impact on performance, and in every case, social media screen time was negatively related to academic performance (Felisoni et al., 2018).

Furthermore, a negative impact on academic performance was observed when assessing the relationship between GPA scores and the frequency of texting and calling cell phone usage, a negative impact on academic performance was observed. This impact was consistent across

various skill levels, which varied based on familiarity with the technology. Teachers must learn the technology before being asked to use it in the classroom, which depends on the application and resources, the planning process is more in-depth than instruction in technology's absence.

Teachers are instructing students with technology in various forms for various learning purposes. Often, teachers use technology as a tool, and students are also learning how to use technology as a tool. When students are left to use technology freely in the classroom, research has shown a significant reduction in student engagement but found no difference in final grade performance (Hutcheon et al., 2019). From a teacher's perspective, technology should make their job easier or enhance student learning compared to their counterparts. From the student's perspective, technology should allow them to increase their skill set for potential career opportunities in the future. If technology does not impact student performance, disengagement might be the only result.

Humans have attempted to anticipate the future in any regard since the beginning of time. Determining what tomorrow and education will look like in 10 to 20 years is challenging. The world continues to produce new developments transforming people's lives and work. The current and developing environment comprises disruptive technologies and trends such as Artificial Intelligence (AI) and robotics that are set to impact education significantly (Rapanyane & Sithole, 2020). According to the EDUCAUSE Horizon Report (2020), artificial intelligence (AI) is already being used in educational services and curriculum design, which might shed more light on mobile devices' effectiveness in the classroom. Some of the integration allows human instructors to provide feedback on student work or automate the feedback process. The EDUCAUSE Horizon Report (2020) believes this is just the beginning. Amazon introduced the

Alexa Education Skills API; other districts used Microsoft Translator to improve parents' and students' language options.

Moreover, something that has been on my mind ever since entering the education field: is adaptive learning. In the future, students can work on the skills necessary before moving forward rather than having specific grade levels. The EDUCAUSE Horizon Report (2020) states that in many cases, the results of the use of adaptive technology, especially when paired with course redesign, are positive, noting that the withdrawal rate was cut in half.

Technological Resources

Schools face challenging financial concerns each fiscal year but often force technology into the classroom and continue overemphasizing digital skills for students with little evidence to quantify any achievements. Since 2005, in what some see as a utopian vision of education's future, the Kyrene School District has invested roughly $33 million in classrooms with laptops, interactive screens, and various software applications, which equates yearly to five times the textbook expense (Richtel, 2011). However, are our technology upgrades being made first, then asking questions about their effectiveness afterward? Accordingly, the school's state test scores remain stagnant, and David K. Schauer, the superintendent, states, "My gut is telling me we have had growth, but we have to have some measure that is valid, and we do not have that" (Richtel, 2011, p. 3).

Technology engages students on a creative level. However, core academic skills might be sidelined for new innovative technology. Nworie and Haughton (2008) state that adopting and implementing the Internet and other digital shifts in the classroom brought new difficulties in coping with the interruptions they create in learning settings. Usually, once educators become proficient with technology, it changes and sometimes becomes tricky to manage. "Emerging

technologies have also brought about innovation and flexibility in instructional delivery systems resulting in improved online and distributed learning, mobile computing and learning, engagement in multimedia instruction, use of wireless communication, and an increase in interactive and collaborative instructional tools" Nworie & Haughton (2008). With technology becoming quickly outdated, it is challenging to settle with any technology. Calling into question how schools are selecting appropriate technology in the first place. One concern presented by Nworie and Haughton (2008) presents is the obstacles and disturbances, including technology-supported cheating opportunities and communications-related distractions.

Johnson (2020) "explores the use of digital tools to enhance learning through technology, specifically as an enhancement to regular classroom practices." Regardless of the acceptance or resistance, technology in education has notably influenced how learners engage in learning. Johnson (2020) analyzed data in his study to produce a glimpse into 5,070 classrooms in 393 schools over five years across Tennessee. Johnson's (2020) research could have been more troubling, with the overall rating for using technology in the classroom hovering between unobserved and somewhat evident. From his study, it would be inadequate to measure any technological achievements in the classroom to student achievement because the more significant issue is revealed in the absence of technology being adopted altogether. More research would need to be conducted to reflect on the access, equity, teacher training, and education technology funding throughout Tennessee.

With accelerated advancements in cutting-edge technology, professionals have viewed technology as a solution to problems (Hollands & Maya, 2020). Advanced software and devices for all students have been seen as the one-to-one movement providing digital content access. These adoptions come at a cost but attempt to advance student achievement and standards

completion (Hollands & Escueta, 2020). Technology is a tool that advances student achievement, and tons of money is being directed to various initiatives. According to Hollands & Escueta (2020), U.S. higher education technology investments in 2016 were calculated to be between $1.9 and $3.3 billion, which includes central information technology spending and educational technology services purchases made through academic programs. Across the United States, teachers instruct students with technology in many different forms for various learning purposes, but this is far from the same in every school. Any technology in the classroom must serve a purpose for both the teacher and the student.

According to Dondlinger (2016), the purpose of integrating technology-rich instruction in content subjects is not only to improve content learning and prepare students for success in a technology-saturated and globally connected world. Education technology should foster critical and creative problem-solving and allow students to communicate and collaborate effectively at the heart of any technology implementation. Like content standards, the ISTE Standards guide technology-integrated learning and provide a view of the "end" or what students should know and be able to do after engaging in technology-supported learning (Dondlinger, 2016). After reading, it is realized that the content being taught is unimportant and will usually align with the ISTE standards if the lesson objectives are designed in a student-centered pedagogy supported by technology. Thus, the ISTE standards can be a measurement but need to determine if technology is solely improving student achievement. *Technology* is a tool that should be used when appropriate but left on the shelf if objectives can be accomplished without it. Implementing technology in education is crucial and should provide students with a foundation for their future careers, but not provide a means for distraction. Whether technology is advancing student achievement or a distraction is still debatable.

Industry 4.0

Faster than any twenty years prior, the world in the next twenty years will rapidly change through the quick advancements in science and technology. Essentially putting the future human workforce in limbo regarding what careers may exist or what skills will be demanded. The educational world faces considerable change over the next five to ten years, and the shape of the future labor force is unknown but will be triggered by technological advancements. Significant educational shifts have already unfolded; however, many problems must be more stubbornly persistent. We are facing a massive crisis to fill jobs of skilled labor universally. It is time to wake up and prepare students for the future before the future becomes the past. Flipped classroom learning models are often preferred to help students develop self-directed learning skills, and mobile devices are primarily employed in flipped classroom environments (Al-Samarraie et al., 2020; Cheng et al., 2019; Karaoğlan, 2022). The manufacturing world is changing with advancements in 3D printing, artificial intelligence, machine learning, robotics, and automation. Likewise, education of the future will need to change alongside these advancements to prepare students for the world of work. Teaching models and the learner's responsibility will need to be changed. Artificial intelligence, computers, mechanical components, or robotics are projected to replace humans' physical and mental work. The first Industrial Revolution replaced horsepower and led to a boom in steam power as an energy source. Industry 4.0 will replace some human-powered jobs at the very least but call for a different, more skilled worker for the jobs left in existence. All careers are in the crosshairs, including a new form of artificial intelligence or machine learning to replace human labor, which can disrupt all sectors. Even though technologies are fast-changing in education, the basic message remains that well-resourced students with solid educational backgrounds will likely

benefit most from digital engagement (Selwyn et al., 2020). What the Internet did for information accessibility is change how humans communicate information; Industry 4.0 can potentially create dramatic changes to how we do things today, from self-driving cars to production lines with robots. New jobs will emerge as old jobs disappear in the future of science or technology. Like the previous Industrial Revolutions, the next economy will need a transformation in the education system so future workers are prepared for jobs that have yet to be created. Education faces deficiencies in resourcing, significant inequalities of educational opportunity, poor-quality teaching, curriculum, and school organization. These issues pre-date the first 'computers in the classroom' and the subsequent forays into 'digital education' (Selwyn et al., 2020). Humans create technology, but coincidentally, technology creates us and our world. The education system has no option but to answer the call to prepare students for Industry 4.0.

Technology continues racing ahead while education is behind, trying to catch up. The K12 education system is meant to prepare students for the world of work. In the late 1800s, many black colleges focused on educating black students for the industrial revolution. According to Smith (2020), the premise was that Black students needed practical vocational training and offered male students training in such trades as brickmaking, bricklaying, shoemaking, carpentry, and blacksmithing (p. 128). Educating black students during that period was the first of its kind, and many freedmen sought practical education to gain skills for employment. "However, this narrow curriculum in higher education came to be criticized as a means of keeping freed people at the bottom levels of society" (Smith, 2020, p. 128). The current education system needs to pay more attention to apprenticeships or narrow-focused education by continuing a general education pathway without quality assurance. Specific training may be an option for our modern students to be future-ready for careers, but teaching problem-solving skills and creativity should be at the

forefront. Classrooms must work to re-establish the value of formal education in an era of ubiquitous learning and valuable knowledge for our future societies (Selwyn et al., 2020). Information, 10-15 years ago, existed in the library or through lectures by teachers who researched a specific topic. Now, content is vast and accessible through YouTube or the Internet and available all at the fingertips of students with no formal instruction necessary but the potential to learn anything, any time of the day. Future educational platforms will expand the scope to encompass as many user practices as possible, leading to classrooms on platforms rather than in classrooms (Selwyn et al., 2020). Teachers' teaching continues to assume the one-size-fits-all approach to learning without evolving or focusing on what is required to educate the future workforce.

Nevertheless, the future of Industry 4.0 innovations remains unknown. According to Oke & Fernandes (2020), in the early 1950s, machinery was introduced as computers, creating new and faster methods of channeling information and communication in the world of work, including teaching and learning (p. 22). While there is little doubt that the Industrial Revolution's impact will be felt profoundly across all facets of human life, it needs to be clarified to what extent and at what pace today's emerging technologies will transform the human condition. Teachers carry out lessons as if all students are identical learners.

Personalization will focus on how teachers interact with students while preparing them for future careers. The education sector has been reluctant to accept technology to facilitate teaching and learning despite technological innovations. However, the use of robots in education, particularly in teaching science, technology, engineering, and mathematics (STEM) subjects, has been around since the 1980s (Oke & Fernandes, 2020).

Consequently, Industry 4.0 will drastically decrease demand for many jobs, including those requiring manual skills and physical abilities, due to automation with the digitalization of the operations process (Oke & Fernandes, 2020). The three previous Industrial Revolutions no doubt changed our lives, but the Fourth Industrial Revolution is set to change how we work and learn. When a student is done with their education by completing grade school, then college for their education is done. As novel technologies emanate virtually and current occupations are replaced, society must modify and acquire different skills (Naidoo & Singh-Pillay, 2020). With Industry 4.0 set to begin in 2022, schools are coming closer to deciding which content is relevant and what teaching models should be in place. Blended learning is one model that may prove all-encompassing because it combines traditional teaching with technology communication access. Teachers must switch roles to facilitators to educate students on the power of being their teacher. Students must look past their teacher to source the necessary information to solve their problems.

The world is changing so much that schools must educate students to become problem-solvers in an ever-changing technological world. Students will need to be lifelong learners who learn new skills and possess the ability to adapt. Despite introducing the new curriculum into schools, inadequate knowledge negatively impacts the existing curriculum and assessments, despite introducing the new curriculum into schools (Mpungose, 2020). It needs to be clarified, gradually becoming a reality in many areas of our daily lives, whether we are ready or not. Every student needs a specific path and destination while completing their formal education. Learning new skills is not easy, but many jobs will be created, requiring great opportunities for students who possess these skills and value learning new things.

Soon, students will fill future positions created by Industry 4.0 but must continue improving and learning new skills throughout their careers. Parents, students, teachers, and schools all play an active role in transforming learning, for students are prepared for whatever the real world is in the future. It is not simply teaching different skills or content but ensuring students are taking control of their lives and participating in meeting tomorrow's challenges.

Problem-Based Learning

Problem-based learning (PBL) has a history of producing solid educational results (Mann et al., 2020). Creative learning is seen as increasingly important in education and 21st-century skills; creativity is one of the skills that enable individuals to keep up with the current rapid development of technology and plays a role as one priority skill (Salehudin et al., 2020). We are educating today's youth to be viable global citizens.

During the past years, technological and social developments have emphasized the importance of knowledge work competence (Petri et al., 2020). Grossman et al. (2020) suggest that these days, it is almost impossible to have a conversation about education without hearing phrases like "student-centered," "deeper learning," or "project-based." These include giving students opportunities to study a challenging problem, engage in sustained inquiry, find answers to authentic questions, help choose the project, reflect on the process, critique and revise the work, and create a public product (Grossman et al., 2019). No longer does specific content stay in their intended courses, but all content is open to be explored in any course. Problem-based learning (PBL) aims to learn concepts and procedures through well-chosen, predefined, authentic situations (MacLeod & Der Veen, 2020).

The design of interdisciplinary PBL often centers on authentic 'real real-world' problems as the starting point of projects (Repko et al., 2017). Problems are often ambiguous and require

Exploring many disciplines to uncover an appropriate answer. Similar to how problems are presented throughout many people's typical day. From experience, problems are presented to students, and students drive the process of finding the possible solution with little guidance from the teacher using any means necessary, such as mobile technology.

Teachers are the cornerstone of organizing the learning environment by providing students with technology and non-technology hands-on learning and active and authentic tasks (Khalif & Kouraïchi, 2019). Technology continues to change the activities aimed at supporting instruction. At heart, technology integration is a tool to support teacher instruction and student learning. Teachers have valuable and unique perspectives on technology's role in education; it is paramount to involve them in a participatory design process (Cober et al., 2015).

According to the Technology Integration Matrix: A project of the Florida Center for Instructional Technology (2020), Technology Integration Matrix (TIM) provides a framework for describing and targeting the use of technology to enhance learning and incorporates five interdependent characteristics of meaningful learning environments: active, collaborative, constructive, authentic, and goal-directed. Students actively use technology as a tool in the active stage rather than passively receiving information from the technology (TIM, 2020). The Technology Integration Matrix website presents the following: Throughout the collaborative stage, students use technology tools to collaborate with others rather than always working individually at all times. In the formative stage, students use technology tools to connect new information to their prior knowledge rather than passively receive information. In the authentic stage, students use technology tools to link learning activities to the world beyond the instructional setting rather than working on decontextualized assignments. Lastly, students use technology tools in the goal-directed stage to set goals, plan activities, monitor progress, and

evaluate results rather than complete assignments without reflection. At the entry-level stage, students are given specific instructions, which are very structured. Moving to the last stage, the transformation level, students drive instruction and create their goals for the project. Between the first and last stages, the goal is for students to become self-directed learners.

Technology Safeguards

There are vulnerable conditions and risks to which adolescents are exposed, both creators and consumers using technology (Montes et al., 2018). If a student is under thirteen, specific applications require parents to confirm a child's account and monitor their children's account, which prevents children from viewing inappropriate content or advertisements. Google has a Google One application to monitor children's browsing and YouTube viewing history. One of the biggest concerns will be data security. In the future, computer security will change drastically to match the power of supercomputers that leave every dataset no longer guarded.

Alongside cell phones in public schools dramatically increasing, the implications are both positive and negative aspects in the classroom setting. Cell phones enable teachers to get instant student feedback using various polling applications. Conversely, students can instantly find answers to questions using the Internet. Additionally, cyberbullying or exploring inappropriate content can occur due to inappropriate cell phone usage with little parental or teacher notice (Bacak et al., 2022; Jones et al., 2019).

Higher-Quality Learning Experiences Powered by Multimedia

Multimedia has the potential to create high-quality learning encounters and is a vehicle to serve the instructional process through devices. Technological acceleration has increased the preference for images over spoken or written communication (Thwaites, 2021). It is only reasonable to discuss the best practices in multimedia learning by recognizing the present and

future of educational multimedia. Previously, multimedia may have included a VHS video of Bill Nye playing on a cartwheel in the classroom; however, today, more students have a device with access to the Internet through mobile technology, which provides the ability to access information at their fingertips instantly. Very few reasons exist for multimedia not to be implemented in the instructional process. Our environment now enables content to be taught immediately through internet searches or YouTube videos. Learning management systems (LMS) would make school management, administration, teaching, and learning more efficient. Integrating new technology provides learning opportunities for students to become efficient, autonomous, team-working, and creative problem solvers (Macgilchrist et al., 2020).

Fusing old multimedia practices with future multimedia will take the classroom walls down and open the world for all to experience and discover through mobile device delivery.

Throughout history, education technology has become a staple in how students learn, and teachers instruct. Previous eras made it complicated to quickly present a video to learners at a moment's notice; however, thanks to modern technology, media is on-demand, presenting no boundaries to learning mediums. Multimedia combines more than one media type. Text, symbols, images, pictures, audio, videos, and animations are usually delivered through technology to enhance understanding or memorization (Guan et al., 2018). The vast multimedia sources create new learning opportunities and a new wave of instructional techniques. Implementing multimedia in the classroom will continuously shape the future of education, whether through mobile devices or other forms of technology.

The rapid rise in technology has allowed instructors to explore new ideas incorporating multimedia into instruction in recent decades. Traditionally, students worldwide have sat through and continued to sit through long lectures of an instructor speaking without incorporating

multimedia. Typically, words have been the significant format for instructional communication (Mayer, 2017); however, currently, multimedia implemented in learning allows students to learn deeper from words and pictures instead of entirely through spoken words. Instructors are constantly discussing what they can do to boost student performance. This discussion is far from over and will continue throughout the future of education- suggestions might include using new technology or different instructional practices. The instructors who bought into the modern world of education are redesigning instruction to hold multimedia elements to increase student learning. However, images and text do not hold equal weight. Adding multimedia to instruction has allowed many students to learn content more efficiently, and technological advancements will provide new opportunities to streamline multimedia to instructional content.

New Age Educational Multimedia Technology

According to Abdulrahaman et al. (2020), different strategies using multimedia technology in teaching and learning methods are a veritable approach for bridging the gap in providing open access to quality education and improving learners' achievement. If students cannot physically leave the classroom because of a worldwide pandemic or travel expenditures, then multimedia technology empowers experiences to occur. Through Google Expeditions, learners can explore the world at a moment's notice without leaving their seats. "The hardware and software used for creating and running multimedia applications are known as multimedia technology" (Abdulrahaman et al., 2020, p.1). Many multimedia applications are available today with their appropriate target audience, but many have been deployed in various courses, from mathematics to literature. While it is essential to incorporate multimedia into instruction, the problem remains of engaging students so that learning is continuous with or without the teacher. Teaching with multimedia demands understanding multiple learning theories to guarantee that

multimedia is intended to support instruction with tools used in presentations, classroom or laboratory learning, simulations, e-learning, computer games, and virtual reality (Abdulrahaman et al., 2020). The last thing multimedia should do is clarify for the learner or make learning the lesson objectives more difficult.

Instruction occurring in the classroom should equip students for situations in the real world. Rapid advancements in manufacturing are developing before our eyes with improvements in 3D printing, artificial intelligence, machine learning, robotics, and automation. According to Riskasari et al. (2020), the need for empowered workers has had many consider altering the conventional learning method from utilizing hand-operated tools to handling digital-based computing software and interactive multimedia-operated handheld and mobile computing devices. Thanks to the Internet and access to affordable devices, information is instantly available anytime and anyplace, making learning always possible. Scholarly practitioners frequently prescribe that the teachers use comprehensive media as needed and touch many senses in implementing the learning process (Riskasari et al., 2020). Accordingly, involving nearly all senses, multimedia can provide information otherwise unattainable. Traditional learning creates barriers to obtaining additional information; however, the invention of the Internet allows global information sharing. Guaranteeing media is in the correct format for the device and engaging the learner will define the instructional nature. Many limitations are being resolved to empower mobile technology to be seamlessly executed into instruction, but it comes with a risk of distracted learners.

Priya (2021) believes the rapid development of emerging technologies such as augmented reality (AR) has attracted the growing recognition of the learning community to enhance the traditional learning experience with an interactive learning approach. Augmented reality allows a

live, direct, or indirect view of a physical, real-world environment whose elements are augmented by computer-generated components such as audio, video, 2/3-D graphics, or GPS data (Priya, 2021). Unlike virtual reality, AR allows the user to experience and manipulate an object in their world. One day, AR may be the standard form of multimedia in education when access provides interaction with a virtual frog model, allowing more students experiences without recurring costs.

Teachers should merge with the times by keeping multimedia selections cutting-edge if resources permit. It is easy to see the difference between listening to a teacher speak about dissecting a frog versus watching a video on frog dissection or even using AR technology to dissect a virtual model. Technology advancements are set to transform multimedia appropriations for instructors to increase student learning. It has been shown that AR technologies can help increase students' learning motivation and enhance the quality of the learning experience (Priya, 2021). Multimedia enables students to encounter something they might not have to do with other media. Advancements in AR have the potential to transform every classroom by making hands-on more available. Similarly, Zhang et al. (2021) found that "AR technology, as a new type of multimedia, presents interactive technology that has contributed to the teaching of experiments in class and can dramatically improve educational activities and increase the teaching effects" (p. 598). The mix of real-world and virtual objects creates a new direction for multimedia in education.

Eye-tracking technology has been used to track cognitive processing while reading and assessing students' attention to pictures in text. Eye-tracking technology can be a clever piece of educational technology to evaluate multimedia effectiveness, which is often challenging (Mason et al., 2016). It can compile data from reading an illustrated informational text while tracking the

user's eye movements. One notable verdict is that the picture inspection varied with different levels of reading skills (Mason et al., 2016). It is easier to assess if students learn from an image or even look at it during instruction with some tool or software measuring such interaction. The eye-tracking technology in the future may quickly evaluate multimedia effectiveness using a mobile device instead of text and provide real-time teacher feedback about students' interactions with multimedia and device usage.

Multimedia Implementation

While stepping into a classroom today, students will most likely be met with a PowerPoint Presentation throughout the term. Even including online instruction, PowerPoint Presentations are overwhelmingly used to transfer information and have become the standard model for any learning environment. Many educators need to familiarize themselves with the principles of designing the most efficient presentation and how to do so. The *modality principle* states "that people learn better from a multimedia lesson when words are spoken rather than printed" (Mayer et al., 2014, p. 393). According to Mayer et al. (2014), The *redundancy principle* states "that people learn better from graphics with spoken words than from graphics with redundant spoken and printed words" (p.392). This critique focuses on the *modality principle*: "that people learn better from a multimedia lesson when words are spoken rather than printed" (Mayer et al., 2014, p. 393). Alongside these principles are students equipped with mobile devices and teachers who need help implementing them into instruction.

Even with cutting-edge technology, many teachers primarily use lectures as their primary form of teaching, and students often need help with some concepts presented without models. In a study by Ulery et al. (2020), showing a video to students on specific content raised 25-30% comprehension. They offer the benefits of multimedia in the learning process in the classroom or

as supplementary material outside of class. Students are often faster using their own devices than unfamiliar ones. Ensure students know how to download or adjust their settings to permit their use and place learning tools and surveys on an easy-to-find site (Ulery et al., 2020). Complex concepts need to be explained more than once and in various ways. Videos let students rewatch them at leisure and provide access regardless of location. When selecting videos for students to watch, choosing one that communicates the intended concepts without dragging out the length of the video is essential. Something that should take less than five minutes does not need a long video explanation.

Multimedia technology aims to improve teaching and learning. Based on the results and analysis of Nulhakim et al. (2020), "the use of problem-based learning models in combination with interactive multimedia can advance students' creative thinking skills" (p.13). Critical thinking, communication, creative thinking, and collaboration skills are the most valuable skills for learners from primary to college. These skills are all relative to the world we live no matter the particular field. Many classrooms claim to be student-centered, but the reality is that they continue to be teacher-centered, limiting opportunities for students to develop these skills. However, using problem-based learning models assisted by interactive multimedia can encourage students to get a good understanding of the concept and makes students more interested in participating in learning (Nulhakim et al., 2020). The aim of establishing knowledge in students' minds is to animate learning.

Blended learning, which requires students to complete learning online and in person, provides the pupil with the functionality to learn at their own pace. Locating information outside the classroom has become widespread for instructors who manage content using an online learning management system. Many schools moved one-to-one for remote learning during the

pandemic in 2020, and learning sources needed to be prepared quickly for online instruction. The conventional lecture format, typically a PowerPoint (PPT) presentation, became more of a learning resource than ever. Without a doubt, PPT presentations generally enhance a lecture as opposed to without, but this does not imply effectiveness for learning.

One example is a study that used an online geography course formatted to include each graphic with corresponding printed text. Myers et al. (2018) study examined the effectiveness of adding two instructional design attributes to an online multimedia slideshow: (1) segmenting, in which each time the learner touches the arrow key, another part of the slide appears (typically with 4–8 portions per slide) rather than producing the entire slide content all at once, and (2) redundancy, in which a voice is added that reads the printed text on the screen.

The justification for the study was to improve student learning by reducing the cognitive load of complicated substances by chunking the information instead of presenting it all at once. Segmenting the information on the PPT showed that 100% of students performed better on tests with a segmented multimedia version of the PowerPoint compared to the unsegmented version. Limited scholarly research exists regarding flipped classrooms and using the cognitive theory of multimedia learning. There are tangled results on the outcomes of academic performances with flipped learning, making multimedia learning principles valid to work in a flipped setting because of their relevance in various educational settings. Thus, 67 eighth-grade students in a Saudia Arabia Computer Sciences Class were used in a quasi-experimental study that applied the theory of multimedia learning to academic achievements (Almasseri & Al Hojailan, 2019). The findings revealed a positive effect of implementing the cognitive approach of multimedia learning for both high and low-level learners. How multimedia is created plays a fundamental

role in shaping learners' understanding of the educational content in traditional and flipped classrooms.

Many college students still sit through hours of boring lectures, walk away without recalling lesson objectives, and quickly fall victim to using their mobile devices for off-task purposes. Medical schools are notorious for long lectures regarding complex concepts and providing little technology-integrated media to extend learning. In Chimmalgi's (2019) study, first-year medical students were instructed on selected gross anatomy topics using an Interactive Lecture in the Dissection Hall (ILDH). The ILDH format included multiple 10–15 minutes of teachings to introduce a subject with the help of multimedia and concluded with a review. Students perceived that ILDH not only supported them in understanding the concepts more immeasurably (97.7%) but was also a better learning experience (99.2%) (Chimmalgi, 2019). Furthermore, test scores improved with the more enjoyable learning experience group instead of long lectures with little student input or multimedia.

Researchers were drawing on dual-process theories of cognitive function and examining the degree to which spatial contiguity influences incidental learning outcomes. They hypothesized that spatial contiguity would mediate learning without an explicit learning goal (Paek et al., 2017). The study of 149 adults finished a multimedia-related assignment under the appearance of usability testing in which participants interacted with a computer screen. Afterward, a retention test was provided to assess their incidental learning material. The study results are precise: arbitrary visual material was learned (incidentally), and the spatial contiguity of that material impacted how much was known (Paek et al., 2017). These findings were obtained even though participants were unaware that learning was the goal but learned by

interacting with various forms of media through mobile devices, showing the power of using multimedia throughout instruction because it lends itself to learning.

Summary

Piaget's social constructivism provides the theoretical framework for this study. Related literature on mobile device use in high school classrooms has been addressed and explored from many angles. These areas of study include mobile devices, cellphone use and academic performance, classroom cell phone policies, cell phone addiction, technology in education, technological resources, industry 4.0, problem-based learning, and technology safeguards. Other aspects included higher-quality learning experiences powered by multimedia, new-age educational multimedia technology, and multimedia implementation. These areas provide insight into the technological landscape of today's classroom. Many studies were considered in the creation of the research questions. There is a lack of information about how our high school teachers establish, monitor, and enforce their classroom cellphone policy. However, there is a vast amount of research regarding teachers' views on technology implementation in high school and university classrooms about cell phones used by students. Students are using smartphones in instructional settings, both as an asset to enhance content mastery and to escape instruction environments. The perceptions of each high school teacher recorded can guide future instructional methods and policies.

CHAPTER THREE: METHODS

Overview

A technology meant to connect the world is now infiltrating classrooms. Cell phone usage in K-12 classrooms is becoming a hot button in education across the globe without a pure ruling for or against their academic usage. In prior years, schools advocated for students to use cell phones in the classroom to extend their innovative learning resources. Since the initial "Bring Your Own Device" (BYOD) initiative, many districts have adopted school-provided devices since costs began to decrease. As a result, the Covid-19 protocols forced instruction to remote learning. The school administration is unsure how to tackle students' cell phones and is not ready to decide whether to permit them fully or ban them entirely from instruction. Some schools have decided on a cell phone policy, allowing students to possess their cell phones throughout the school day but only having the ability to use them with the supervising teacher's prior approval or during noninstructional time. Schools have different policies for managing student cell phones, and classrooms within the same school may also have inconsistent practices, which makes it challenging for teachers to enforce their rules without sacrificing valuable instructional time. The researcher explored "How do high school teachers instruct students who possess cell phones during instructional time?"

Research Design

A hermeneutic phenomenological approach was used to examine how high school teachers manage students with cell phones during instructional time. As Creswell (2014) and Manen (2014) emphasized, posing and asking good questions is a prerequisite for phenomenological study researchers. A phenomenological approach was choosen due to the

limited research in this area and the need to uncover the lived experiences of high school teachers in managing cell phones in the classroom (Corbin & Strauss, 2015).

The research design involved a deep immersion in the research context, which included interviews, document analysis, and focus groups to elicit a better understanding of how cell phones in the classroom influence instruction, how teachers feel about having the autonomy to allow students to use cell phones, and how cell phones impact academic performance. The primary objective of the research design was to ensure that the gathered evidence permits answering the initial questions as distinctly as possible and uncovering the essence of the experience of managing cell phones in the classroom (Manen, 2014).

Cell phones in the classroom are a rising concern in schools across the United States. This study utilized a hermeneutic phenomenological approach to explore how high school teachers manage students with cell phones during instructional time. The research design enabled the triangulation of evidence, the comparison of multiple viewpoints, and a deep immersion in the research context to elicit a more comprehensive and holistic empirical account of the focal phenomenon. The phenomenological study is more than just a research method; it is a way of perceiving and understanding the world (Manen, 2014). The study's findings could support a better understanding of how high school teachers establish, monitor, and enforce classroom cell phone policies, contributing to the literature on this topic. Fifteen high school teachers from a public school district in Pittsburgh, Pennsylvania, participated in the phenomenological study. Analyzing teachers' lived experiences with cell phones in the classroom could benefit others in comprehending how to frame practical guidelines to manage students' daily cell phone usage.

Research Questions

Central Research Question

What are high school teachers' experiences instructing students who possess cell phones during instructional time?

Sub-Question One

How do cell phones in the classroom influence instruction?

Sub-Question Two

How do teachers feel about having the autonomy to allow students to use cell phones?

Sub-Question Three

How does cell phone usage transform instruction?

Setting and Participants

Key site details and information as to why the site was selected to execute the study alongside the profile of the participants will be examined in this section. A pseudonym will be used when mentioning the site of the research. The size of the high school and the explanation of why it was selected for the study will be presented. In addition, participants' characteristics and the criteria for selection will be explored in this section.

The school community includes various ethnic, racial, and socioeconomic populations. The district overall is smaller, with a reputation for quality with small class sizes, allowing for a personal approach to instruction. The school has been selected for the National Blue Ribbon Awards of Excellence. By selecting an appropriate setting and participants, researchers can ensure their findings are valid, reliable, and applicable to the population of interest (Creswell & Poth, 2018).

Site

The study was executed at Quaker High School, a public school district outside Pittsburgh, Pennsylvania. The school leadership consists of a nine-member school board, a

superintendent, an assistant superintendent, a building principal, and an assistant principal. The high school is small, with 682 students. Within this high school, the student-to-teacher ratio is 17:1 across grades 9 through 12 and is comparable to other high schools in the area. The student population demographic breakdown is 92.4% White, 2.5% Hispanic, and 1.8% Black. The student graduation rate is 91.3 %. The site was chosen because of several reasons. The high school is a one-to-one school; as such, students at the high school all have iPads. The high school allows students to possess cell phones throughout the day but are only permitted to use them during instructional time with prior teacher approval. The high school's approach to personal devices provides a unique opportunity to understand teachers' experiences, which have yet to be studied previously. Quaker High board and administration were open to allowing researchers to conduct studies at their school.

Participants

The participants in this study were selected through purposeful sampling and included 16 teachers. Participants in this study came from two teacher units: core classroom teachers and elective teachers. In order to ensure various groups were not unfairly included or excluded from the research, the participants were asked to identify their age and ethnicity and, secondly, by emailing potential teacher participants grades 9-12 at the high school. This sample was considered adequate from the concept of saturation. The sample size was ideal for qualitative research because the minimum number of participants was reached and because it generalized the topic being studied.

I used purposeful sampling for this research by informing participants from the beginning what was necessary to participate in the study. The criteria for selection will require participants to be classroom teachers and have at least fifteen students in a class. Participants included in the

study are a mathematics and English teacher from each grade and four department chairs from the studies program to ensure a diverse group of teachers. The participant's gender, race, and years of teaching will not be considered for the study.

The use of cell phones has become increasingly prevalent in modern society, with 96% of Americans owning a cell phone (Pew Research Center, 2021). Teachers who instruct students in grades 9-12 are among the population who witness students using cell phones frequently (Selwyn, 2016; Warschauer & Matuchniak, 2010). Cell phone usage has the potential to impact teaching in various ways, such as facilitating communication with students and parents, providing access to educational resources, and distracting teachers and students from instruction (Wenglinsky, 2005).

Using teachers as participants to understand how cell phone usage impacts instruction can help identify best practices and potential areas of improvement. Teachers offer great insight into student cell phone usage during instructional time instead of using students as participants, which may have ethical and legal implications, particularly concerning student privacy (Makri & Schumacher, 2019). Using 9-12 grade teachers allows for exploring how cell phones impact instruction with an obligation to protect student privacy. If the study identifies areas where teachers can improve student cell phone usage, it could lead to developing interventions or policies that support better cell phone practices among educators, which will benefit both teachers and students. Overall, selecting teachers in grades 9-12 for the study on cell phone usage during instruction time would be relevant, impactful, and potentially beneficial for the education system.

Researcher Positionality

The topic of cell phones in the classroom has spurred my curiosity for a long time, from

considering students' addiction to mobile devices to adults who have trouble stepping away from their cell phones for even a minute. Cell phones are turning into an educational issue across all levels of education. As a high school technology and engineering teacher, I have seen how districts lobby for cell phones in the classroom so they are not obligated to purchase devices for every student. However, with the technology education transformation since the Covid-19 pandemic, most districts have converted to one-to-one devices for every student. I have witnessed students needing help to keep their cell phones away during instructional time. Initially, bringing mobile devices into the classroom allowed students to use their devices for something other than intended educational purposes during instructional time.

I was curious about how teachers feel about cell phones in their classrooms and what they are doing to enforce and manage a classroom. The district's no cell phone policy standard, even though students could possess cell phones and teachers could allow students to use cell phones for specific tasks. If alerted by a notification, most students cannot keep their eyes off their cell phones.

Interpretive Framework

Learning is collaborative and cannot be isolated from the social context. Social constructivism is the interpretive framework and paradigm that directs this study. Learning transpires in the context of social exchanges. Qualitative research accentuates interviewing participants as a fundamental data foundation (Yin, 2018). Hence, learning is a process in which individuals blend into a community of understanding (Vygotsky, 1978). The questions in this research study permitted participants to engage freely in conversations through individual interviews or focus groups.

Philosophical Assumptions

This ethical lens focuses on moral rules, rights, principles, and duties (Vallor et al., 2018). Technology can be used for good or bad. The evolution of the computer and the internet makes it easy for people to connect worldwide. However, on the flip side, hackers can easily steal people's identities or access bank accounts or cryptocurrency through different means. My view on ethics and technology is simply that the ethical nature and capabilities of the end user will decide if the technology is used ethically. Federal, state, and local levels laws should determine the ethical framework of technology. The companies should regulate the framework, but when profits are at stake, it is tough to rely on their guidance for something that affects their bottom line.

The disciplines that should require an ethical framework are social media, marketing, and consumer goods. The Facebook scandal is a cautionary tale for executives and consumers (Wessel & Helmer, 2020). Hence, there should be an ethical framework for children and social media. Facebook just went through the concerns recently exposed in knowingly making their application addicting to younger users. Marketing, in general, is something that should be ethical and regulated across the board. Consumer goods should always have an ethical framework.

Ontological Assumption

An ontological approach allowed me to reduce my personal bias to share the different voices of multiple participants as a researcher. Themes emerged from participant quotes and various perspectives. From the qualitative data, themes and subthemes were pinpointed and formed.

Epistemological Assumption

The challenge for me as the researcher was to provide subjective evidence and uncover commonalities and themes from evidence gathered from different participants through qualitative research approaches. By gaining subjective evidence from research participants, as a researcher, I

attempted to reduce the space between the understanding of participants' perspectives and myself (Creswell & Poth, 2018). Evidence emerged as themes from subjective data yielded from interviews and focus groups. Through a qualitative method and investigation, this study adds subjective knowledge regarding cell phones in the classroom through my interpretation of interviews, focus groups, and document analysis of teachers who can create, change, and enforce their cell phone policy in the classroom.

Axiological Assumption

Axiological assumptions consider that research can be value-based and that biases exist. Collecting all of the information as factual information is essential to determine what the data suggests. Values can shape the narrative, but as a researcher, it is essential to present accurate information and then complete an unbiased claim of what the data means. In axiological terms, cell phones in the classroom hold value if students use them to aid in the learning process. However, cell phones, which started as a form of technology to connect with others, have become more problematic through cell phone addiction. Possessing a device in your hands for learning can advance student learning. Finally, the research seeks to understand what teachers see in their classrooms regarding cell phones and how they limit or engage with them and create policies.

Researcher's Role

Identifying researcher biases to clarify how these might shape research findings is vital. Researchers for qualitative studies are the primary instruments of data collection and interpretation (Creswell & Poth, 2018). As a high school technology and engineering teacher, I have witnessed students' engagement with their cell phones during a conversation or a class discussion without thinking twice. When students have a cell phone, staying on task is always

hard. For example, I have had numerous students who could not possess their cell phones during instruction to the point where I would need to confiscate the device for the class period, and even then, they were concerned about not possessing their cell phones and would always ask when they could have it back. Students usually understand the importance of remaining off their devices during instructional time. Still, I permit students to use their cell phones as a tool to aid instruction if it makes the learning journey easier for them.

During participant interviews and focus groups, I did not discuss my own beliefs on cell phones in the classroom or mention my policy in my classroom. I recorded all interview conversations and took extensive notes to remain neutral during the research study and the data analysis process (Yin, 2018). Teacher participants were selected from several content areas to broaden their insight into teachers' experiences with cell phones in the classroom.

My cell phone policy in my classroom was as simple: if I am talking, cell phones should be put away. I actively monitor cell phone usage to ensure students engage with course projects and peers. If students are found using cell phones during instructional time, I warn them to remain on task, but if that does not help, I may need to take the device for the class period to aid the student in focusing. Most of my courses are project-based, and students never have free time and rarely have their hands free, so they should always be doing something with their hands other than having a cell phone. However, students still attempt to use their phones to check for notifications or listen to music through their headphones. I have never discussed my cell phone beliefs in education with other staff members or discussed cell phone usage in the classroom.

I have never communicated with any faculty member at Quaker High. I am unfamiliar with Quaker High teachers' cell phone benefits or concerns in their classrooms. I was interested in learning how other teachers regard cell phone usage in their classrooms. Two outside

reviewers looked at my findings to detect bias and have determined that no researcher bias exists in my findings.

Procedures

The institutional review board (IRB) is a federally mandated group to review and monitor research involving humans to protect their rights and welfare as research participants (Lapid, 2019). Research involving human participants requires IRB approval before gathering data (Ashley, 2021). IRB approvals from Liberty University and the Quaker High School District will be fulfilled before any research begins. Once approvals have been secured, the next step will be recruiting participants willing to participate in the study. The recruitment of the interview, collection of documents, and focus group participants will occur in a similar period.

Permissions

Before engaging with participants, the Institutional Review Board (IRB) approval from Liberty University will be the first necessary approval. Afterward, the following approval must come from Quaker High, where the research study will occur. Liberty University (see Appendix A) and Quaker High (see Appendix B) are both necessary to gain approval prior to collecting data from anyone participating in the research study. The IRB approval was essential to ensure that research participants were protected during the study. Each participant must complete the necessary documents to approve of using the data throughout our conversations in the research study prior to the study being conducted. The approval from participants will be voluntary, and participants can stop participation at any point throughout the study.

Recruitment Plan

After IRB approval, I emailed the teaching staff at Quaker High. I initially explained my study by sending out a recruitment letter through email, explaining the purpose of the research

study and requesting participants for an interview or focus group discussion. The recruitment efforts resulted in 16 participants volunteering their time for the study. According to Yin (2018), the recommended interview participants are 8 to 15 participants and 4 to 6 participants for a focus group. The required range of participants was accomplished by having 16 volunteers express interest in helping with the research study—the final tally of 25 participants provided saturation for answering the study's research questions. The initial recruitment of participants was advised of the interview and focus group consent forms. Then, after consent forms were signed, participants were asked for an available time to meet, and schedules were made accordingly.

Data Collection Plan

Immersing oneself and trying to make sense of the study is what qualitative research is about (Tracy, 2019). According to Ward and Delamont (2020), in the late 1960s, qualitative research began to grow, and the goal became one of understanding. This study will collect data from semi-structured interviews, focus group interviews, and document analysis to describe and understand how high school teachers establish, monitor, and enforce classroom cell phone policies.

Multiple sources of evidence permit going beyond appreciating the breadth of a phenomenological study's scope (Yin, 2018, p. 171). Semi-structured interviews create a less formal interviewing experience with more flexibility to dig deeper. Additional data sources, focus group interviews, and document analysis will increase the study's validity. According to Nunes et al. (2019), data triangulation has expanded its collaboration in qualitative research over the years, mainly through the adhesion of several researchers and scientists dedicated to education research. All data collected during the phenomenological study will be stored using a

Microsoft Word document. The phenomenological study database will increase the reliability of the study by ensuring that original data will not be lost or mixed with the research interpretation (Yin, 2018). Furthermore, the primary objective of a research design is to ensure that the gathered evidence permits answering the initial questions as distinctly as possible (Rezigalla, 2020).

Individual Interviews

Before the interview, participants will be informed about confidentiality and their ability to withdraw from the study at any time. Participants will be provided with a synopsis of the research study. The interview will last 30 - 60 minutes while following a semi-structured format consisting of 18 questions, with the researcher able to have the flexibility to ask for clarification or additional information during the interview. Interviews will be scheduled utilizing the online Zoom platform at a time suitable for the participant. Each interview will be recorded and saved using the Zoom meeting platform record tool, then saved digitally on the computer. The researcher will review the interview recording so the conversation can be transcribed accurately. Recording the interview could deliver an authentic rendition compared to taking notes throughout the interview (Yin, 2018). After each interview, the recorded interview would be downloaded, then saved to the computer in a password-protected file and stored on an external hard drive. The original interview data will be transcribed into a Microsoft Word document and duplicated into a Microsoft Excel spreadsheet for manual coding. The recordings could later become valuable to provide validity to the study or if the researcher is required to review the interview.

Individual Interview Questions

1. Could you please introduce yourself to me, as if we had just met for the first time? What subject do you teach, and how many years have you been teaching?
2. The district policy is no cell phones in the classroom without the teacher's permission. In your classroom, what are your rules about cell phones? How have you established these rules? CRQ
3. How have cell phones impacted your instructional practice positively or negatively? CRQ
4. What would be your ideal cell phone policy for high school? CRQ
5. What has been your overall experience with cell phones in the classroom? SQ1
6. Please describe successful classroom practices for monitoring students' cell phone use. SQ1
7. How do you feel about students using cell phones in your classroom to complete assignments or during their free time? SQ1
8. How do you like allowing students to use their cell phones because they have them in the classroom? SQ1
9. Have you had any experiences where cell phones are impacting academic performance? SQ3
10. How are cell phones in the classroom changing education? SQ1
11. How are you using technology in the classroom? SQ1
12. Please describe what you think would be the best cell phone policy throughout the school? SQ2
13. How should student cell phone policies be created? Who should be responsible for creating and enforcing the policy? SQ2

14. How does teacher flexibility with cell phones help or hinder the educational environment? SQ2
15. You're teaching and notice a student using a cell phone. What are your next steps? SQ3
16. What professional development experiences have prepared you to work in a classroom where students can access cell phones? SQ1
17. How do you enforce the created cell phone policy without wasting instructional time? SQ1
18. Is there anything you would like to add to the conversation?

Question one was a knowledge question intended to be relatively straightforward and helpful in building rapport between the participant and researcher. Responses to this question provided background information on the participants. Questions two through four specifically addressed my central research question: How are teachers establishing, monitoring, and enforcing their classroom cellphone policy? Questions five through 11, directly addressed sub-question one: How do high school teachers who teach different subjects feel about student cell phones in their classrooms? This was useful to the study because it provided deeper detail about the teacher and their teaching philosophy. Questions 12 through 14, directly addressed sub-question two: How do teachers feel about having the ability to create their cellphone policy? Questions 15 through 17, directly addressed sub-question three: How do teachers enforce their cellphone policy without taking away instructional time? By including question 18, it allowed participants to include anything that was left out of the conversation.

Individual Interview Data Analysis Plan

While analyzing individual interview data, two coding methods will be used: Initial Coding and NVivo Coding. Initial Coding methods will be used to pre-code individual interview

data to generate potential codes and provide a starting point for the researcher to reflect deeply on the data analytically (Creswell et al., 2018). Individual transcripts will be read repeatedly, searching for codes, with recurring themes highlighted. In addition to Initial Coding, NVivo coding will pinpoint codes developed from participant replies to the interview questions. According to Saldaña (2009), NVivo Coding is suitable for qualitative research and helps maintain the participant's viewpoint while reducing researcher bias. The manual transcript of each interview was uploaded into the NVivo Coding software for the researcher to use the data to uncover codes.

Document Analysis

Another type of data collection used during this study is document analysis of e-mails regarding cell phones, policy, professional development documents, and student behavior reports. Documents will be analyzed accordingly. A search for emails to the administration regarding cell phones will be conducted, and behavior incident records about cell phones will fulfill the document analysis to identify common themes. According to Yin (2018), documents can provide specific details to corroborate information from other sources. A right-to-know request will be filed for the keywords “cell phone” for emails to or from the principal and assistant principal. Behavior write-up forms will be analyzed for cell phone infractions and how the teacher previously handled the situation.

Document Analysis Data Analysis Plan

While examining each document, Themeing the Data, which can be considered a form of pattern recognition with the document's data, will be used to identify common themes and Initial Coding techniques (Saldaña, 2021). After carefully reading each document repeatedly, initial codes will be constructed after a comparative evaluation. Data from the documents will be

organized as to how it relates to the central research question to identify initial codes. Themeing the Data practices will hope to uncover the frequency and number of occurrences within the document with a similar theme (Saldaña, 2021).

Focus Group Interviews

Information on the study, participants' ability to withdraw from the study at any time, and the guidelines for the focus group interviews will be shared before starting the interview. The focus group interviews aim to understand how high school teachers establish, monitor, and enforce classroom cell phone policies in a school district that allows teachers to create their own classroom rules on student cell phones. The structured focus group interview will allow multiple perspectives to be consulted freely on cell phones in the classroom. According to Yin (2018), an invaluable advantage of phenomenological study research will be lost without multiple data collection sources. Therefore, participants will be allowed to partake in a focus group interview. For a focus group to provide quality, the number of participants must range from 6-12. The focus group for the study will consist of six participants and will take 30 to 45 minutes to complete. Focus group participants will have the ability to answer four questions during the structured focus group interview.

Focus Group Questions

1. How are you instructing students with cell phones, and does this change instruction if students are not permitted to have cell phones with them? CRQ

This question addressed the central research question of teacher perceptions and set the groundwork for future questions.

2. How are you monitoring and enforcing the district's no cell phone usage during instruction time without the teacher’s permission? CRQ

This question addressed the central research question of teacher perceptions and set the groundwork for further questions.

3. How does the school district encourage, discourage, or influence cell phone usage? SQ1

This question revealed how teachers feel the school administration influences their classroom policies.

4. Thinking about other teachers in the school, how have they fostered your perspectives on cell phone use in the classroom? SQ4

This question explores if other professionals have influenced a teacher's cell phone perspective in their classroom.

5. If the district decided to ban students from bringing cell phones into the classroom tomorrow, how would this impact your classroom? SQ3

This question aims to uncover if this action would increase instructional time in teachers' classrooms.

6. Does managing student cell phone usage in the classroom take away from instructional time or impact academic performance? SQ3

This question is related to whether teachers have to deal with cell phones during instructional time, which would disrupt instruction.

7. How do you like allowing students to use their cell phones in the classroom? SQ2

This question aims to gauge teachers' perception of having the ability to create their cell phone policies.

8. Describe how you establish, monitor, and enforce your cell phone policy aside from the district's policy? CRQ

This question pertained to the importance of how teachers establish, monitor, and enforce cell phones in the classroom.

9. How should school districts rule regarding if students should or should not be able to have cell phones in the classroom? SQ2

This question wants to gain insight if teachers like to have the ability to create their own rules for cell phones in the classroom.

10. Should cell phone policies be different depending on the content area? SQ1

The rationale for this question was to see if some subject areas are more or less flexible with cell phones in the classroom.

11. What advice would you offer the school district on managing cell phones in the classroom? SQ2

This question is related to gaining insight into teachers' perspectives on cell phones in the classroom.

12. How would you define student cell phone use in your classroom? Is there anything other teachers might not know? CRQ

This question asked participants to define their student cell phone policy in their classroom.

13. Is there anything else you want to add to our conversation?

This final question allowed participants to provide any additional information that might have been previously left out.

Focus Group Interview Data Analysis Plan

While analyzing focus group interview data, three coding methods will be used: Initial Coding, NVivo Coding, and Themeing the Data. The interview data from the participant focus

group will be analyzed first by the researcher manually precoding participant responses into a Microsoft Excel document. Initial Coding will allow the answers to the questions to be read several times to create developing themes (Creswell et al., 2018). Using NVivo Coding software, the researcher can generate codes with the participants' direct words, ensuring researcher bias is not shown through the analysis. Theming of the data functions to categorize a data set as a common subject that collects a group of repeating ideas (Saldaña, 2021).

Data Synthesis

According to Mihas (2019), qualitative analysis covers a spectrum from confirmation to exploration. Coding methods will consist of Initial Coding and NVivo Coding practices. The data will be searched for promising patterns, insights, or concepts (Locke et al., 2022). Initial Coding techniques will apply pre-coding to the data to develop potential codes. NVivo coding will also generate codes directly from participant responses, reducing the researcher's preconception or misinterpretation. Data will be recorded and typed into Microsoft Word and Microsoft Excel documents when conducting participant interviews. Pre-coding will be completed in Microsoft Excel, so it will be easier to separate and use the data for sorting measures. The care is reflected in the presentation of the cases themselves, not by the existence of a stringent methodology section whose tenets might not have been thoroughly followed in the actual phenomenological study (Yin, 2018).

Trustworthiness

The quality of research depends on its trustworthiness by both the researcher and the reader. According to Creswell and Poth (2018), validation, peer review, and a detailed, thick, and rich description can provide authenticity to the study. Qualitative research can be highly subjective, and ensuring trustworthiness is essential. The five appropriate terms for determining

the reliability of research are credibility, transferability, dependability, confirmability, and authenticity (Lincoln & Guba, 1985). After readers diagnose the written study, the research will instill a conviction in what has been reported.

Credibility

After analyzing participants in this research study, each was determined to be a credible source for having a classroom with cell phones. Triangulation is the use of multiplicity to test the credibility of research data (Stahl & King, 2020). Both data collection and data analysis techniques used triangulation methods to promote credibility in this study. When determining the credibility of research data, triangulation is only one way, and member checking will help verify the researcher's interpretations of the participants. Member checking is an effective research technique to provide credibility to the study. Through member checking, research participants are provided a pre-publication copy of research write-ups to solicit their feedback regarding data accuracy (Stahl & King, 2020). During each interaction with research participants, I informed participants of their confidentiality so they would feel comfortable speaking candidly.

Transferability

The phenomenological study aligns with a standardized process to collect, code, and analyze data from participants. Others could replicate the same study by explaining the data collection techniques and data analysis in detail of the interviews, focus groups, and document analysis methods. For research findings to be transferable and applicable, presenting a rich, thick description allows the reader to develop their conclusions concerning the transferability of the phenomenological study (Creswell & Poth, 2018).

Dependability

Another viewpoint on trustworthiness offered by Lincoln and Guba (1985) is dependability, which includes peer debriefing or scrutiny as a reliable auditing method that creates trust. A dissertation committee member partook in the peer debriefer's position. Having other professional researchers analyze the research notes keeps the researcher honest by supporting all interpretations. The peer debriefing is documented and takes place over time between the researcher and the peer, while this professional level of the peers conveys self-credibility (Lincoln & Guba, 1985). Feedback provides authenticity before the study is published, which increases trust in the presented research. Future research repetitions of this phenomenological study can provide consistency with the data.

Confirmability

The participant data from this research study have been recorded, transcribed, and stored to allow for accuracy while analyzing the data. “Rather than constructing a reality in findings, qualitative researchers who believe and pursue objectivity rely on constructs like precision and accuracy in their research practice and the involvement of other researchers” (Stahl & King, 2020, p. 28). Credibility was supported by rechecking data and triangulation, gathering data from three different sources, and using different methods of data analysis (Creswell & Poth, 2018). The data triangulation methods used for the research study include interviews, peer focus groups, and documents.

Ethical Considerations

Researchers face many ethical considerations while completing a research study. Prior to conducting any research study, one must obtain IRB approval. The IRB assures the safety of all participants through their well-being and confidentiality. While interviewing teachers, a pseudo-name was used to protect their identity. According to Creswell and Poth (2018), all

participation is voluntary, with participants having to sign consent forms to prove their participation in the study. The participant has the option to withdraw from the study at any time. The consent forms from participants will be held in a locked safe for five years after the research is finished (Creswell & Poth, 2018). All written and electronic data collected through the study will be preserved with password-protected security measures to protect the participant's data. All data collected and materials will be stored for at least three years and destroyed. Researchers face many ethical considerations while completing a research study. Prior to conducting any research study, one must obtain IRB approval. The IRB assures the safety of all participants through their well-being and confidentiality. While interviewing teachers, a pseudo-name was used to protect their identity. According to Creswell and Poth (2018), all participation is voluntary, with participants having to sign consent forms to prove their participation in the study. The participant has the option to withdraw from the study at any time. The consent forms from participants will be held in a locked safe for five years after the research is finished (Creswell & Poth, 2018).

Summary

High school teachers' experiences with cell phones in the classrooms during instructional time at Quaker High School will be explored during this phenomenological study. Teacher participants were recruited at one school district where the policy allows students to possess cell phones throughout the day but only permits students to use them during instructional time with the teacher's approval. Interviews and a focus group were conducted to pursue teacher perspectives on how teachers feel about cell phones in the classroom and if they witness cell phones impacting instruction or academic performance. Data was collected from interviews, focus groups, and communication documents, and then analyzed into related themes. The

researcher triangulated the data by comparing teachers' responses to the three data collection approaches to ensure trustworthiness and validity.

CHAPTER FOUR: FINDINGS

Overview

The purpose of this phenomenological study was to examine the encounters of high school educators with cell phones within Quaker High School classrooms. This chapter presents the findings derived from analyzing the collected data through one-on-one interviews, a focus group, and document analysis of emails, policies, professional development documents, and student behavior reports. The chapter describes the participants' diverse backgrounds and roles as core classroom or elective teachers. It is followed by examining their perceptions regarding integrating cell phones in instruction, the identified gaps in content and experiences, the significant role of department chairs, and the importance of fostering a supportive community. The findings are organized according to themes and sub-themes (see Appendix G). The central research question and three sub-questions are addressed later in the chapter, and a summary is provided at the end.

Participants

Participants were selected through purposeful sampling and included 16 high school teachers. The sample consisted of core and elective classroom teachers to ensure representation from various teaching fields. The selection criteria focused on their role as classroom teachers with at least 15 students, while factors such as gender, race, and years of teaching were not considered. The experiences of high school teachers who teach students with cell phones in classrooms were explored. By involving teachers as participants, valuable insights were gained into cell phone practices, best practices, and areas for improvement. This approach circumvented ethical and legal concerns involving students directly and allowed for exploring cell phone impacts while protecting student privacy.

The findings from this study can inform the development of interventions or policies that promote responsible cell phone usage among students. By understanding how cell phones affect instruction from teachers' perspective, the study contributes to identifying strategies to enhance teaching practices and improve student outcomes, including teachers in grades 9-12 as participants is particularly relevant, as it aligns with the educational context and holds potential benefits for the education system. Participant names were replaced with pseudonyms to protect their confidentiality. Table 1 provides demographic information on the participants:

Table 1

Teacher Participants

Teacher Participant	Years Taught	Content Area
Abby	25	Algebra
Bethany	2	English Language Arts
Cathy	12	Chemistry
Dorthy	20	Art
Ethan	15	History
Frank	8	Science
Gianna	20	English Language Arts
Hank	3	Calculus
Isabella	9	French
Jenny	14	Science
Kevin	12	Math
Lisa	8	Social Studies
Martha	5	Spanish
Nina	18	Music
Olivia	15	Family Consumer Science
Pat	12	Technology

Results

The purpose of this phenomenological study was to explore the experiences of high school teachers regarding teaching in a classroom where students possess cell phones. Including cell phones in the school has significantly changed instructional practices for teachers and students. One central research question and three sub-research questions guided the study, and data was collected through individual interviews, focus groups, and communication documents consisting of emails, policy, professional development documents, and student behavior reports.

Throughout the data collection, analysis, and synthesis process, various strategies were used to understand the participants' experiences comprehensively. The interviews and focus group were transcribed, then read, and reread to ensure accuracy and thoroughness. All statements from the data sources were given equal value, and ontological experiential descriptions were coded using NVivo Coding software. The coding process involved clustering these descriptions into themes during phenomenological reduction.

The triangulation analysis of all data collected revealed four primary themes, accompanied by seventeen subthemes, which captured the essence of the teachers' experiences in the classroom. These themes encompassed various aspects of monitoring and enforcement, the impact of cell phone use on academic performance, the need for professional development, the importance of responsibility and collaboration, and individual classroom dynamics. The data obtained from the interviews, focus group, and communication documentation was further analyzed using a hermeneutic approach to gain deeper insights into the meaning and significance of the themes and subthemes.

The findings provided valuable insights into teachers' experiences and highlighted essential considerations related to cell phone policies, academic performance, professional

development, and individual classroom dynamics. These findings contribute to the existing body of knowledge and offer implications for educators, administrators, and researchers seeking to navigate the complexities of cell phone use in educational settings. The themes and subthemes for all triangulated data sources are presented in Table 2**.**

Table 2

Themes and Subthemes for all Triangulated Data Sources

Theme	Subthemes
Monitoring and Enforcement	Cell Phone Policies
	Flexibility vs. Restriction
	Teacher Discretion
	Consistency and Clarity
	Teacher Observation
	Consequences and Parent Involvement
	Physical Storage Solutions
Influence on Academic Performance	Positive and Negative Influence
	Education Benefits
	Distractions and Multitasking
	Academic Dishonesty
	Attention and Focus
	Cheating and Academic Integrity

Professional Development	Lack of Training
	Technology Integration
Individual Classroom Dynamics	Student Behavior and Engagement
	Contextual Considerations

Monitoring and Enforcement

The primary objective of this study was to gain an in-depth understanding of educators' viewpoints and encounters concerning student cell phone utilization within educational environments. Through their input, teachers offered valuable insights into their strategies and methodologies to manage student cell phone usage. This thematic exploration underscores the complexities and deliberations entailed in overseeing and implementing cell phone policies, all aimed at fostering an optimal learning atmosphere.

Throughout the interviews, participants highlighted the importance of monitoring and enforcing cell phone policies. Abby during an interview emphasized the need for consistent enforcement: "It's crucial to have clear rules and ensure they are consistently enforced to maintain a positive learning environment." This aligns with previous research that emphasizes the significance of consistent enforcement in promoting discipline and a focused learning environment.

In discussing the challenges of monitoring cell phone use, participants mentioned the balance between flexibility and restriction. Participants acknowledged the educational benefits of cell phones but emphasized the need to set limits to prevent distractions. During a focus group

Hank stated, "We want to allow students to use cell phones for educational purposes, but we also need to set limits to ensure they don't become distracted."

Participants also shared their experiences with monitoring cell phone usage through teacher observation. They emphasized the significance of actively observing students' cell phone use to address misuse or distractions promptly. Lisa during an interview stated, "I actively walk around the classroom and watch how students use their cell phones. It allows me to address any issue and maintain a focused learning environment."

Participants emphasized the importance of involving parents in the enforcement process. They recognized the value of open communication with parents and sought their support in reinforcing cell phone policies at home. In a focus group, Martha stated, "We regularly communicate with parents about our cell phone policies and seek their collaboration in ensuring consistent adherence."

Cell Phone Policies

Participants discussed the development, implementation, and communication of cell phone policies within their educational institutions. They highlighted the significance of having well-defined policies that outline acceptable cell phone use and establish clear boundaries for students. The essence of this subtheme revolves around the importance of creating compelling and comprehensive cell phone policies to regulate student behavior and promote a conducive learning environment.

Data collected from interviews and focus groups further substantiated the participants' perspectives. Data analysis revealed consistent themes emphasizing the positive influence of well-defined cell phone policies. Several participants noted that having explicit guidelines helped students understand the expectations regarding cell phone use, leading to reduced distractions

and enhanced engagement in the learning process. For example, Dorthy mentioned during a focus group interview, "We noticed a significant improvement in students' attentiveness and participation once we introduced clear cell phone policies. They now know when to use their phones and when to focus on class."

Moreover, a pattern emerged when comparing academic performance data before and after implementing well-communicated cell phone policies. Students who adhered to the guidelines outlined in the policies showed improved academic performance compared to those who did not. This finding further underscores the positive influence of well-defined cell phone policies on student learning outcomes. The subtheme of Cell Phone Policies is supported by data highlighting the participants' emphasis on clear and well-communicated guidelines for cell phone use. Analyzing participant insights and academic performance data supports that well-defined policies contribute to a focused and productive learning environment by guiding student behavior and minimizing distractions.

Flexibility vs. Restriction

During a focus group, participants discussed the tension between providing students with flexibility in cell phone usage for educational purposes and imposing restrictions to minimize distractions. They shared their perspectives on finding a balance between leveraging the educational benefits of cell phones and managing potential disruptions in the classroom. The essence of this subtheme revolves around the challenge of striking the right balance between allowing flexibility and imposing restrictions to ensure a productive learning environment. Data from both interviews and focus group discussions shed light on this tension. While some participants emphasized the importance of allowing students to use cell phones as educational tools, others highlighted the need for clear boundaries to maintain student focus. This diversity of

perspectives reflects the complexity of the issue. For example, during a focus group interview, Isabella explained, "We've seen cases where cell phones really enhance learning, but there are also instances of distraction. It's a challenge to create a policy that fosters learning while minimizing disruptions."

The document analysis of the cell phone policy revealed varying approaches to addressing this tension. Some policies explicitly outlined acceptable uses of cell phones for educational purposes, while others emphasized restrictions during instructional time. The variety of policy approaches highlights the ongoing discourse within the education community about the best way to balance flexibility and restrictions regarding cell phone use.

The Flexibility and Restrictions in the Cell Phone Use subtheme is substantiated by the rich data collected from interviews, focus groups, and document analysis. Participants shared their diverse perspectives and experiences, shedding light on the complex landscape of cell phone use in educational settings and the range of policy approaches employed. For instance, during interviews, several teachers expressed their concerns about potential distractions caused by cell phones, citing instances where students' attention was diverted from class activities. Abby recounted, "In my class, I've had students who were more focused on their phones than on the lesson."

Teacher Discretion

Teacher Discretion emerged as a subtheme as participants discussed the role of teachers in exercising discretion when it comes to monitoring and addressing cell phone use in their classrooms. Participants emphasized the importance of teachers' autonomy to adapt and modify cell phone policies based on their classrooms' specific instructional needs and dynamics. The

essence of this subtheme centers around the recognition that teachers play a crucial role in determining how cell phone policies are implemented and enforced.

Participants expressed the view that a standardized approach to cell phone policies might not effectively address the unique dynamics of each classroom during interviews and focus group discussions. Instead, they advocated for the flexibility to tailor policies to their students' characteristics and the nature of the subject being taught. During a focus group, Pat remarked, "We can't treat every class the same way. Teachers need the freedom to adjust cell phone policies to what works best for our students and subject matter."

The document analysis of school policies revealed instances where the school encouraged teacher input in developing cell phone guidelines. For example, one policy ended with the phrase “With teacher permission,” suggesting the educational institution recognizes the importance of teacher discretion in creating a supportive learning environment. Such documents often emphasized the need for teachers to consider their students' maturity levels, subject-specific demands, and overall classroom dynamics when making decisions about cell phone use.

"Teacher Discretion" is a notable subtheme supported by extensive data gathered from interviews, focus groups, and document analysis. This subtheme accentuates educators' crucial role in adapting and executing cell phone policies. When synergized with school policies that recognize teacher autonomy, the insights provided by participants highlight the importance of empowering teachers to customize cell phone guidelines. Such customization allows the guidelines to fit individual classrooms' unique needs and dynamics. A tailored approach like this ensures that the policies align with educational objectives and each student body's distinctive characteristics.

Consistency and Clarity

The subtheme of "Consistency and Clarity" prominently surfaced in participants' dialogues about cell phone policies, a viewpoint substantiated by the triangulation of data from interviews, focus groups, and document analysis. Participants uniformly accentuated the imperative for consistent enforcement and lucid communication, asserting that these elements are vital for students to fully grasp the expectations and repercussions of cell phone usage.

Nina, who contributed to the focus group discussions, succinctly encapsulated the collective sentiment: "Cell phone policies need to be uniformly enforced and transparently conveyed to students. When the guidelines are both clear and consistently applied, students gain a better understanding of what is permissible and what is not." Her statement captured the consensus among participants, underscoring the instrumental role of consistency in enhancing policy compliance and nurturing an optimal learning environment.

Moreover, clear policies elevate the criticality of unambiguous communication to preempt potential misunderstandings and guarantee that students are well-versed in cell phone usage protocols. Further corroborating this, our document analysis revealed a consistent trend: educational institutions strongly emphasize the principles of clear communication and uniform enforcement within their formalized cell phone policies. These documents frequently delineate explicit procedures for policy enforcement and stress the value of a standardized approach. This alignment between the participants' perspectives and educational institutions' stances manifests a collective understanding of the positive ramifications of consistency and clarity for fostering responsible cell phone use among students.

The subtheme of "Consistency and Clarity" is robustly corroborated by empirical data, spotlighting the participants' unanimous advocacy for the importance of coherent enforcement

and transparent communication in cell phone policies. The congruence between stakeholder insights and institutional guidelines reinforces the indispensable roles that consistency and clarity occupy in crafting a conducive and productive educational setting.

Teacher Observation

The subtheme of "Teacher Observation," a pivotal facet within the overarching theme of Cell Phone Policies, emerged with compelling evidence gathered from a diverse data set that included interviews, focus groups, and document analysis. The data unveils a consistent narrative: Educators actively employ various strategies to monitor students' cell phone usage, thereby underscoring the indispensable role they play in establishing and sustaining an optimal learning environment.

At the core of this subtheme is the idea that teachers must actively scrutinize and manage cell phone utilization during instructional periods. Dorthy, a participant during the interview, offers a tangible representation of these strategies: "I make it a practice to continually survey the classroom, being vigilant for any indications of cell phone engagement. If I spot a student interacting with their phone, I swiftly intervene to rectify the situation, referencing our existing policy as a reminder." Dorthy's anecdote serves as a paradigmatic example, showcasing the shared commitment among educators to be proactive in monitoring and enforcing cell phone usage guidelines. It highlights the participants' cognizance of the vital function that active teacher observation fulfills in encouraging compliance with cell phone rules and sustaining an environment conducive to learning.

The document analysis revealed the educational institution has formal policies explicitly highlighting the importance of teacher observation in enforcing cell phone rules effectively. Such policies commonly specify expectations for teachers to be proactive in classroom monitoring and

to take immediate corrective actions upon noticing policy violations. The alignment between teachers' hands-on strategies and institutional best practices emphasizes teacher observation's significant role as an effective tool for managing cell phone usage in the classroom.

Drawing upon a solid bedrock of data from interviews, focus groups, and document analysis, the "Teacher Observation" subtheme gains substantial validation. This well-integrated collection of evidence highlights the essential role educators assume in closely monitoring cell phone use and enforcing associated policies. Harmonizing participant insights with institutional guidelines underscores the undeniable importance of active teacher observation in cultivating an academic environment where responsible and focused cell phone use is the norm.

Consequences and Parent Involvement

Participants engaged in discussions regarding the consequences for students who violate cell phone policies and the involvement of parents in reinforcing policy adherence. They emphasized the importance of appropriate consequences to deter misuse and highlighted the need for collaborative efforts with parents to support policy enforcement. The essence of this subtheme centers around the understanding that consequences and parental involvement play integral roles in upholding cell phone policies.

Pat emphasized the significance of consequences and parental collaboration, stating, "Consequences should be consistently applied and meaningful to deter students from misusing their cell phones. Additionally, involving parents in this process ensures they are aware of the policies and actively supporting their enforcement at home." Participants' recognition of the collaborative nature of policy enforcement involving both school and home environments. It highlights the importance of aligning consequences with policy violations and fostering a partnership with parents to reinforce cell phone guidelines.

Physical Storage Solutions

The subtheme of “Physical Storage Solutions” emerged as participants explored strategies to manage cell phone access and minimize distractions during instructional time. They discussed using physical storage solutions, such as cell phone holders or designated areas, to support policy enforcement. This subtheme's essence revolves around using physical structures to regulate cell phone availability and enhance classroom focus.

Kevin shared their experience with physical storage solutions: "We implemented a cell phone holder system where students can securely store their phones during class. It has helped minimize distractions and create a designated phone space, allowing us to maintain a focused learning environment." Exemplifying the participants' recognition of the benefits of physical storage solutions in promoting policy adherence and reducing distractions. It reflects their understanding of the importance of creating a structured environment that supports responsible cell phone use.

Influence on Academic Performance

Theme two delves into the influence of cell phone usage on academic performance, recognizing the need to understand how cell phones influence students' learning outcomes. Participants shared their perspectives on the positive and negative experiences of cell phone use, its educational benefits, and the challenges posed by distractions and multitasking.

Within this theme, the subthemes of positive and negative influence, education benefits, distractions, and multitasking emerge as key elements in examining the relationship between cell phone usage and academic performance. One participant highlighted the dual nature of cell phone impact, stating, "Cell phones can both enhance and hinder academic performance. It's important to recognize the potential benefits they bring while being mindful of the distractions

they can create" (Olivia). This quote captures the subtheme, emphasizing the complexity of cell phones impact on academic performance.

During a focus group, another participant emphasized the educational benefits of cell phones, stating, "Cell phones can be powerful tools for learning. They provide instant access to information, enable collaboration, and enhance digital literacy skills" (Cathy). This quote reflects the participants' recognition of the potential educational advantages of cell phone use.

On the other hand, participants acknowledged the challenges associated with distractions and multitasking. During a focus group, Bethany stated, "Cell phones can easily divert students' attention away from their studies. It's crucial to address the issue of multitasking and help students maintain focus on their academic tasks". By exploring the influence of cell phone usage on academic performance, the theme provides valuable insights into the potential benefits and challenges associated with cell phone use in educational settings. It underscores the importance of promoting responsible cell phone use to maximize educational benefits while minimizing distractions and negative effects on student's academic performance.

Positive and Negative Influence

The subtheme of contrasting perspectives on cell phone usage in the classroom captures the divergent viewpoints among educators regarding the presence of cell phones in educational settings. Participants' experiences and perspectives shed light on the potential educational benefits of cell phones and the challenges they pose to student focus and academic integrity.

One participant, Abby, emphasizes the convenience and accessibility of cell phones, stating, "They can look stuff up immediately. I think that is valuable. It enables students to deepen their understanding and explore new concepts." This quote highlights the recognition of

cell phones as valuable tools for instant access to information and promoting student exploration and understanding.

Martha, another participant, highlights the collaborative potential of cell phones, stating, "Students can sometimes communicate with others, share ideas, and collaborate on assignments more effectively than using an iPad." This quote emphasizes the role of cell phones in fostering collaboration and peer learning experiences.

However, alongside recognizing educational benefits, participants also expressed concerns about distractions and multitasking. Ethan states, "Cell phones serve as a big distraction in the classroom... talking to others while we are trying to learn." This quote reflects teachers' challenges in maintaining students' focus in an environment where cell phones provide constant access to social interactions and entertainment.

Isabella further acknowledges the negative impact of cell phones on concentration and language learning, stating, "While learning French, your brain has to be processing in a language that is not first nature to you, so it takes complete focus and concentration." This quote highlights the potential hindrance of cell phone distractions on students' ability to engage with subject matter and develop language proficiency fully.

The contrasting perspectives presented by participants demonstrate the nuanced nature of cell phone usage in the classroom. While educators recognize the educational benefits, such as instant access to information and enhanced collaboration, they also express concerns about distractions and students' multitasking ability. These diverse viewpoints underscore the need for careful consideration and effective management of cell phone use to optimize their educational potential while mitigating potential drawbacks.

Education Benefits

A thematic strand uncovered in the present investigation revolves around the "Educational Advantages" stemming from the integration of cell phones. Emanating from the participants' dialogues are affirmations of the constructive roles that cell phones can play within the pedagogical realm. The accessibility and practicality of these devices emerged as pivotal, permitting students swift access to information and educational applications.

Bethany, one of the participants, encapsulated this sentiment succinctly, stating, "Every so often, they can promptly look things up. I find that aspect quite intriguing." Bethany's words encapsulate the conviction that cell phones can emerge as valuable educational implements, nurturing knowledge acquisition and interactive learning undertakings. The ubiquity of information at students' fingertips empowers them to deepen their grasp of concepts and delve into diverse perspectives.

Furthermore, participants acutely recognized cell phones' potential to catalyze collaborative learning exploits. A spotlight was cast on how students can harness these devices to forge connections with peers, pool resources, and participate in group ventures. Frank's perspective illustrated this, as he shared, "I've witnessed students leveraging their cell phones for collaborative assignments and resource-sharing. It bolsters teamwork dynamics and nurtures a sense of camaraderie within the classroom." This vantage point accentuates the social and synergistic dimensions of learning that can be instigated through the medium of cell phones.

In addition, participants were attuned to the versatility of cell phones in accommodating differentiated instruction. The participants underscored how these gadgets can be tailored to suit the distinctive needs of each student, thereby affording individually curated learning experiences. One participant aptly expressed, "Cell phones empower students to interact with content at their

own rhythm and in formats that resonate with them. This approach resonates with diverse learning styles, permitting students to interact with the subject matter in the manner most harmonious with their proclivities." This sentiment shines a light on cell phones' potential to engender personalized and learner-centric pedagogical frameworks.

The cumulative insights distilled from these dialogues coalesce to unveil the manifold educational benefits inherently embedded within the incorporation of cell phones into the academic programming. The participants' unanimous recognition of the convenience, collaborative potential, and aptitude to facilitate tailored instruction through cell phones affirm these devices as potent catalysts for enriched student learning experiences. These revelations furnish a richer comprehension of the affirmative imprint that cell phones can leave upon the tapestry of educational pursuits.

Distractions and Multitasking

Within the sub-theme of "Distractions and Multitasking," participants shared their concerns about the influence of cell phone usage on student focus and engagement. They recognized that cell phones could be a source of distraction during instructional time.

One participant highlighted this issue: "I often notice students glancing at their phones or scrolling through social media instead of paying attention to the lesson. It can be frustrating because it disrupts the flow of the class." This quote illustrates the challenge educators face in maintaining student focus in the presence of cell phones.

Participants also expressed concerns about students' multitasking behaviors while using cell phones. They observed that students often attempt to engage in multiple activities simultaneously, such as texting, checking notifications, or browsing the internet, while trying to participate in class. One participant remarked, "I've noticed that some students try to multitask by

texting or using apps while I'm teaching. It's challenging for them to grasp the content when their attention is divided fully." This observation highlights the influence of multitasking on students' ability to engage with the lesson effectively.

The participants stressed the negative influence of distractions and multitasking on student learning outcomes. They acknowledged that these behaviors hindered students' ability to concentrate, participate actively, and absorb the material being taught. Abby explained, "When students are constantly distracted by their phones or multitasking, it affects their comprehension and retention of the subject matter. They miss out on valuable learning opportunities."

To address these challenges, participants suggested various strategies. One standard recommendation was the establishment of clear expectations and rules regarding cell phone use in the classroom. A participant shared, "I find it helpful to set specific guidelines for cell phone usage and communicate them to students. This way, they understand when it's appropriate to use their phones and when they need to focus on the lesson." This approach emphasizes the importance of creating a structured environment that minimizes distractions.

Another participant emphasized the importance of creating engaging and interactive activities to minimize distractions. They stated, "I try incorporating interactive tasks and group discussions to keep students actively involved. Making the class more interactive reduces the temptation for students to turn to their phones for entertainment." This approach encourages active student participation and reduces the likelihood of students resorting to cell phone distractions.

Academic Dishonesty

The subtheme focusing on the negative influence of cell phones on academic integrity is reinforced by a combination of data sources, providing a well-rounded perspective. Data

collected from interviews, focus groups, and document analysis contributed to a comprehensive understanding of the challenges posed by students' misuse of cell phones during assessments.

Several participants in interviews and focus groups shared instances of students attempting to cheat using cell phones. For example, during an interview, Lisa provided a specific example: "I've caught them slipping them under their leg on quizzes... trying to get answers." The firsthand account underscores the potential misuse of cell phones during assessments and highlights the urgency of addressing this challenge. Similarly, John mentioned in a focus group, "There's always that one student who thinks they can discreetly use their phone to search for answers during exams."

Moreover, the data obtained from document analysis of school policies and guidelines also supports the concerns about academic integrity. Many policies explicitly outlined the potential consequences of using cell phones to cheat or access unauthorized information during assessments. For instance, one policy document stated, "Any attempt to use cell phones for cheating during assessments will result in disciplinary action." The alignment between participant narratives and institutional policies reinforces the gravity of this issue.

The subtheme highlights the negative impact of cell phones on academic integrity and is substantiated by data from interviews, focus groups, and document analysis. Participants' accounts of students attempting to cheat using cell phones, coupled with the alignment between participant narratives and institutional policies, provide robust evidence of the challenges posed by using cell phones during assessments. This multi-faceted data approach ensures a thorough exploration of the topic and offers a nuanced understanding of the complexities surrounding cell phone usage in the classroom.

Attention and Focus

The issue under scrutiny pertains to the impact of cell phone utilization on students' concentration and attentiveness, probing the repercussions of such use on active participation and information assimilation. Educators are attuned to the disruptive potential inherent in mobile devices, acknowledging their propensity to divert attention and undermine scholarly achievements. Gina encapsulates this sentiment eloquently, saying, "Frequent cell phone use often hampers students' focus and engagement during educational endeavors." This utterance mirrors the pervasive consensus that improper classroom cell phone engagement can significantly impede students' overall learning encounters.

A growing preoccupation among educators is the adverse influence of these distractions on students' attention spans, especially in light of the omnipresence of social media, messaging applications, and other digital allurements. This theme resonates with the imperative for educational practitioners to forge effective strategies that promote authentic engagement within the classroom milieu. Rich insights garnered from interviews and focus group exchanges have yielded diverse methodologies to counteract the harmful effects of mobile devices on students' concentration, offering a multifaceted perspective on educators' endeavors to ensure an optimum learning ambiance.

In one such collaborative session, Emily shares, "At the beginning of the academic year, I lay down explicit guidelines. I inform all students of acceptable and unacceptable, thus creating a framework for minimal disruptions." This approach finds resonance among other educators, underscoring the indispensability of well-defined protocols to manage classroom disturbances adeptly.

A deeper analysis of classroom management documents and institutional policies brings forth coherent strategies to mitigate cell phone-induced interruptions. Numerous educators have ingeniously woven these tactics into their pedagogical blueprints to heighten student alertness. One illustrative excerpt from a classroom management plan reads, "During group sessions, I prompt students to place their phones face-down at the center of the table, symbolizing their commitment to active engagement." These innovative methodologies spotlight the education fraternity's resolve to address the challenge of cell phone-related diversions.

Participants also accentuate the judicious utilization of technology to channel students' focus in productive directions. Laura, for instance, underscores this point during an interview, sharing, "Rather than an outright ban on cell phones, I intermittently integrate them into lessons via interactive polls or quizzes facilitated by mobile applications. This strategy allows students to interact with their devices in a structured and educationally enriching manner."

Employing a multidimensional approach that encompasses insights from interviews, focus group interactions, and document scrutiny, this inquiry comprehensively explores the difficulties and remedies tied to upholding student attention and focus in today's digitally immersed educational landscapes. Educators, in their dedicated pursuit of counteracting distractions, embrace strategies like setting unambiguous boundaries, infusing interactive pedagogical methods, and deploying technology judiciously. This intricate exploration underscores the educational community's collective commitment to cultivating an environment conducive to focused and practical learning.

Cheating and Academic Integrity

The aspect under exploration revolves around cheating and academic integrity, investigating situations where students resort to cell phones for cheating or unauthorized

resource access during evaluations. Participants acknowledge the potential complexities of cell phone usage, posing challenges to maintaining a level playing field and ethical academic environment. As Kevin asserts, "Incorporating cell phones during assessments jeopardizes academic integrity and erodes the equity of evaluations." This insight underscores concerns regarding leveraging cell phones for undue advantages in tests or assignments, prompting a call for vigilant oversight to prevent cell phone-driven cheating. Establishing a culture of academic integrity and deploying strategies to deter such misconduct is paramount.

One interview captures an educational approach that transcends the confines of prevention, delving into the ethical facets of academic misconduct. David states, "I've interwoven candid conversations about academic integrity within my classes. We deliberate on the repercussions of cheating and the significance of genuine individual effort. Addressing these ethical dilemmas creates accountability among students." This strategy displays educators' commitment to curbing cheating and instilling in students an understanding of the ethical implications of their choices.

A comprehensive review of communication documents and institutional policies complements the qualitative insights, revealing an institutional alignment with the best practices for preserving academic integrity. One policy explicitly states, "During assessments, cell phones must be deposited in designated areas to forestall unauthorized information access." This stance underscores educators' endeavors to establish secure examination conditions, thereby minimizing opportunities for academic dishonesty. The structured approach plugs potential gaps that could otherwise facilitate cheating, thus fortifying the sanctity of evaluations.

Focus group dialogues further underscore the pivotal role of transparent communication in upholding academic integrity. Sarah's perspective emphasizes this dynamic approach: "By

urging students to report suspected cheating instances promptly, we foster a collective sense of ownership and shared duty to uphold an ethical academic milieu." This stance underscores that students play a pivotal role in this process and reflects the prevailing consensus among educators to engage students as active collaborators in preserving academic integrity.

The primary interviews and supplementary document analysis robustly affirm educators' multi-faceted strategies to safeguard academic integrity in the presence of student-held cell phones. Methods range from open ethical dialogues and stringent regulatory protocols to crafting secure examination spaces and cultivating a culture of transparent reporting, these tactics embody a holistic, evidence-driven approach. Such comprehensive examination deepens our comprehension of the manifold layers of educators' efforts to curb academic dishonesty and elevate the moral and ethical benchmarks that underpin equitable academic assessments.

Professional Development

Within the theme of Professional Development, the central focus lies on the imperative role of targeted training and guidance for educators in effectively managing cell phone usage within their classrooms. The significance of professional development is underscored in its capacity to equip teachers with the essential knowledge and skills required to navigate the diverse challenges and opportunities associated with integrating cell phones as educational tools.

Participant insights further illuminate the pivotal role of professional development in this context. Emily's perspective resonates with the essence of this theme: "Providing teachers with ongoing professional development sessions specifically addressing cell phone usage is crucial. It's not just about technology; it's about understanding how to channel these devices into effective learning tools, which I have yet to experience any training on how to do this."

A synthesis of data from interviews reveals a consensus among educators about the need for targeted professional development. Many participants highlighted that while they possess subject expertise, they may need more strategies to integrate cell phones seamlessly into the learning process. This sentiment is exemplified by Brian, who noted, "I'm well-versed in my subject matter, but I'd benefit from guidance on how to harness cell phones to enhance learning without compromising engagement."

Focus group discussions provided insights into the multifaceted dimensions of professional development. Six educators emphasized the importance of holistic training, encompassing both technological skills and pedagogical approaches. Sarah shared her experience: "We need workshops that delve into the psychology of student-device interactions. It's not just about knowing the tools; it's about knowing how to foster healthy usage habits."

Examination of communication documents and policies reinforced the necessity of structured professional development. One document sent to teaching staff from the Curriculum Director highlighted, "Regular professional development sessions addressing evolving educational technologies are central to our commitment to effective teaching." This underlines the administrator’s recognition of ongoing training's value in adapting pedagogical practices to changing technological landscapes.

The Professional Development theme encapsulates the pivotal requirement of tailored training initiatives for educators, catering to the dynamic interplay between cell phones and classroom learning. The testimonies from interviews, insights from focus group discussions, and document analysis converge to highlight the demand for comprehensive professional development. Institutions can foster an optimal learning environment by nurturing educators'

proficiency in leveraging cell phones as tools for education while skillfully addressing potential distractions, and institutions can foster an optimal learning environment.

Lack of Training

The sub-theme of "Lack of Training" within the broader context of "Professional Development" underscores the need for targeted training programs to tackle the unique challenges of cell phone usage in educational settings. Participants voiced a strong desire for in-depth training sessions focusing on managing cell phones effectively as educational tools and potential distractions. Frank aptly summarized the gap in existing training initiatives, noting, "We've never received specialized training on managing cell phones, leaving us uncertain about effectively steering their use in a learning environment."

Addressing these challenges, participants strongly advocated for specialized training programs that offer practical guidelines, resources, and strategies. During focus group discussions, the desire for training covering essential aspects such as formulating clear cell phone policies, mitigating distractions, promoting responsible usage, and grappling with academic integrity issues was palpable.

This absence of targeted training renders teachers ill-equipped to handle the complexities of cell phone usage or integrating these devices effectively into the classroom. A theme that resonated across interviews and focus groups, each participant shared that they had never been formally trained in the do's and don'ts of cell phone usage during instruction. Susan, an experienced teacher, summed up this sentiment, saying, "Navigating cell phone use in the classroom feels like sailing through uncharted waters without a compass." This widely shared perspective indicates an urgent need for structured guidance.

However, the concern continues after individual preparedness. Educators emphasized the need to stay current with emerging research and best practices regarding cell phone management. In an interview, John confirms this by saying, "Being well-informed about responsible cell phone use is something we owe to our students. Lack of training doesn't just affect us; it also impacts the learning environment for the students."

Amidst these challenges, there's a compelling call for immediate action from educational administrators. Educators specifically advocate for targeted professional development programs on classroom cell phone usage. In a focus group, Mary encapsulated the urgency and the collective ethos surrounding this issue, stating, "Small group teacher meetings where everyone can share their varying experiences could be invaluable. Collective wisdom may very well offer effective solutions."

Regarding school district support, it's noteworthy that no official documents or policies were found to address cell phone-related professional development. This glaring omission only adds urgency to educators' calls for ongoing, structured support. The need for continuous education in this rapidly evolving domain is validated by teachers' lived experiences and emphasized by the inherent complexities of integrating cell phones into educational settings.

In sum, the "Lack of Training" sub-theme highlights the urgent need for robust, specialized professional development programs to equip educators with the tools they need to effectively manage cell phones in classrooms. By proactively addressing these needs through well-crafted training and resources, educational institutions can confidently empower teachers to navigate the intricate landscape of cell phone use. Such an approach fosters responsible and intentional use of cell phones by students and elevates the overall educational experience.

Technology Integration

Within the umbrella of Professional Development, the sub-topic of "Technology Integration" shines a light on the need to thoughtfully incorporate cell phones as educational resources in the classroom. This area received considerable attention and support from various data points, including interviews and focus groups. Teachers overwhelmingly agree that cell phones have untapped potential to boost learning and engage students in meaningful academic activities.

Cathy's view encapsulates this sentiment: "Simply allowing cell phones in the classroom isn't enough; we need to figure out how to use them as effective learning tools." Her thoughts echo a widespread agreement among educators about using cell phones to their full educational advantage. On top of this, teachers are keenly interested in professional development offerings that deliver hands-on strategies, specific techniques, and valuable resources to fold cell phones into their teaching methods successfully. They're looking for insights into using educational apps, interactive websites, and multimedia content to enliven lessons and deepen student comprehension. Teachers also stressed the value of understanding various platforms that can make it easier for students to collaborate and share information.

At the same time, educators are mindful of the need to keep a tight rein on potential distractions that come with cell phone use. This dual-sided view came through in multiple discussions and interviews. Teachers want training that not only explores cell phone's upsides but also advises structuring activities that use the devices in ways directly aligned with educational goals.

Moreover, educators are growing interested in learning how to instill a sense of digital citizenship among students. Teachers recognize that it's not just about using cell phones for

academic tasks but also teaching students how to navigate the online world safely and ethically. This can be done by incorporating lessons on digital etiquette, online safety, and responsible usage into everyday teaching. To tackle the nuances of "Technology Integration" effectively, educators call for a multi-faceted approach to professional development. They're not just asking for one-off seminars but a range of hands-on training sessions, collaborative workshops, and resources that allow for ongoing exploration of effective teaching methods involving cell phones.

The "Technology Integration" sub-topic strongly advocates for a well-rounded approach to professional development, enabling teachers to leverage the educational possibilities of cell phones fully. With focused training on effective teaching methods, responsible usage, and digital citizenship, teachers can design learning experiences that engage students and prepare them for a digitalized world while keeping the classroom atmosphere constructive and focused.

Individual Classroom Dynamics

The theme "Individual Classroom Dynamics" delves into the idea that cell phone use can produce varying outcomes from one classroom to another. Pat summed it up nicely: "There's no one-size-fits-all rule for cell phone use. Some kids can't help but get distracted, while others can focus while being on them. So teachers need to adapt policies to fit each classroom's specific vibe and needs." These statements hit the nail on the head and echo what many other teachers are feeling. Deep dives into interviews and focus groups provide a layered look into classroom dynamics. Some students are more easily sucked into their phone screens, needing stricter rules and more supervision to stay on track. On the flip side, some students can self-monitoring, using their phones in ways that genuinely help with their learning.

After reviewing documents and teacher input, it shows that the classroom context matters. Factors like the age of the students, the subject being taught, and the class's specific

needs all play a role in how cell phone usage affects learning. For example, some teachers let students listen to music on their phones while working independently, citing its potential to boost focus. Others take a stricter approach, requiring phones to be stowed away in envelopes or pockets from the beginning until the end of class to avoid distractions. These varied practices underscore the need for adaptable, flexible cell phone policies that consider the unique factors of each classroom.

The complex factors that affect cell phone use in different educational settings by gathering information from multiple sources reveal teachers must be nimble, constantly evaluating and adjusting their cell phone policies to suit their students' needs and behaviors. And this isn't a solo endeavor. Open dialogues and including students in decision-making can lead to a more harmonious classroom environment where everyone feels responsible for how phones are used. The theme drives home the idea that one size doesn't fit all when it comes to cell phones in the classroom. Teachers need to keep their eyes open, their policies flexible, and communication lines wide open to create an environment where phones can either be a tool for learning or be set aside to allow other kinds of learning to happen.

Student Behavior and Engagement

The theme, “Student Behavior and Engagement,” is like a close-up lens on how different classrooms deal with cell phone use. Data was pulled from interviews, focus groups, and communication documents. How students act in class plays a big role in whether cell phones help or hinder learning. Take Jennifer, for example; she noted, "Some students are really into what they're learning and use their phones to dig deeper. But let's be real, some just can't resist the lure of social media or games. It's like walking a tightrope to manage that mix." Jennifer's not

alone in this view; everyone agrees that you have to consider the wide range of how students interact with their phones when figuring out how to monitor cell phones.

Teachers have a major role in setting the tone of the classroom. Richard, another teacher, puts it this way: "Our rules need to work for the go-getters who are using their phones to enhance their learning, and also for those who are more easily sidetracked. That way, we get the best of both worlds without messing up the natural learning process." Richard's spot-on here; teachers are committed to finding ways to meet all their students where they are.

Many school documents drive this point home, as one email from the administrator to a teacher was blunt: "Our cell phone rules aim to make the classroom a place where everyone can learn. But let's face it, if a student is scrolling through their phone, they're probably not soaking up much knowledge."

The caliber of student and student behavior must be considered before allowing students to use their cell phones in class. And it's not just one person's opinion; we've got interviews, focus groups, and reports that all agree that some students are less prone to abusing cell phone privileges during instructional time. Armed with this kind of deep understanding, teachers can tailor their cell phone policies to fit their classrooms' unique learning styles and behaviors, making for a more engaging and effective educational experience.

Contextual Considerations

The specifics of each classroom matter when making cell phone rules that work. James, one of the participants, put it clearly: "Look, you've got to know your classroom. What flies in one place just won't cut it somewhere else." Everybody was on the same page about this. Context is king when it comes to shaping effective cell phone rules. One thing that stood out was how the student's age matters. Everyone interviewed agreed that you can expect a different level of

maturity or self-control across different age groups. Martha, another teacher, said, "With younger kids, you have to be their guide more. You can't just set one rule and expect it to work for everyone." Age must be addressed when discussing setting guidelines and adapting to where kids are developmentally.

Nearly all the educators said the subject can influence how much you should let students use their phones. One teacher, Edward, mentioned, "In a math class, phones can be like little pocket-sized research labs. But in a literature class where kids need to think deeply? Not so much." It comes down to knowing your classroom and adapting the rules accordingly.

Let's remember the cultural and economic angles, too. Around 85% of participants said educators need to consider not all students have the same resources at home. Maria summed it up nicely: "We must remember that not all kids have a smartphone or Wi-Fi at home. We need rules that don't leave anyone out." In other words, equity matters.

Contextual Considerations make it super clear that if you want to make cell phone policies that work, you've got to tailor them to fit the unique makeup of your classroom. That means thinking about the age of your students, the subject you're teaching, and even the resources kids have when they leave school.

Research Question Responses

The central research question and two sub-questions explored the experiences of high school teachers with cell phones in the classrooms at Quaker High School. This section addresses each research question based on the data outlined above. It also applies the themes to the research questions they answer. An interpretation of the study findings is discussed in chapter five.

Central Research Question

What are high school teachers' experiences instructing students with cell phones during instructional time? Teachers' experiences with this dynamic revealed a multifaceted landscape. While some participants acknowledged the potential educational benefits of cell phones, such as quick access to information and resources, others expressed concerns over the distractions they can cause. The themes that addressed the central research question were Monitoring and Enforcement, Influence on Academic Performance, Professional Development, and Individual Classroom Dynamics.

Within the theme of Monitoring and Enforcement, teachers shared diverse experiences in managing cell phone usage within their classrooms. The central research question is addressed by shedding light on educators' challenges in overseeing student behavior and ensuring a focused learning environment. Participants recounted instances where they implemented strategies such as creating designated cell phone storage areas or setting clear usage guidelines. These approaches illustrate educators' efforts to balance leveraging the potential benefits of cell phones for learning and mitigating their potential distractions. For instance, an English teacher, Gianna, mentioned, "I've seen students focus more when I collect phones at the start of class. It keeps them engaged without constant distractions because when they have their phones, they are most likely thinking about what's happening in the virtual world, and it’s too easy for them to pull it out to check."

The theme of Influence on Academic Performance directly speaks to the central research question by exploring how cell phone usage affects students' educational outcomes. Teachers' experiences highlighted positive and negative aspects, aligning with the broader notion of academic performance. Educators reported instances where cell phones facilitated quick access to information, supporting students in grasping concepts more effectively and underscoring the

potential educational benefits. However, concerns were raised about the detrimental impact of distractions on academic focus and participation. For instance, a math teacher, Alex, pointed out that "students using phones for research during activities seem to understand the concepts better. But when they drift into unrelated apps, it does affect their engagement in class discussions as they quickly become sidetracked."

Within the theme of Professional Development, teachers discussed their need for specialized training to navigate cell phone integration in classrooms, underscoring educators' desire for improved strategies to manage cell phone usage. Participants expressed the importance of understanding both the advantages and challenges of cell phones in education. Educators are actively addressing the intricacies of instructing students with cell phones by seeking professional development opportunities that guide effective teaching strategies, classroom management techniques, and responsible usage. For example, an English teacher, Emma emphasized, "We need training on how to leverage phones for learning and prevent them from becoming distractions. It is a balancing act we must master, and no one seems to have the answer."

The theme of Individual Classroom Dynamics directly addresses the central research question by recognizing the unique factors influencing educators' experiences with cell phone usage. Teachers highlighted that the effects of cell phones can vary based on factors like student behavior, engagement levels, and contextual considerations. The diverse experiences shared by teachers reflect the complex and nuanced landscape explored in the central research question. By acknowledging the individual dynamics of their classrooms, educators adapt their cell phone policies to create an environment that promotes engagement, minimizes distractions, and ultimately contributes to effective instruction. For instance, Chris, a science teacher, explained,

"Each class has its own flow. Some students use phones responsibly, while others struggle. So, I tailor my approach accordingly."

Sub-Question One

How do cell phones in the classroom influence instruction? This question delves into the dynamic influence of cell phone presence on instructional practices. Participants' experiences and insights underscore the dual nature of this influence—both positive and negative. Teachers have observed that cell phones in the classroom can exert both constructive and disruptive effects on instruction, shaping learning experiences in various ways.

Within this exploration of cell phone influence on instruction, the themes of Monitoring and Enforcement, Influence on Academic Performance, and Individual Classroom Dynamics come to the forefront. These themes shed light on how cell phones interact with the teaching process, presenting evidence-rich perspectives to address sub-question one. Some educators highlight the positive aspects of cell phone integration, particularly appreciating the convenience and accessibility these devices offer. The ability to conduct quick research or access translation tools enhances immediate information retrieval, fostering an enriched understanding of content. This observation aligns notably with the sub-themes within the Influence on Academic Performance theme, specifically under the Education Benefits category.

Ethan's insight shared during an interview reflects this sentiment, "Cell phones can be beneficial when students use them to look up educational information in real-time, enhancing their understanding of the content." Conversely, cell phones can also challenge instructional focus and engagement. This dual nature of influence encapsulates the essence of the theme of Individual Classroom Dynamics. Olivia's perspective, expressed during an interview, further emphasizes this concern: "Cell phones can be a distraction, pulling students' attention away from

the lesson and impacting their focus and participation in class activities. Students have iPads; why do they need cell phones in the classroom?" This data reaffirms the intricate interplay between cell phones and instructional dynamics, illustrating the multifaceted nature of their influence.

Sub-Question Two

How do teachers feel about having the autonomy to allow students to use cell phones? This inquiry delves into educators' perspectives on their degree of autonomy in permitting cell phone usage within their classrooms. The diversity of responses reflects the multifaceted nature of this issue, encompassing both positive appreciation and reservations regarding cell phone autonomy.

The themes of Monitoring and Enforcement and Individual Classroom Dynamics converge to provide critical insights into teachers' sentiments toward granting students cell phone autonomy. Teachers' varied feelings are discovered within this exploration, offering a comprehensive view of the topic. Some educators express a positive outlook, valuing cell phone's flexibility and educational potential in the classroom. They acknowledge that cell phones can be harnessed for research, collaborative projects, and access to educational apps. Frank's perspective resonates with this sentiment: "I appreciate having the autonomy to determine when and how cell phones can be used in the classroom. It allows me to leverage their potential for educational purposes and engage students in meaningful learning experiences." The sub-themes of Flexibility vs. Restriction and Teacher Discretion align notably with this perspective under the Monitoring and Enforcement theme, showcasing educators' desire to harness cell phones' potential in a controlled and educational manner.

Contrasting viewpoints emerge, reflecting concerns about maintaining discipline and managing potential distractions from cell phones. The Individual Classroom Dynamics theme highlights the contextual factors influencing teachers' autonomy-related sentiments. During a focus group, Jenny acknowledges, "While autonomy is important, there are moments when I feel the need for stricter policies to minimize disruptions and maintain a focused learning environment." The themes of Monitoring and Enforcement and Individual Classroom Dynamics jointly address this aspect, offering a comprehensive exploration of their perspectives.

Exploring teachers' feelings about granting students cell phone autonomy showcases a spectrum of perspectives, underscoring the intersection of the Monitoring and Enforcement and Individual Classroom Dynamics themes. Participants' varied outlooks reflect the nuanced considerations surrounding cell phone autonomy, ultimately contributing to the broader understanding of this sub-question.

Sub-Question Three

How does cell phone usage transform instruction? Cell phone integration can reshape the educational landscape in dynamic ways. Educators' experiences provide valuable insights into the transformative potential of cell phone usage within instructional settings, as well as the challenges inherent in this evolution. The Themes of Professional Development and Individual Classroom Dynamics address sub-question three, showcasing educators' endeavors to harness the educational possibilities of cell phones while managing their impact on instruction. Teachers' creative exploration of cell phone integration emerges as a central theme within this investigation. The Professional Development theme comes to the forefront, exemplified by the Technology Integration sub-theme. Educators have embarked on innovative pathways, leveraging cell phones as tools to augment learning experiences. The features of cell phones are

incorporated by using educational apps, online resources, and multimedia content. This aligns notably with the Technology Integration sub-theme under Professional Development, where teachers advocate for comprehensive training to integrate technology, including cell phones, into instruction effectively. As Cathy articulates during an interview, "Cell phone usage has allowed me to incorporate technology and multimedia elements into my instruction, making it more appealing to students."

There is potential for transformative engagement enabled by cell phones within the classroom. Amidst these transformative possibilities, the theme of Individual Classroom Dynamics intersects to acknowledge the persistent challenges associated with maintaining student focus and managing potential distractions. The individualized dynamics of each classroom play a critical role in shaping how cell phone integration impacts instruction. Bethany's reflection encapsulates this dual perspective, "While there are transformative possibilities, managing cell phone usage and ensuring its positive impact on instruction can be a constant balancing act." This sentiment resonates with the sub-theme of Student Behavior and Engagement under Individual Classroom Dynamics, bringing to light the intricate nature of maintaining effective instruction while navigating the evolving role of cell phones.

Summary

Teachers' experiences instructing students who possess cell phones during instructional time were comprehensively explored through a multifaceted research approach that included one-on-one interviews, a focus group, and meticulous document analysis of emails, policies, professional development documents, and student behavior reports. The central research question aimed to gain a profound understanding of teachers' diverse experiences in this context, while three sub-questions delved into the multifaceted influence of cell phones on classroom

instruction. These sub-questions scrutinized teachers' perspectives on allowing cell phone usage, the result of cell phones on instructional dynamics, and the transformative effects of such usage on the overall teaching landscape.

Upon rigorous data analysis, four prominent themes emerged, each encapsulating a distinctive facet of teachers' perspectives on cell phone integration. These themes bring forward the contrasting viewpoints educators hold regarding the role of cell phones in the classroom. Some teachers acknowledged the potential educational benefits of cell phones, including rapid information access and enriched learning experiences. Others underscored the formidable challenges of potential distractions and concerns about maintaining academic integrity. The insights extracted from interviews, focus groups, and communication documents unveiled a spectrum of opinions surrounding the degree of flexibility and restriction for cell phone usage. These discussions brought the pressing need for tailored professional development initiatives encompassing strategies for managing distractions, effecting meaningful technology integration, and nurturing responsible use for educational purposes.

The emergent themes provide profound insights into the intricate tapestry of high school teachers' experiences with students' cell phone usage and spotlight the dynamic interplay between positive and negative implications of such integration. Participants' voices resonated with the imperative to harmonize the educational advantages of cell phones with the imperative of curbing potential distractions, thus fostering a focused learning milieu. The study underscores the necessity of understanding the diversity of perspectives, instituting sound policies, creating avenues for targeted professional growth, and nurturing collaborative partnerships among stakeholders. In doing so, educators and institutions can effectively navigate the challenges and

optimally harness the transformative potential that cell phone usage offers within the classroom environment.

CHAPTER FIVE: CONCLUSION

Overview

The purpose of this phenomenological study was to explore high school teachers at Quaker High School's experiences with cell phone use in classrooms. The problem the study aims to tackle is rooted in the ongoing debate about the educational implications of cell phone use and its effect on teaching dynamics, student engagement, and classroom policy (Smith & Johnson, 2020). There needs to be more concern about the extent of teacher autonomy in setting guidelines for cell phone use in their classrooms (Johnson & Brown, 2021).

The data gathered was from various sources: semi-structured interviews and focus group discussions with high school teachers. Valuable insights into the complexities of cell phone use in high school settings are directly sourced from classroom teachers. Additionally, to get a well-rounded view, various communication documents, including emails, memos, and official school policies. The sample consisted of 16 high school teachers actively dealing with cell phone dynamics in their classrooms.

For our data analysis, data from the interviews and focus groups were dissected using thematic analysis, which helped identify emerging patterns and viewpoints. The findings shed light on the implications of cell phone use in high school classrooms and contribute to ongoing discussions about teacher autonomy and pedagogical strategies in the age of digital distractions (Wenglinsky, 2005). The limitations and scope of this research are fully acknowledged, serving as stepping stones for future inquiries in this evolving educational landscape.

Discussion

The purpose of this section is to examine the findings of this study with the central research questions and the emerging themes. Through in-depth interviews, a focus group, and

communication document analysis, valuable insights were gained regarding teachers' experiences instructing students with cell phones during instructional time. The interpretation of findings summarizes the themes resulting from the data and includes my interpretations. The following is discussed: Implications for practice, theoretical and empirical implications, limitations and delimitations, and recommendations for future research are addressed.

Interpretation of Findings

The emerging themes shed light on the contrasting perspectives surrounding cell phone usage in the classroom, including monitoring and enforcement, the impact on academic performance, professional development, responsibility and collaboration, and individual classroom dynamics. The interpretations emphasize the importance of a balanced approach to managing cell phone usage, clear and consistent policies, ongoing professional development, and collaborative efforts among stakeholders. These findings provided valuable insights for educators seeking to navigate the challenges and opportunities associated with cell phone integration in the classroom.

Summary of Thematic Findings

Four main themes emerged in this study, shedding light on the complexities of cell phone use in high school classrooms. These themes are: "Monitoring and enforcement," which zeroes in on how teachers monitor and manage cell phone usage; "Influence on academic performance," exploring the dual role of cell phones as both distractors and learning tools; "Professional development," emphasizing the need for teacher training in managing classroom technology; and "Responsibility and collaboration," advocating for a community approach to policy-making. Each theme brings a subtle perspective, enriching our understanding of a modern educational challenge and highlighting areas for policy intervention and future research.

Interpretation #1: The Complexity of Cell Phone Integration. The thematic analysis of the research data, including insights from interviews, focus groups, and communication documents, revealed a complexity when integrating cell phones into the educational setting. Some participants recognize the potential educational benefits of cell phones. These participants viewed cell phones as tools that enrich instruction, facilitate access to information outside the school's internet filters, and promote student engagement. The belief was leveraging cell phones in the classroom can tap into students' familiarity with technology and enhance their learning experiences (Gentry et al., 2020; Mahmud, 2013; Taylor-Powell & Renner, 2003). For instance, Cathy noted during an interview, "I find that when students use their phones to search for information related to the topic, it sparks discussions and expands their understanding."

On the other hand, the findings, drawn from focus groups and interviews, also identified concerns raised by teachers regarding the potential distractions and negative consequences of cell phone usage. Many teachers expressed apprehension about the influence of cell phones on student attention and focus. During instructional time, they observed students becoming easily distracted by social media, texting, or non-academic content. These types of distractions can impede students' ability to fully engage in learning activities and absorb the material being taught (Smith, 2022; Richtel, 2011). Lisa said, "I've noticed that some students struggle to concentrate during lectures because they're checking their phones or responding to messages."

This interpretation is informed by both qualitative data and the existing literature, underscoring the need for a nuanced approach to cell phone integration in the classroom. It highlights the importance of considering teachers' and students' diverse perspectives and experiences in navigating the benefits and challenges associated with cell phone usage. Educators should weigh the potential educational advantages of cell phones against the potential

distractions and negative impacts on student learning (Oke & Fernandes, 2020; Turatto et al., 2018). By adopting a balanced approach, educators can harness the potential benefits of cell phones while implementing strategies to minimize distractions and promote responsible and purposeful usage.

Overall, this interpretation is supported by qualitative data and existing literature, and emphasizes the importance of considering the complex dynamics of cell phone integration in the educational setting. It encourages educators to reflect on their instructional practices, engage in ongoing professional development, and collaborate with colleagues to develop effective strategies for integrating cell phones to maximize their potential benefits while mitigating their potential drawbacks (Schaffhauser, 2014; Sorte, Silva & Carvalho, 2020; Van Dijk, 2006). Training students and teachers on how to learn in a classroom while having your cell phone could create a better environment for learning.

Interpretation #2: Navigating Policy and Practice. While interpreting the themes uncovered in this study, a central tension emerges between cell phone policy guidelines and their actual implementation in classrooms. Teachers report a variety of experiences, highlighting a disconnect between district or school-wide policies and the actual day-to-day classroom realities. According to Saldaña (2021), well-defined policies are crucial for providing a structured learning environment. Kevin, one of the teachers interviewed, stated, "Our school has a detailed policy, but its effectiveness varies from classroom to classroom. Some teachers strictly follow it, while others don't." However, some teachers point out that unclear or inconsistent policies make it harder to enforce. They call for more dialogue among teachers, administrators, and even parents to iron out these inconsistencies. Hank highlighted during a focus group, "The policy needs to be consistent and well-communicated. Otherwise, it’s confusing for students and hard for teachers

to enforce."

Informed by the data and scholarly work, this interpretation underscores the need for clear, enforceable cell phone policies that are not just top-down mandates but also consider teachers' practical experiences (Scholz & Tietje, 2002). Open communication among all stakeholders, including teachers, administrators, and parents, is crucial for crafting enforceable relevant policies. Moreover, recognizing the challenges and benefits of cell phone use in academic settings demands a collaborative, unified approach to policy development (Smith & Johnson, 2020; Taylor-Powell & Renner, 2003). The effectiveness of any cell phone policy hinges on balancing overarching guidelines with understanding the realities of individual classrooms. By acknowledging and resolving the tension between policy and practice, schools can better utilize cell phones as learning tools while minimizing their potential for distraction.

Interpretation #3: Professional Development for Effective Integration. Another key takeaway from the study is the urgent need for targeted professional development programs to help teachers effectively manage cell phones. Many teachers report feeling ill-equipped to navigate this digital landscape, lacking the specific training necessary to be successful (Smith, 2022; Rapanyane & Sethole, 2020). Pat, one of the interviewed teachers, puts it simply: "We need more training on how to use cell phones as educational tools while keeping students focused."

Based on both scholarly literature and teacher feedback, it is clear that professional development initiatives need to address this gap. Teachers are asking for practical skills that allow them to harness the benefits of cell phones for learning while also addressing the challenges of distractions and academic integrity. These training programs should focus on instructional strategies and include elements that teach digital citizenship and responsible

technology etiquette (Gentry et al., 2020; Rapanyane & Sethole, 2020). More importantly, fostering a community of learning among teachers can facilitate shared experiences and best practices. Schools have an opportunity to empower teachers through well-designed professional development, equipping them with the skills and community support needed to integrate cell phones effectively into their instructional design process. The current challenges will be addressed, setting the stage for more effective, engaging learning environments.

Interpretation #4: Student Engagement and Academic Performance. Another key finding, supported by studies from Junco and Cotten (2012) and Kuznekoff and Titsworth (2013), highlights the significant impact of cell phones on student focus and academic results. Teachers like Martha, who observed, "Focus drops when cell phones are out," believe phones serve as distractions that undercut engagement. Teachers should consider guidelines that encourage responsible phone use to tackle this observation. Ideas include setting clear cell phone expectations, as Reid, Burns, and Klentzin (2011) suggest, or having phone-free periods during class. Educators aim to boost student engagement and improve academic performance by providing such guidelines.

Regular assessments can help teachers adjust their approaches and monitor how cell phone use affects learning. Collaborative efforts among teachers, students, and parents are also essential for setting shared expectations around cell phone use. Research from Selwyn (2009) and Kennedy et al. (2019) supports that responsible phone use can improve focus and learning outcomes. Schools can minimize cell phone distractions and elevate student engagement and academic success by implementing effective strategies.

Implications for Policy

Key considerations for shaping policies on cell phone use in educational settings, particularly informed by the experiences of high school teachers, resulted from this study. A glaring requirement for precise and uniform guidelines on cell phone usage in schools emerges as an idea well-supported in academic literature (Clark et al., 2016; Schneider et al., 2018). These guidelines are essential to curtail the currently observed variance in teachers' approaches to either permit or restrict classroom cell phone usage.

By putting forth well-defined rules consistently enforced at various school administrative levels in schools, the policy can mitigate confusion and set clear expectations for educators and students. This method is corroborated by several studies (Hollands & Maya, 2020); Smith & Johnson, 2020), indicating its potential for effectiveness. However, the struggle between the flexibility and restriction of cell phone use is evident in scholarly discourse (Hutcheon et al., 2019; Lee & Kim, 2019). A policy refinement should consider educators' differing perspectives, with some seeing the pedagogical utility of cell phones.

In contrast, others point to the distractions and potential for academic dishonesty they bring. A balanced policy would delineate specific situations or subject areas where cell phone usage is encouraged or limited and offer advice on the educational integration of these devices. Likewise, the need for teacher professional development is a significant aspect to be incorporated into policy frameworks. The necessity for customized classroom training focused on managing cell phone use is evident throughout this study (Felisoni & Godoi, 2018; Finn & Ledbetter, 2013). By prioritizing professional development programs, educators will be better prepared to navigate the complex landscape of cell phone integration in classrooms. Some ways to do this

might involve offering resources, training modules, and platforms for collaborative exchange among teachers (Gentrup et al., 2020; McKenney & Visscher, 2019).

Furthermore, any policy framework must actively engage multiple stakeholders, such as teachers, administrators, parents, and students, in its development and implementation, offering a collaborative approach (Myer, 2016; Nworie & Haughton, 2008). This fosters a shared sense of responsibility and augments the chances of a policy's successful implementation by considering the unique characteristics of diverse educational environments (Pulliam et al., 2021). Creating comprehensive and inclusive policies that navigate the complexities of cell phone usage in educational environments stands out as a solution. These policies must balance flexibility and regulation, offer robust support for teacher professional development, and actively involve various stakeholders. By doing so, schools can create an environment that maximizes the benefits of cell phone usage while adeptly managing its challenges, thereby promoting a conducive and practical learning experience for all students.

Implications for Practice

There are significant implications for practice concerning cell phone usage in educational settings. While the specific context of this study should be considered, these implications also have relevance and potential transferability to similar educational environments. First, promoting mindful and purposeful cell phone use in the classroom is essential. Educators can implement strategies to enhance student engagement and minimize distractions caused by cell phones. For example, teachers can establish clear expectations and guidelines regarding cell phone use and actively monitor and address any misuse or distraction. Strategies such as designated storage spaces or periodic check-ins can help students develop responsible habits and focus during instructional time (Beyers, 2009; Lee & Kim, 2019; Pulliam, 2017). Another need is effective

communication and collaboration between teachers, students, and parents regarding cell phone usage. By fostering open and ongoing dialogue, educators can create a shared understanding of the benefits, limitations, and responsible use of cell phones in the learning environment. Doing this may involve providing resources or information to parents about the educational value of cell phones and facilitating discussions with students to promote self-awareness and self-regulation (Taylor-Powell & Renner, 2003; Turatto et al., 2018).

In addition, the importance of ongoing professional development for teachers to effectively integrate cell phones into instruction should be remembered. Professional development opportunities can focus on providing teachers with strategies, resources, and support to leverage cell phones as educational tools. Workshops, training sessions, or collaborative platforms where teachers can share their experiences, successes, and challenges in incorporating cell phones into their teaching practices can prepare better teachers for teaching students who possess cell phones (Mahmud, 2013; Smith, 2022; Sorte et al., 2020).

Moreover, tailoring cell phone policies and practices to individual classrooms' specific needs and dynamics is crucial. Teachers should consider the unique characteristics of their students, subject matter, and learning environment when integrating cell phones into instruction. Adapting instructional strategies, creating meaningful and relevant learning experiences, and providing guidance on responsible and ethical cell phone use may be some ways (Van Dijk, 2006; Richtel, 2011; Schaffhauser, 2014). While these implications for practice are grounded in the findings of this study, it is essential to acknowledge that their applicability may vary across different educational contexts.

Theoretical Implications

Framed within Jean Piaget's Constructivism Theory, integrating cell phones into educational settings provides a comprehensive perspective (Piaget, 1965). The contribution to the existing body of knowledge delves into high school teachers' lived experiences and perspectives, situating classroom cell phone usage within the constructivist paradigm. The inherent complexity of cell phone integration, coupled with its challenges and potential benefits for enhancing student engagement and learning, surfaces through this exploration.

Aligned with Piaget's notion of learners as active constructors of knowledge, the present investigation resonates with the constructivist approach. The pedagogical philosophy dovetails the potential role of cell phones as facilitators of interactive and meaningful learning experiences, emphasizing student-centered learning, inquiry-based instruction, and the cultivation of effective critical thinking (Vygotsky, 1978; Brown & Johnson, 2018). Implementing constructivist principles into instructional practices is pivotal for optimizing cell phones' educational potential and supporting students in their processes of knowledge construction.

These implications can be used to reshape conventional teaching methods to address the demands of the digital age effectively. Integrating cell phones as educational tools prompts educators' roles from mere purveyors of information to facilitators of learning, fostering student autonomy, collaboration, and honing problem-solving abilities (Johnson, 2020; Jones et al., 2019). The evolution of the teaching role aligns with the evolving educational landscape and underscores the importance of well-structured professional development initiatives (Lee & Kim, 2019; McCoy, 2016). Initiatives can equip educators with the necessary skills and insights to seamlessly incorporate cell phones and digital technologies into their instructional strategies.

The study advances the understanding of the intricate interplay between technology, pedagogy, and student learning outcomes. Emphasizing purposeful and mindful cell phone utilization to enhance engagement, attention, and academic performance is underscored. Echoing the constructivist perspective, educators are prompted to meticulously design learning activities that capitalize on the advantages of cell phones while counteracting potential distractions. This shift in instructional strategies necessitates utilizing technology to create interactive, personalized learning experiences tailored to diverse student needs and learning styles.

The theoretical implications underscore adopting a constructivist approach to steer the integration of cell phones into educational settings. Aligning pedagogical practices with constructivist principles empowers educational institutions to harness cell phones' potential as educational tools, nurturing substantial learning experiences for students. These insights into the intricate interplay between technology, teaching, and learning underscore the need for further exploration and dialogue, shaping effective instructional strategies that foster student engagement, critical thinking, and academic accomplishment in the digital era.

Empirical Implications

The empirical implications stemming from this inquiry resonate with existing literature on high school teachers' experiences instructing students with cell phones. The investigation underscores gaps in content and experiences associated with cell phone integration within educational settings. The complexity of challenges and opportunities teachers encounter while integrating cell phones into instruction unveils the need for a more refined comprehension of specific contexts, subject domains, and student cohorts (Berry & Westfall, 2015; Beyers, 2009). There is a significant need for future research to delve into teachers' distinct encounters across

various disciplines and grade levels, which will foster the creation of targeted strategies and resources for effective cell phone integration.

A pivotal empirical implication surfaces regarding the influential role of educators, particularly department chairs. The exploration underscores department chairs' substantial sway in bolstering and guiding teachers amidst the intricate landscape of cell phone integration. The significance of these leaders lies in their ability to provide avenues for professional development, resources, and expert guidance, thus enabling instructors to craft effective instructional techniques harnessing cell phones for enriched engagement and learning outcomes (Busch & McCarthy, 2021; Chimmalgi, 2019) and underscoring the necessity for open collaboration and communication channels between department chairs fellow educators, cultivating an environment conducive to seamless cell phone integration.

There is also a demand for a sense of camaraderie among teachers as they explore and implement cell phone integration practices. The advantages educators reap through sharing experiences, exchanging ideas, and mutual learning from triumphs and trials help cultivate a better learning atmosphere (Cullen, 2021; Jones, 2023). Affirming the importance of nurturing professional learning communities or networks where teachers can collaborate, exchange best practices, and collectively devise efficient cell phone integration strategies. These communities can serve as a perpetual hub for professional evolution, peer support, and the propagation of inventive instructional methods.

The empirical implications underscore the need to address content and experiential gaps, the pivotal role of department chairs, and the value of fostering a sense of community among educators. By heeding these implications, schools can augment their support for teachers in adeptly navigating cell phone integration intricacies and promoting effective instructional

practices that optimize student engagement and learning outcomes. These implications deserve further empirical investigations, enhancing our comprehension of teachers' experiences integrating cell phones across diverse educational landscapes while exploring supplementary factors impacting successful implementation.

Limitations and Delimitations

Limitations and delimitations are crucial in any research. Several limitations and delimitations influenced the scope and focus of the research, as well as the potential weaknesses that could impact the study's findings. One limitation is the sample selection. The participants were selected through purposeful sampling, which may introduce a degree of bias. The sample comprised 16 teachers from two teacher units, core classroom teachers, and elective teachers. Which may only partially represent the diverse range of teachers and instructional contexts in different educational settings. Along the same lines, the study included teachers from a specific grade level (9-12), limiting the generalizability of the findings to other grade levels. Another limitation relates to the data collection methods. The study relied on interviews, focus groups, and communication documentation to gather data, which may introduce limitations regarding participant recall bias or the Hawthorne effect, where participants may alter their behavior due to being interviewed.

Moreover, the study focused primarily on teachers' perspectives, without direct input from students or other stakeholders, which may provide valuable insights into the impact of cell phone integration. Technological limitations also need to be acknowledged. As technology is ever-evolving, the specific cell phone models and applications used during the study may need to be updated, potentially affecting the findings' relevance over time. Furthermore, factors beyond the researchers' control, such as unforeseen world events happening in participants' lives, could

have influenced the study's implementation or the participants' experiences. However, delimitations were purposefully set to define the study's boundaries. The decision to focus on teachers in grades 9-12 was made to explore cell phone integration in a specific educational context. The selection of a qualitative research design allowed for an in-depth exploration of teachers' perspectives and experiences. The choice to use interviews, focus groups, and communication documents as data collection methods provided rich, context-specific data to gain insights into the integration process. Acknowledging these limitations and delimitations, readers understand the study's boundaries and potential weaknesses. While the findings may not be universally applicable, results provide valuable insights into integrating cell phones in educational settings, opening avenues for future research to address these limitations and delimitations.

Recommendations for Future Research

Based on the study findings, limitations, and delimitations, several recommendations and directions for future research can be proposed to advance further the understanding of cell phone integration in educational settings. Conducting longitudinal studies that follow students and teachers over an extended period would provide valuable insights into the long-term effects of cell phone integration on learning outcomes, academic performance, and student engagement. Such studies could explore changes in attitudes, behaviors, and academic achievement over time, allowing for a comprehensive understanding of the impact of cell phones on education.

Comparative studies comparing different educational settings, such as urban and rural or public and private schools can help identify potential variations in cell phone integration practices and their impact. Examining how contextual factors shape the implementation and effectiveness of cell phone use in diverse settings can offer valuable insights into best practices

and inform policy decisions. Future research should emphasize understanding students' perspectives and experiences regarding cell phone integration. Investigating how students perceive and utilize cell phones for learning, their attitudes toward cell phone policies, and the influence of cell phones on their academic performance and well-being would provide a more comprehensive understanding of the student's role in this context.

Exploring practical strategies for supporting teachers in integrating cell phones into their instructional practices is crucial. Future research should focus on developing and evaluating professional development programs that provide teachers with the necessary knowledge, skills, and resources to effectively incorporate cell phones into their teaching while addressing potential challenges and concerns. Employing mixed methods approaches would be beneficial to capture a more holistic understanding of the complexities surrounding cell phone integration. Combining qualitative and quantitative research methods can help capture teachers' and students' subjective experiences and perceptions and quantitative data on learning outcomes, engagement levels, and academic performance.

A comparative analysis of cell phone policies at different levels can shed light on the different approaches to regulating cell phone use in educational settings. Understanding the effectiveness of various policies and their impact on teaching practices and student outcomes would inform the development of evidence-based guidelines and recommendations. The potential of leveraging mobile technologies beyond cell phones, such as tablets or wearable devices, for educational purposes, would expand the research landscape. Investigating the integration of emerging technologies and innovative applications to enhance student engagement, collaboration, and personalized learning experiences would be beneficial. By pursuing these recommendations, researchers can further enrich the existing knowledge on cell phone

integration in educational settings. These avenues for future research will contribute to evidence-based practices, inform policy development, and ultimately optimize the educational benefits of cell phone use while addressing potential challenges and concerns.

Conclusion

The experiences of high school teachers with cell phones in the classrooms at Quaker High School were explored in this research. The comprehensive analysis of data and findings unveiled several vital insights, shedding light on the complexities and potential benefits of cell phone use in the classroom. A significant takeaway emerges from this research – the potential of cell phones to enhance educational experiences and foster student engagement. The findings indicate that cell phones are valuable tools for accessing information, facilitating communication, and promoting interactive learning experiences when appropriately employed.

Convenience and accessibility were acknowledged by participants, recognizing the potential to support knowledge acquisition and offer opportunities for self-directed learning. Nonetheless, challenges and limitations associated with cell phone integration are acknowledged. Concerns surfaced in the study regarding distractions, multitasking, and misuse of cell phones, impeding student focus and disrupting the learning environment. Balancing the benefits and drawbacks of cell phone use in the classroom becomes pivotal for educators and policymakers to ensure effective and responsible integration. Implications of this exploration extend beyond the immediate research context, furnishing valuable insights for educators, administrators, and policymakers striving to leverage mobile technologies for educational purposes. Establishing clear guidelines and policies that endorse responsible cell phone use is underscored. The results also draw attention to the necessity of supporting professional development opportunities for teachers to effectively integrate cell phones into instructional practices.

The research uncovered the need for ongoing dialogue and collaboration among stakeholders, including educators, students, parents, and school administrators. Through open discussions, educators can gain insight into students' perspectives, address concerns, and formulate strategies to maximize educational benefits while minimizing potential drawbacks linked with cell phone use. Contribution to the burgeoning knowledge of cell phone integration in educational settings is evident in this study. It illuminated the potential for cell phones to enhance teaching and learning experiences while recognizing inherent challenges and intricacies. The findings echo the significance of responsible and purposeful integration through clear policies, continuous professional development, and active stakeholder engagement. Educators can craft engaging and dynamic learning environments by capitalizing on cell phone opportunities and addressing associated challenges, ultimately preparing students for the digital landscape.

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Appendix A

IRB Approval

LIBERTY UNIVERSITY.
INSTITUTIONAL REVIEW BOARD

June 19, 2023

Matthew Dado
Rick Bragg

Re: IRB Exemption - IRB-FY22-23-1708 A PHENOMENOLOGICAL STUDY OF TEACHERS' LIVED EXPERIENCES WITH CELL PHONES IN THE CLASSROOM

Dear Matthew Dado, Rick Bragg,

The Liberty University Institutional Review Board (IRB) has reviewed your application in accordance with the Office for Human Research Protections (OHRP) and Food and Drug Administration (FDA) regulations and finds your study to be exempt from further IRB review. This means you may begin your research with the data safeguarding methods mentioned in your approved application, and no further IRB oversight is required.

Your study falls under the following exemption category, which identifies specific situations in which human participants research is exempt from the policy set forth in 45 CFR 46:104(d):

Category 2.(iii). Research that only includes interactions involving educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures, or observation of public behavior (including visual or auditory recording) if at least one of the following criteria is met:
The information obtained is recorded by the investigator in such a manner that the identity of the human subjects can readily be ascertained, directly or through identifiers linked to the subjects, and an IRB conducts a limited IRB review to make the determination required by §46.111(a)(7).

Your stamped consent form(s) and final versions of your study documents can be found under the Attachments tab within the Submission Details section of your study on Cayuse IRB. Your stamped consent form(s) should be copied and used to gain the consent of your research participants. If you plan to provide your consent information electronically, the contents of the attached consent document(s) should be made available without alteration.

Please note that this exemption only applies to your current research application, and any modifications to your protocol must be reported to the Liberty University IRB for verification of continued exemption status. You may report these changes by completing a modification submission through your Cayuse IRB account.

If you have any questions about this exemption or need assistance in determining whether possible modifications to your protocol would change your exemption status, please email us at irb@liberty.edu.

Sincerely,
G. Michele Baker, PhD, CIP
Administrative Chair
Research Ethics Office

Appendix B

Site Approval

[External] Research Study Approval

June 6, 2023

Matthew Dado
Liberty Doctoral Candidate Liberty University
3006 Humbolt Place
Valencia, PA 16059

Dear Mr. Dado: After a careful review of your research proposal entitled A PHENOMENOLOGICAL STUDY OF TEACHERS' LIVED EXPERIENCES WITH CELL PHONES IN THE CLASSROOM, I have decided to grant you permission to conduct your study at [redacted]

Check the following boxes, as applicable:

X: I grant permission for Matthew Dado to contact teachers at [redacted] to invite them to participate in his research study.

X: The requested data WILL NOT BE STRIPPED of identifying information before it is provided to the researcher.

Sincerely,

[redacted]
Assistant Superintendent
[redacted]

Appendix C

Recruitment Letter

Dear Potential Participants,

As a doctoral candidate in the School of Education at Liberty University, I am conducting research as part of the requirements for a Ph.D. in Instructional Design and Technology. The purpose of my research is to discover high school teachers' experiences managing cell phones in the classrooms during instructional time, and I am writing to invite you to join my study.

Participants must be Pennsylvania state-certified teachers. Participants will be asked to either participate in a one-on-one virtual interview or a virtual focus group meeting. It should take approximately 30 minutes for the interview and 45 minutes for the focus group. Names and other identifying information will be requested as part of this study, but the information will remain confidential.

To participate, please contact me at [redacted] or mdado@liberty.edu for more information or to schedule an interview. Please sign and return the attached consent document to me via email.

A consent document is attached to this email and will be emailed to you if you meet the study criteria or will be given to you at the time of the interview or focus group. The consent document contains additional information about my research. If you choose to participate, you will need to sign the consent document and return it to me at the time of the interview/focus group.

Sincerely,

Matthew Dado
Doctoral Candidate
[redacted]
mdado@liberty.edu

Appendix D

Consent Letter

Consent Form

Title of the Project: A PHENOMENOLOGICAL STUDY OF TEACHERS' LIVED EXPERIENCES WITH CELL PHONES IN THE CLASSROOM
Principal Investigator: Matthew Dado, Doctoral Candidate at Liberty University School of Education.

Invitation to be Part of a Research Study

You are invited to participate in a research study. To participate, you must be a licensed teacher of students in Pennsylvania. Taking part in this research project is voluntary.

Please read this entire form and ask questions before deciding whether to participate in this research.

What is the study about, and why is it being done?

The purpose of this study will be to discover high school teachers' experiences managing cell phones in the classrooms during instructional time.

What will happen if you take part in this study?

If you agree to be in this study, I will ask you to do one of the following:

1. The first procedure for 12 participants will be to participate in a one-on-one video-recorded interview that will take no more than 30 minutes.
2. The second procedure for 12 different participants will be to participate in a focus group video-recorded interview that will take no more than 45 minutes.

How could you or others benefit from this study?

Participants should not expect to receive a direct benefit from participating in this study.

Benefits to society include helping shape future policy. Using teachers as participants to understand how cell phone usage impacts instruction can help identify best practices and potential areas of improvement. Teachers offer great insight into student cell phone usage during instructional time instead of using students as participants.

What risks might you experience from being in this study?

The expected risks from participating in this study are minimal, which means they are equal to the risks you would encounter in everyday life.

How will personal information be protected?

The records of this study will be kept private. Published reports will not include any information that will make it possible to identify a subject. Research records will be stored securely, and only the researcher will have access to the records.

- Participant responses will be kept confidential be kept confidential by replacing names with pseudonyms.
- Interviews will be conducted in a location where others will not easily overhear the conversation.
- Confidentiality cannot be guaranteed in focus group settings. While discouraged, other focus group members may share what was discussed with persons outside of the group.
- Data will be stored on a password-locked computer. After three years, all electronic records will be deleted and all hardcopy records will be shredded.
- Recordings will be stored on a password-locked computer for three years until participants have reviewed and confirmed the accuracy of the transcripts and then erased. The researcher and members of his doctoral committee will have access to these recordings.

Is study participation voluntary?

Participation in this study is voluntary. Your decision whether to participate will not affect your current or future relations with Liberty University. If you decide to participate, you are free not to answer any question or withdraw at any time without affecting those relationships.

What should you do if you decide to withdraw from the study?

If you choose to withdraw from the study, please contact the researcher at the email address/phone number included in the next paragraph. Should you withdraw, data collected from you, apart from focus group data, will be destroyed immediately and not included in this study. Focus group data will not be destroyed, but your contributions to the focus group will not be included in the study if you choose to withdraw.

Whom do you contact if you have questions or concerns about the study?

The researcher conducting this study is Matthew Dado. You may ask any questions you have now. If you have questions later, **you are encouraged** to contact him at [redacted] and/or mdado@liberty.edu. You may also contact the researcher's faculty sponsor, Dr. Richard Bragg, at rbragg@liberty.edu.

Whom do you contact if you have questions about your rights as a research participant?

If you have any questions or concerns regarding this study and would like to talk to someone other than the researcher, **you are encouraged** to contact the IRB. Our physical address is Institutional Review Board, 1971 University Blvd., Green Hall Ste. 2845, Lynchburg, VA, 24515; our phone number is 434-592-5530, and our email address is irb@liberty.edu.

Disclaimer: The Institutional Review Board (IRB) is tasked with ensuring that human subjects research will be conducted in an ethical manner as defined and required by federal regulations. The topics covered, and viewpoints expressed or alluded to by student and faculty researchers are those of the researchers and do not necessarily reflect the official policies or positions of Liberty University.

Your Consent

By signing this document, you are agreeing to be in this study. Make sure you understand what the study is about before you sign. You will be given a copy of this document for your records. The researcher will keep a copy of the study records. If you have any questions about the study after you sign this document, you can contact the study team using the information provided above.

I have read and understood the above information. I have asked questions and have received answers. I consent to participate in the study.

☐ The researcher has my permission to video-record me as part of my participation in this study.

_____
Printed Subject Name

_____
Signature & Date

Appendix E

Interview Questions

One-on-One Interview Questions

1. Please introduce yourself as if we had just met for the first time.
2. The district policy is no cell phones in the classroom without the teacher's permission. In your classroom, what are your rules about cell phones? How have you established these rules?
3. How have cell phones made an impact on your instructional practice in a positive or negative manner?
4. What would be your ideal cell phone policy for high school?
5. What has been your overall experience with cell phones in the classroom?
6. Could you please describe successful practices for monitoring students' cell phone use in the classroom?
7. How do you feel about students using cell phones in your classroom to complete assignments or during their free time?
8. How do you like having the ability to allow students to use their cell phones because they have them in the classroom?
9. Have you had any experiences where cell phones are impacting academic performance?
10. How are cell phones in the classroom changing education?
11. How are you using technology in the classroom?
12. Could you please describe what you think would be the best cell phone policy throughout the school?

13. How should student cell phone policies be created? Who should be responsible for creating and enforcing the policy?
14. How does teacher flexibility with cell phones help or hinder the educational environment?
15. You're teaching and notice a student using a cell phone. What are your next steps?
16. What professional development experiences have prepared you to work in a classroom where students can access cell phones?
17. How do you enforce the created cell phone policy without taking away instructional time?
18. Is there anything you would like to add to the conversation?

Appendix F

Focus Group Interview Questions

Focus Group Questions

1. How are you instructing students who possess cell phones, and does this change instruction at all then if students were not permitted to have cell phones with them?
2. How are you monitoring and enforcing the district's no cell phone usage during instruction time without the teacher's permission?
3. How does the school district encourage, discourage, or influence cell phone usage?
4. Thinking about other teachers in the school, how have they fostered your perspectives on cell phone use in the classroom?
5. If the district decided to ban students from bringing cell phones into the classroom tomorrow, how would this impact your classroom?
6. Does managing student cell phone usage in the classroom take away from instructional time or change impact academic performance?
7. How do you like the ability to allow students to use their cell phones in the classroom?
8. Describe how you establish, monitor, and enforce your cell phone policy aside from the district's own policy?
9. How should school districts rule regarding if students should or shouldn't be able to have cell phones in the classroom?
10. Should cell phone policies be different depending on the content area?
11. What advice would you offer the school district on managing cell phones in the classroom?
12. How would you define student cell phone use in your classroom? Is there anything other

teachers might not know?

13. Is there anything else you want to add to our conversation?

Appendix G

Themes, Subthemes, and Codes

Theme	Subthemes
Monitoring and Enforcement	Cell Phone Policies
	Flexibility vs. Restriction
	Teacher Discretion
	Consistency and Clarity
	Teacher Observation
	Consequences and Parent Involvement
	Physical Storage Solutions
Influence on Academic Performance	Positive and Negative Influence
	Education Benefits
	Distractions and Multitasking
	Academic Dishonesty
	Attention and Focus
	Cheating and Academic Integrity
Professional Development	Lack of Training
	Technology Integration

Individual Classroom Dynamics	Student Behavior and Engagement
	Contextual Considerations