

THE PREPAREDNESS AND SELF-EFFICACY PERCEPTIONS OF YOUTH  
MINISTERS REGARDING TECHNOLOGY INTEGRATION IN MINISTRY

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In Partial Fulfillment  
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Doctor of Education

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by

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## APPROVAL SHEET

THE PREPAREDNESS AND SELF-EFFICACY PERCEPTIONS OF YOUTH  
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## ABSTRACT

This dissertation uses a mixed-method approach to ascertain the preparedness and self-efficacy perceptions of youth ministers in relation to integrating technology into their ministry with a special focus on various types of social media platforms. Chapter Two addresses the precedent literature which demonstrates that technology and media through which one communicates always influences one's message in significant ways. Since youth ministers are charged to communicate the greatest message of all time, the gospel, it is imperative that they understand the means through which they convey that message. Chapter 3 examines the methodological approach to the research study which was predominantly quantitative in nature, supported by open-ended questions to allow participants to clarify their choices. This study examines five areas which have the potential to influence efficacy levels including demographic questions in order to give responses context and meaning; questions related to access and support to determine the influence of environmental factors related to technology-assisted ministry; questions to determine how comfortable participants are using technology as well as how they are using those technologies in ministry; and finally questions to ascertain where participants believe training can be improved in order to address the challenges of integrating technology into ministry. Chapter 4 provides a detailed statistical analysis of all the collected data. Additionally, the researcher highlights points of interest as they related to integrating technology into ministry. Conclusions and implications of the data analysis include experienced youth ministers tend to have higher efficacy levels, youth ministers have an accurate understanding of the kinds of social media teenagers are using, but have reservations about implementing those platforms into their own ministry, there is

room for improvement in education and technology-based resources. Recommendations for further research include evaluating the effectiveness of integrating technology into ministry; comparing that data with ministries that have chosen more analogue methods. Additionally, further research might also include assessing the efficacy levels of professors in higher education in the area of technology integration into ministry.

*This work is dedicated to all the youth ministers who invested in me and to those who will  
faithfully train the generations to come (2 Tim. 2:2).*





## CHAPTER ONE

### THE PROBLEM AND ITS SETTING

In a 2011 article, *Technology Integration Preparedness and its Influence on Teacher-Efficacy*, Coleen Moore-Hayes studied the self-efficacy beliefs related to integrating technology into education to investigate differences in perceptions of self-efficacy between pre-service teachers and in-service teachers. The purpose of this study was to explore how to improve efficacy beliefs related to technology integration in the classroom. Surprisingly, Moore-Hayes discovered that there was no statistically significant difference between the beliefs of the experienced teachers and those who were preparing or beginning their teaching careers (2011, p. 8). Her findings showed that teachers who claimed to be knowledgeable about technology, were not actually integrating it into the classroom. The respondents reported they had not been adequately prepared to do so and, therefore, were hesitant to incorporate it into their classroom. Ultimately, fear had more of a bearing than did their aptitude in using technology. The researchers of the Moore-Hayes study focused on teachers in Nova Scotia, 50% of whom were elementary level, and 50% were intermediate or secondary level. Moore-Hayes stated, “The rapid growth of technology in education continues to have a profound effect on the teaching profession. The changing nature of how we receive and distribute information suggests that educators need new strategies and tools for teaching and learning” (2011, p. 3). She continued, “As the demand for innovative web-based strategies and assistive technologies increases, so too does the need to provide support for those charged with delivering instruction” (2011, p.3). If teachers do not feel adequately prepared to integrate these tools, the efforts to create the technology for will be in vain.

## **Research Concern**

Youth ministers and Christian educators most likely face a similar problem and lack the training necessary to effectively utilize technology. Youth ministers may desire improvements in education to help prepare them to use digital tools effectively and responsibly. Youth ministers need training not only in theology and leadership, but also possibly instruction in how to take advantage of the digital resources available to them. This generation of teenagers needs ministers who are as comfortable with technology as they are with theology.

## **Research Purpose**

The purpose of this study is to ascertain preparedness as it relates to ministerial training and self-efficacy perceptions of youth ministers in integrating technology into ministry. The importance of this study is to determine if ministry education is adequately providing youth ministers with integration training and to determine if this type of preparation needs to be altered to improve self-efficacy beliefs related to technology integration in youth ministry.

## **Research Questions**

1. What is the relationship between self-efficacy perceptions in integrating technology into youth ministry and demographic factors?
2. What is the relationship between self-efficacy perceptions and the extent of technology use?
3. What is the relationship between self-efficacy perceptions and exposure to technology integration methodology in formal ministry training?
4. What is the relationship between self-efficacy perceptions of youth ministers and support from their various social networks?

5. What do youth ministers consider to be the greatest need relating to improving self-efficacy perceptions and technology use?

### **Research Hypothesis**

The researcher believes this study will demonstrate that there is a need for more technology integration education particularly in ministerial contexts. This is a challenging problem for both professors, who may feel behind the curve in understanding technology, as well as youth ministers who are called to speak to a generation that is experiencing seemingly exponential change. The task of higher education, however, is to provide these ministers with a foundation that will carry them long into the future and empower them to effectively communicate the Gospel to every generation using the most effective means possible.

### **Research Assumptions**

The following assumptions are essential for this research study. First, based off of the marked improvements technology has brought to the classroom and to life in general, the researcher makes the assumption that technology has the potential to benefit youth ministry. In light of the similarities between instruction in the classroom and instruction in youth ministry, and based on the assumption that youth ministers disciple many of the same types of students, the researcher assumes the field of youth ministry stands to benefit from the research and resources that have been invested in improving education. This study does not seek to prove the benefits of technology.

Next, the researcher assumed that, generally speaking, youth ministers are interested in integrating technology into their ministry even if it is simply using their mobile devices to text students. They see how important technology is to the students in their ministry and have a desire to use those technologies to establish stronger

connections to their teenagers. They have a basic understanding that technology can be beneficial but also that it has the potential to be unhealthy.

The researcher also assumes that the participants in this study have a basic understanding of the Internet to such an extent that they are able to successfully and accurately fill out the web-based survey. Using a web-based survey is the most cost effective means to reach the broadest audience. While this may bias the results, the researcher does not believe that it is significant enough to warrant using a different mean to collect data.

Lastly, the researcher assumes that the research sample, though not representative of every youth minister in the United States, provides reliable answers to the research questions. The sample size is large enough to provide data which can be used to determine the general beliefs of youth ministers, their efficacy beliefs, technology use, and ideas about the type of preparation they received while in ministry training.

### **Delimitations of the Study**

This study is limited in a number of ways in order to maintain focus and provide beneficial data to address these challenges. This research is primarily concerned about the quality of youth ministry training as it relates to technology integration in ministry. In order to ascertain if such training is taking place, this study qualifies formal training as that which is provided by evangelical colleges, universities, or seminaries. Regarding youth ministers, only those who have completed at least an undergraduate degree or are currently undergoing a ministry-related program will be included in the formal training category. Since each school may use different vocabulary to label their Christian studies program, ministry-related programs include any type of program that is directed to train vocational church ministers. Youth ministers who received a degree in any area of study outside of formal ministerial training, are distinguished from those who have formal

ministry training in order to make comparative analysis between ministerial training and non-ministerial training. In addition, this study does not distinguish theology degrees from degrees which might be considered more leadership-focused ministry preparation. Since theological education should also be practical in nature, this study includes these types of theology programs in the ministry-related program category.

### **Terminology**

- *Crowdsourced*. The practice of generating content via the users of a particular site. *Wikipedia* is a crowdsourced website which is built upon user-generated content. Accuracy is improved as information is presented and contested.
- *Digital Immigrant*. Individuals who do not fit into the category of *Digital Native*, but who never-the-less have developed a curiosity or interest in information technologies.
- *Digital Literacy*. The ability to find, evaluate, utilize, share, and create content using information technologies and the Internet.
- *Digital Native*. Individuals who have experienced technology to such an extent that it has become second nature to them. They are comfortable experimenting with it and expressing themselves through it. Its transformative presences is demonstrated in most aspects of their life including their relationships and knowledge acquisition.
- *Ministry*. Used in its broadest sense and could include such ministry-related tasks as discipleships, relations with parents, leadership training, and personal development.
- *Ministry-Related Degree*. Any Christian studies program or course including service training, theology, and leadership related course involved in vocational ministry instruction.

- *Preparedness*. One's preparation for the given task, which in case of this study, will refer to one's education and training in the use of technology integration in ministry.
- *Self-Efficacy*. An individual's belief in his or her capacity to execute behaviors necessary to produce specific performance attainments (Bandura, 1997, para. 1).
- *Search Engine Optimization (SEO)*. The practice of manipulating website data in order to maximize the likelihood that a particular page will get a higher ranking among mainstream search engines such as Google and Bing (Boyd, 2014, p. 184).
- *Technology*. Any digital media, programs, mobile applications, web applications, or telecommunication resources. It would also include the use of blogs, social media, video sites such as YouTube and Vimeo, Snapchat, and a host of other programs currently being integrated in ministry.
- *Youth Ministry*. Includes ministry to adolescents which typically involves students in middle school and high school. Since a vast majority of churches do not include students who are beyond this age range, this study will not distinguish between churches which limit to their ministry to this range and those that include a broader age range in their youth ministry program, such as grade transition programs or college students.

### **Precedent Literature**

Teenagers are often deemed *digital natives* because technology is all they have ever known (Prensky, 2012, p. 67). In their experience, the Internet has always existed, most of their friends have mobile phones, and social contexts are constantly evolving. Community is no longer simply defined by geographical location but now involves a

complex network of relationships, both in the physical world, as well as an ever-growing virtual one in cyberspace. This increasing use of personal smart devices is quickly becoming a deep-rooted part of teenage identity and personality. In a 2015 study from the Pew Research Center, Amanda Lenhart, Associate Director of Research, reported that 92% of teenagers say they are going online daily, including 24% who say they go online almost constantly (2015, p. 2).

*Common Sense* is the leading independent nonprofit organization dedicated to helping kids thrive in a world of media and technology. According to their website, their mission is to “empower parents, teachers, and policymakers by providing unbiased information, trusted advice, and innovative tools to help them harness the power of media and technology as a positive force in all kids’ lives” (Common Sense, 2016a). In the *Common Sense Census of Tweens and Teens*, researchers surveyed 2,658 children between the ages of 8 and 18 and found that the American teenager spends on average 9 hours of media daily not including school or homework (Common Sense, 2016b, p. 16). The growing popularity of social media and expression sites, including the most dominant sites, Facebook, Instagram, Snapchat, and Twitter, means that teenagers are increasingly spending more time connected to a vast network on the web. Lenhart also noted that nearly three-quarters of teens surveyed have, or have access to, a smartphone emphasizing the fact that this generation is defined by an identity rooted in technology (2015, p. 2).

The introduction of mobile technology in the form of tablets and smartphones has added a new variable to the mix, transforming the digital landscape from homebound personal computers and to devices better suited for the fast-paced mobile lifestyle of modern society. In Walter Isaacson’s biography of Steve Jobs, he chronicled the rise of Apple’s empire under Jobs’ leadership, as it introduced what would become generational staples: the *iPod*, a personal media player; the *iPad*, Apple’s version of a computer

tablet, and the *iPhone*. The iPhone was launched in 2007 with a hefty price tag of \$500. The new phone garnered so much praise that it even prompted the Pope to question publicly if people thought more highly of the phone than of Jesus. He questioned, “Is a Saviour needed by a humanity which has invented interactive communication, which navigates in the virtual ocean of the Internet and, thanks to the most advanced modern communications technologies, has now made the Earth, our great common home, a global village?” (Benedict, 2006, para. 2). The Pope’s words prompted people in the news media to dub the new device the “Jesus Phone” (Kedrosky, 2007, para. 1).

While some were impressed with its features, many predicted that the cost alone would prevent the phone from ever taking off. By the end of 2010, Apple had sold ninety million iPhones, and had obtained over half of the total profits generated in the global cell phone market (Isaacson, 2011, p. 474). Within less than a year of its release, Apple had sold 15 million iPads world-wide. Users could purchase inexpensive apps, most of which were free or sold for only a few dollars. Isaacson wrote, “With the iPod, Jobs had transformed the music business. With the iPad and its App Store, he began to transform all media, from publishing to journalism to television and movies” (2011, p. 503). Smartphones allow users to maintain their connection to technology 24 hours a day, seven days a week. Companies spend billions of dollars developing more effective means of harnessing the power of technology and its impact on culture. These companies understand the influence these innovations have on teenagers and young adults and use that knowledge to strengthen their brand. The question remains, however, are ministry leaders receiving the training they need to use technology to advance the Kingdom of God?

The volume of mobile devices moving into the day-to-day lives of individuals only account for one aspect of mobile use, personal media consumption. This is indeed their original purpose, but the development of applications has expanded their use in



modern culture. Jeff Kissinger, who has specialized in mobile learning and the use of emerging technology in higher education, led a qualitative study at Florida State College at Jacksonville which explored the learning experiences of college students using electronic textbooks (2013, p. 160). While the population of this report was too small to be definitive, the student participants in the study provided some preliminary impressions for incorporating mobile technology into the classroom and may give insight into what similar results might appear within a ministry setting. Kissinger provided all of the students in the study with *eBooks*, digital textbooks downloaded onto a tablet device, and required each student to journal their progress each week during the duration of the study. In addition, the instructor would also give semi-structured interviews. The data was then coded into seven categories: social constructivism, self-efficacy, situated learning, acceptable social use, personal learning environments, e-book activities, and student motivations (Kissinger, 2013, p. 161).

The study produced six conclusions relating to the use of e-books for learning. Kissinger reported, “Students expressed feelings of competence. Students expressed feelings of high self-efficacy. Students valued using the e-books for learning. Students perceived e-book use as metacognitive and individualized. Student use demonstrated that e-books can enhance learning. Student and instructor views on the learning value of social texts diverged” (2013, p. 163). If students believe that e-books and similar applications enhance their learning and competence levels, utilizing these programs within youth ministry may provide a valuable asset in the pursuit of spiritual growth and discipleship. The mobility, functionality, and increasingly sociability, of developing technologies has a lot of potential to improve Christian education. The participants in Kissinger’s study expressed that the devices in most cases improved their learning experience by increasing their freedom to explore conceptions as well as learn in new environments. In theory, additional training to integrate these digital tools into ministry

could breathe new life into the study of Scripture as well as one's exploration of God's creation.

Technologically enhanced learning is no longer a new concept. In fact, B.F. Skinner developed his own version of what was called a *teaching machine*. Skinner held that teachers were not providing students with feedback quick enough for the students to benefit from their mistakes. The teaching machine allowed students to proceed at their own pace. When they gave the wrong answer the machine gave them an immediate response. If they answered correctly, they could proceed and advance their learning (Glaser, 1965, p. 7). According to Martha Casas, the machines would more than likely have been a success, but unfortunately there were major downsides (2002, p. 25 - 26). Demand was high for the development of new programs, but the programmers could not keep up. As a result, the quality of the programs suffered. Second, the machines were costly to make and many of the school districts simply could not afford them. Perhaps the machines' biggest problem was that educators believed them to be dehumanizing to students. Educators believed the machines provided only rote learning and did not promote creative thinking.

Skinner's teaching machine may have faced insurmountable obstacles, but today's digital technology may be able to overcome many of the hurdles of his device. The teaching machines required skilled programmers in order to provide curriculum to be used during instruction. Today, programmers are developing user-friendly interfaces that allow educators to easily develop their own teaching programs and games. This allows the teacher to customize the programs to their preferences and according to the needs of their students. The cost for many of these mobile applications is minimal; many of which are under a few dollars. In addition to pre-designed apps, programming software is also becoming more user-friendly, allowing more people than ever to program their own applications. These developments can help ministry leaders afford to feasibly develop

their own digital curriculum, training resources, and discipleship applications.

Next, one must understand the benefits for developing and utilizing digital resources to support one's ministry. Without intentionality, preaching and teaching within the local church can largely become unidirectional communication in which audience members become passive receivers of information. Outside of visual clues, youth ministers who simply lecture from the stage are limited in their ability to assess engagement. He is dependent upon his own ability to observe and read the audience in order to know whether or not he is actually engaging his people. Concerning his role, Paul wrote in 1 Corinthians 3:10, "According to the grace of God given to me, like a skilled master builder I laid a foundation, and someone else is building upon it. Let each one take care how he builds upon it" (ESV). A master builder does not simply throw stones to lay a foundation for a building. Neither will a master teacher simply throw out propositions without taking the time to make sure those truths are properly set. Building a proper foundation involves intentionality, preparation, and execution. Even as the stones are laid, a master builder is cognizant of the progress, measuring and remeasuring to make sure every stone is situated so that the integrity of the building remains strong and it can continue to be erected. How then can one, who is following Paul's example, preach without concern his teaching is engaging his audience?

Paul wrote letters, the best communication device of his day, to communicate with the church. It is important to note that this form of communication is also unidirectional. Paul writes, his audience receives. It would be easy, having these letters in hand, to preach in the same fashion which is what typically happens in any given sermon. However, preaching and teaching is not the same as writing and given the ability to dialogue with the churches, Paul's communication with the churches would look drastically different. Preaching and teaching should be dynamic, not unidirectional, but engaging the audience.

Unidirectional preaching is restrictive not only for the preacher but also for the recipient. Justin Wise suggested that church members desire greater interactivity. (2014, p. 30). If an audience member has a question during the sermon, he or she will just have to save it until the end. Even if they remember what their question was, they still have to muster the confidence necessary to bring it before the pastor. Good questions may go unanswered out of fear of embarrassment. How would he ever know there was any question at all if the member never brought it to his attention? In this instance, technology may hold the key to greater opportunity. Mobile technology allows audience members to use social media services like Twitter and Facebook to actually engage the pastor and his teaching.

Without question, mobile phones can be a distraction and hurt one's ability to really connect with teenagers. Critics suggest that even the mere presence of a mobile phone can create an atmosphere of disconnection and hinder any kind of deep conversation between individuals (Turkle, 2015, p. 4). Others question the long term effects of constant access technology, particularly on cognitive retention, reflection, and imaginative thought (Bauerlein, 2009, p.95). The concern here is that the potential benefits may not outweigh the negative consequences of introducing technology into one's teaching. It is important to understand that neither of these previous authors are necessarily against technology. They simply want their readers to understand that the tools people use have the potential to harm us as much as we benefit from their use.

Youth pastors do not have to compete with technology if they learn how to harness it for their own purpose. Jerry Odom noted, "Students have an emotional connection to their mobile phones. When students use mobile phones as learning tools, they make emotional connections to the subject being studied." He continued, "When students use mobile phones to study an abstract concept such as faith, the exercise has the potential to resonate with them on a personal level" (2012, p. 71-72). If these devices

have such an important role in the life of teenagers, it seems reasonable to consider how this technology can be utilized more effectively to minister to teenagers. Without education, however, youth ministers are left to a process of trial and error, potentially wasting what little time they have with their students.

One might question, in light of the fact that many youth ministers are digitally native themselves, whether or not it is even necessary to provide training in technology integration. Researcher Danah Boyd makes a compelling argument that society has made a false assumption believing a *digital native* is necessarily digitally knowledgeable (2014, p. 176). Adults, under this vernacular, fall under the category of a *digital immigrant*, or an individual who is an inexperienced outsider in the world of technology. Her concern was that knowledge does not always translate into wisdom. In 2008, John Palfrey and Urs Gasser, wrote *Born Digital*, subtitled *Understanding the First Generation of Digital Natives* in which they tried to redefine the terms digital native and digital immigrants to move away from an age based to one of experience (p. 4). While acknowledging Palfrey and Gasser's attempt to redefine these terms, Boyd wrote that their attempt was futile in light of the embedded nature of age within these two concepts (2014, p. 196). Recently Palfrey and Gasser republished a revised and updated version of the book with a new subtitle, *How Children Grow Up in a Digital Age*, completely removing any trace of the terms *digital native* or *immigrant*. Many of the challenges Boyd raises in terms of the ongoing nature of education to teenagers about their unfettered consumption of all things digital is directly applicable to the ministerial leaders who are charged to be their overseers. For example, Boyd argues that by deeming teenagers *digital natives* and the adults as *digital immigrants*, the adult educators, are less compelled to address the challenges youth face in a networked world (2014, pg. 176). The individual who would otherwise be the authority in the student's life assumes that he or she is inferior to the understudy and, therefore, incapable of making any kind of contribution. While young

people may hold certain advantages from a technological perspective, what they lack is a wisdom that is only forged through experience and time. This type of reasoning also assumes that all natives have had equal access to technology as well as assuming that each has taken advantage of such access.

The Moore-Hayes study compared teacher self-efficacy of technology integration with classroom management, inclusion, and the teaching practicum. Her report notes that when comparing the composite scores of the four independent areas, the mean rate of technology integration ranked the lowest of the four areas, with 40% reporting that they were not at all prepared in this area (2011, p. 9). Studies in technologically-supported learning approaches demonstrate their potential to strengthen student performance (Abramovich 2006; Lei and Zhao 2007). However, many teachers may not be implementing student-centered methods of technology integration because of their lack of self-efficacy to do so (Kopcha 2008). The results of the Moore-Hayes survey demonstrate that these teachers did not feel adequately prepared to utilize assistive technologies to support teaching.

Instructors who lack the confidence to integrate technology are less likely to use it regardless of the potential benefits. Studies in technologically-supported learning approaches demonstrate their potential to strengthen student performance (Abramovich 2006; Lei and Zhao 2007). However many teachers may not be implementing student-centered methods of technology integration because of their lack of self-efficacy to do so (Kopcha 2008). The participants in the Moore-Hayes study indicated that they would be more prepared if they had more hands-on training during the practicum experience. Feelings of anxiety prevented many of the young teachers from even attempting to integrate any form of technology. The study revealed greater initial access to these forms of technology would help alleviate fears of utilizing technology in the classroom. If these findings are accurate, and can carry over into ministerial education, greater access

to technology could potentially provide ministers advantages regarding integration of technology in the church setting. Colleges could provide courses in digital instructional design in order to help technologically-minded pastors to correctly develop programs to enhance the discipleship process. This is not to say that technology is necessary in order for the continued advancement of the church, but if such advancements proved to increase the success of student performance, it stands to reason that they could also quite possibly strengthen efforts in discipleship. If the church has this tool at its disposal and fails to utilize it, ministry leaders must share to some extent the responsibility for failing make use of every advantage to strengthen the church.

Greater access may be one of the keys to unlocking the potential of technologically assisted approaches, but significant breakthroughs may face additional challenges. Not only do instructors lack the confidence to teach about the proper integration of technology, there is also another hurdle educators must overcome; the language barrier. Marc Prensky, who popularized the terms *digital native* and *digital immigrants*, wrote that the single biggest problem facing education today is that “digital immigrant instructors, who speak an outdated language (that of the pre-digital age), are struggling to teach a population that speaks an entirely new language” (On the Horizon, 2001a, p. 2). The ability to communicate is a powerful resource in the teacher’s tool kit. The potential reality is the inability to clearly communicate with students may hinder instructors to such an extent that they avoid technological topics all together. Digital immigrant instructors may lack the ability to provide working examples of how to properly use technology to assist their ministry. While technology potentially offers much improvement to learning environments, unless higher educational institutions adequately train educators, providing them with knowledge, hands-on experience, and confidence necessary to implement it, the value of educational technology quickly dissipates (Alaniz and Wilson, 2015, p. 2).

The International Society for Technology in Education (ISTE) is a nonprofit organization that seeks to help educators and students make better use of technology. Its mission is to empower learners to flourish in a connected world by cultivating a passionate professional learning community, linking educators and partners, leveraging knowledge and expertise, advocating for strategic policies, and continually improving learning and teaching (ISTE, 2016a). ISTE provides technology integration standards for both teachers and students so that the instructors and their students can successfully become digitally fluent. The seven ISTE standards for students fit nicely within the field of Christian education and therefore serve as a foundational structure upon which to build understanding of how to make the best use of technology in discipleship and instruction.

The first standard is the *empowered learner* in which students “take an active role in choosing, achieving, and demonstrating competency in their learning goals, informed by the learning sciences” (ISTE, 2016b, p. 1). This standard encompasses a student’s ability to formulate learning goals and develop strategies for accomplishing those goals. This is an invaluable skill in light of the fact that ministry students will not always have professors to push them to achieve greater levels of effectiveness. An additional focus in this standard, is one’s ability to have a basic understanding of how to choose, use and troubleshoot current technologies. This is key a component in the effective integration of technology. If students understand how to make a plan as well as problem solve when that plan goes awry, they will have the tools necessary to learn new technologies as they emerge.

The second standard is the *digital citizen* in which students “recognize the rights, responsibilities and opportunities of living, learning and working in an interconnected digital world, and they act and model in ways that are safe, legal, and ethical” (ISTE, 2016b, p. 1). Physical life is anchored to both time and location. When a person makes a decision in the real world, they can use their context to determine the best course



of action, the best terms to use. They may take into account how those nearby will react to the decision. Context and company can make all the difference in the world. What may be inappropriate for one audience, may be perfectly acceptable to another. Context is key, but the one of the drawbacks of the Internet and social media is that it strips context from the equation. This is what is known as a *context collapse*. Becoming a digital citizen also means that one must develop their digital identity. One's digital identity is how one represents him or herself online. This takes place through a number of activities such as tagging, posting content, commenting, and monitoring how others are reacting to the information one shares. Maintaining one's online persona is a much more difficult task than its real-world counterpart because what is shared is no longer personal but now exists in a permanent digital public record ready to be consumed and critiqued by the masses. If one makes a lapse in judgment as to what they share, that one decision could have far reaching and lasting consequences across the ocean of networked communities attached to the Internet. In addition to protecting oneself, good citizens of any nation look out for the interests of others. Citizenry also means respecting the rights and properties of others online. The anonymity and accessibility of the Internet is an incredible tool for educators, however, those same two characteristics lend themselves to illegal behavior. Pastors may face the temptation to pull content from online sources without making the effort to request the author's permission. Such an action often leads to copyright infringement. Shaw and Shaw explained, "Unfortunately, disrespect for copyright or misunderstanding of the proper scope of fair use, when added to the ease of copying, the speed of transmission, and the number of online users, results in massive digital copyright infringement" (Shaw & Shaw, 2003, p. 24). This is an act of theft, something believers would most certainly avoid. Still, accessibility and anonymity of the Internet make this a real temptation for ministry leaders as they develop content. Christian ethics are taught in most seminaries and divinity schools; however, today,

ministry leaders need to understand how Christian ethics flesh out in the digital world as it is in the physical one.

The third standard is the *knowledge constructor* in which students “critically curate a variety of resources using digital tools to construct knowledge, produce creative artifacts and make meaningful learning experiences for themselves and others” (ISTE, 2016b, p. 1). Pastors, like other educators, are faced week-to-week with the challenge of providing content to their audience. The vast amount of resources online offer ministers a treasure trove of digital elements and tools. Unfortunately, anyone can write and post anything they desire online regardless of the validity or accuracy of that information or resource. Individuals who are unable to locate accurate information online may inadvertently be transmitting false information to their students. Digital fluency must involve the ability to critique the credibility and relevance of resources online. Seminaries and divinity schools could and should provide students with the resources and guidance necessary to make the best decision about which resources are acceptable to use and which are not.

The fourth standard or marker of digital fluency is that the student becomes an *innovative designer*. This means he or she must be able to “use a variety of technologies within a design process to identify and solve problems by creating new, useful or imaginative solutions” (ISTE, 2016b, p. 2). This is a deliberate and intentional process in which the student is able to develop ideas and test those ideas to solve a problem. A problem can be any obstacle or task that a ministry leader might need to accomplish. For example, he or she may desire to have a better way to keep track of attendance each week at the weekly youth group service. In order to demonstrate the innovative designer concept, a youth minister would need to assess his or her need to determine what digital tools might be helpful for this particular situation. It could be as simple as using a spreadsheet to take inventory of who is showing up from week to week or it could be a

program specifically designed to track attendance. The ministry leader may have to test several options out to determine which is going to be the best fit for the task at hand.

The fifth standard in digital fluency is that the student must learn how to become a *computational thinker*. These types of students “develop and employ strategies for understanding and solving problems in ways that leverage the power of technological methods to develop and test solutions” (ISTE, 2016b, p. 2). Computational thinking involves analysis, being able to take acquired data and putting it to practical uses. For example, returning to the attendance scenario above, using digital tools could allow the youth leader not only to track weekly attendance, but also use to same data to graph growth patterns. He or she could determine which events and services receive greater attendance and use that data to create similar services in the future.

The sixth ISTE standard is that students become *creative communicators* in which they are able to “communicate clearly and express themselves creatively for a variety of purposes using the platforms, tools, styles, formats and digital media appropriate to their goals” (ISTE, 2016b, p. 2). Youth ministers, like all pastors, are communicators. It stands to reason then that if there is a tool which could help them become better communicators of the Gospel, that it would be worth the time to make sure they are fully prepared to take advantage of them. It is common practice in the modern church to develop presentations using programs like PowerPoint or Keynote. They may choose use worship software like ProPresenter in order to facilitate all the dynamics of a worship service. What is unclear is whether or not they are receiving any kind of training in seminary or the like in order to use these programs effectively. In light of the considerable amount of time that ministry leaders spend crafting sermons each week, it is worth noting that visual presentations can either strengthen that message, engaging students, or completely distort the message, creating learning barriers. Creative communicators are able to communicate complex ideas clearly and effectively by developing digital content such as visualizations, models,

and simulations. It is imperative that seminaries develop ministers who can not only interpret the Word of God but also effectively communicate it visually.

The last standard is that students become *global collaborators*, meaning they are able to “use digital tools to broaden their perspectives and enrich their learning by collaborating with others and working effectively in teams locally and globally” (ISTE, 2016b, p. 2). When Jesus gave the Great Commission to his disciples he said, “All authority in heaven and on earth has been given to me. Go therefore and make disciples of all nations, baptizing them in the name of the Father and of the Son and of the Holy Spirit, teaching them to observe all that I have commanded you. And behold, I am with you always, to the end of the age” (Matthew 28:18-20 ESV). One of a minister’s primary goals should be to help his audience develop a passion to reach the lost by carrying the Gospel into the far ends of the earth. This is difficult to accomplish if students cannot put a face to the problem at hand. Hearing about needs from across the globe is one thing, it is quite different however to actually see and experience those needs first hand. One option is to take his students on a mission trip, but mission trips can be extremely costly. It is unlikely that a minister would be able to fly his whole youth group to the other side of the world to help them experience other cultures. For those who cannot afford to travel the world, the Internet is an indispensable tool because it has the potential to connect with people from a variety of backgrounds and cultures across the globe. New advancements in social media live streaming allows people from anywhere in the world to broadcast a message as well as interact with the viewing audience. Youth ministers can also set up Skype sessions with missionaries in order to allow interaction so that students can engage these people and ask questions of their own. It allows participants to experience the world and explore issues that are beyond the walls of the church.

Global collaboration also allows ministers to connect with like minded people in their field. Sometimes problems are too complex for any one person to try to address.

Online collaboration allows leaders to interact with one another to examine difficult issues and together develop solutions. Insurmountable challenges can be isolating and defeating. Only God can attest for the number of ministry leaders who have fallen away from the ministry because they lacked the support to help them get through difficult situations. Global collaboration also provides another source of accountability and support. Ministry can be grueling but with the right tools and training, youth ministers do not have to face it alone.

The ISTE standards are just a starting place, a spring board from which to develop educational programs to help educators and ministry leaders develop a basic understanding of the digital resources available to them. Teachers who would consider themselves digital immigrants have much to learn from their native counterparts, but they also have much to give. It is a difficult process for those who lack the confidence to navigate uncharted waters. Still, one must understand that education and intellectual progress has always been generational and collaborative in various degrees regardless of whether one calls him or herself an immigrant or a native.

God has called his people to be good stewards, which includes using the resources that God has provided in this age. The current generation of teenagers is a technological one and is deeply engaged in the interconnectedness of web, smartphones, and other wearable technologies. The next evolution of youth ministry will be one that fully takes advantage of emerging technologies to engage teenagers in the process of discipleship. This does not mean that they should blindly integrate all technology. It also does not mean that the Gospel needs technology in order to remain relevant. However, a better understanding of how to use technology could strengthen ones ability to communicate the Gospel in a way that will increase student engagement. Jesus and his followers often used various means to communicate the Gospel to those who gathered to hear what he had to say. Incorporating new means of communication may be the method this generation

needs in order to be hear the message that Jesus' followers teach and preach today.

### **Methodological Design**

The researcher seeks to survey the preparedness of youth ministers as it relates to ministerial training and self-efficacy perceptions of youth ministers in integrating technology into their ministry. In order to accomplish this purpose, this study will survey youth ministers who have completed ministerial training in a evangelical college, university, or seminary. This study will hopefully provide insight as to whether ministry education is adequately providing youth ministers with foundational wisdom necessary to responsibly integrate technology into their ministry and in so doing improve self-efficacy beliefs.

This study investigates the differences in perceptions of efficacy beliefs between youth ministers with limited ministerial training and experience, and the beliefs of veteran youth pastors. The Moore-Hayes survey only contained five questions related to the topic of technology integration, and its focus was in the secular school system. The lead researcher in the Moore-Hayes study acknowledged that the study was not specifically focused on the integration of technology, and many improvements could be made to the instrument to obtain a better understanding of how educators feel about integrating technology into their instruction (2008, pp. 59-60). The limitations of this former study along with the recommendations from its lead author provide a starting point upon which to build a study among youth ministers and youth ministry faculty.

In light of these recommendations, the researcher developed a more in-depth survey instrument. This improved instrument was used to ascertain what youth ministers believe about technology integration in ministry as well as external factors which may influence self-efficacy perceptions. The Moore-Hayes study used a mixed method approach which primarily utilized a Likert scales for each of its four categories

with one open-ended question. It is the intention of the researcher to develop a similar research instrument which makes use of a Likert scale survey with additional open-ended questions to add clarity to the survey responses.

The instrument was analyzed by an expert panel of field experts in the areas of youth ministry, psychology, and technology to determine if any adjustments need to be made before giving the survey to youth ministers. In addition, the instrument was tested by a pilot group of youth ministers who can offer feedback related to the clarity of the questions. In terms of distribution, in order to reach a broader range of youth ministers, the researcher will use an online survey.

In terms of a sample population for the study, the researcher used several youth ministry related networks from which to draw participants. The researcher also promoted the survey instrument on Youth Ministry Round Table (YMRT), a website and Facebook page operated by the College of Christian Studies at Anderson University in South Carolina. It continues to experience high traffic from various denominations across the nation. This past spring YMRT experienced a surge of visitors regarding one of its posts, receiving 150,000 views in one weekend. As a recruiter for the College of Christian Studies at Anderson University, the researcher also travels to various youth ministry related conferences. Youth ministers from various types of churches from a broad geographical range attend these conferences. Promotion through these channels resulted in 288 participants.

### **Research Procedures**

All data was received through the web-based survey created through SurveyMonkey. This survey was promoted across various websites, social media, emails, and newsletters. Utilizing these resources should minimize the overall cost and time of acquiring research data. The researcher intends to spend three to six months promoting

the survey and receiving data. The quantitative data was imported into SPSS software for analysis. The open-ended questions were individually assessed and coded to ascertain whether there are any reoccurring themes or issues.

In order to do comparative analysis among youth ministers, this study delineates youth ministers into experience-dependent categories. These categories include various ranges of youth ministry experience, for example, less than a year, one to two years, three to four years experience, and so on. Comparing these different categories of youth ministers allows the researcher to investigate the differences in their perceptions of technology integration into ministry. The Moore-Hayes study surprisingly found no statically significant difference in the efficacy beliefs of integrating technology between the pre-service teachers and the in-service ones. The data was analyzed to see if this same phenomenon is present between novice youth ministers and their veteran counterparts. The researcher will also ask demographic questions designed to identify your ethnicity, gender, age, and education. These characteristics help to give survey responses context and meaning. The researcher asked questions relating to access and support. These questions are designed to determine the influence of environmental factors related to technology-assisted ministry. These include questions relating to the various types of technology available in their ministry context. In addition, the participant will provide information about leadership attitudes toward technology in the church as well as student use. In order to assess ministerial preparation and training, the researcher will ask questions relating to their education and exposure to technology during their training. Since self-efficacy perceptions relate to ones confidence and comfort for a particular ability, the researcher will ask questions designed to determine how comfortable youth ministers are using technology as well as how they are integrating into ministry. Finally, the researcher will ask youth ministers about which areas in ministerial training need improvement in order to address the challenges of integrating technology effectively



in ministry. These responses should provide valuable insight into how prepared youth ministers are to use 21st century tools for the advancement of the kingdom of God.

### **Research Contribution**

The researcher used simple descriptive statistics to describe what the data demonstrated and relied mainly on percentages, mean and range, and standard deviations to determine what factors contribute to successful integration of technology or lack thereof. Having this knowledge, the researcher hopes to provide a better understanding about what changes may or may not be needed to higher education in order to better prepare youth ministers for ministry to future generations. The Moore-Hayes study revealed that in order to facilitate technology integration into the educational system of any institution, teachers need far more training than they have received. The respondents acknowledged that they wished they had more exposure to technology in their training and that those who had such experiences were much more likely to integrate the technology into their own classrooms. In providing this research, the researcher hopes to establish guidelines that can help future youth ministry faculty train their students to best utilize and integrate technology into ministry.

### **Overview**

Chapter two reviews the literature used to develop an understanding of the research related to preparedness and self-efficacy perceptions of youth ministers regarding technology integration in ministry. Chapter three examines the methodological procedures and survey instrument. Chapter four presents an analysis of the research data. Chapter five provides research conclusions, implications, limitations, and areas for further research.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **Inclusion Criteria**

Chapter two includes a review of the literature used to develop an understanding of the research interest pertaining to the preparedness and self-efficacy perceptions of youth ministers regarding technology integration in ministry. Since research is limited in this particular field of ministry, associations will be made between youth ministers and student teachers at various levels. Literature resources consisted of books and websites from various experts and scholars in the field of technology and ministry, journal articles, national data tracking organizations such as the Pew Research Center, Nielson, and Common Sense Media among others, as well as databases from the libraries of Southeastern Baptist Theological Seminary, the University of South Carolina, and Anderson University. These included EBSCOhost, ATLA Religion Database with ATLA Serials, and ERIC.

The following is a list of key search terms used: self-efficacy, Web 2.0, Digital Natives, Digital Immigrants, Blogs, Educational Technology, Facebook, Twitter, Instagram, Snapchat, Social Media, YouTube, Social Networking, Mobile, Technology, Teacher, Education, Internet, Pew Research, Nielsen, Students, Teenagers, Youth Ministry, social networking, study, technology, Marshall McLuhan, Neil Postman.

#### **Overview of the Chapter**

After reviewing the literature and available resources, this chapter begins with

a Neil Postman's work regarding how society should evaluate and address the challenges of incoming technology into culture and the influence of Marshall McLuhan. Next, the author reviews the history of selected technologies which transformed culture and communication throughout history. Then, the author examines of the potential challenges of integrating technology in the classroom and in the church. The following literature review is an overview of the affects of technology on students, youth ministry, and the educational trends.

### **Literature on Technology Integration**

In 1998, Neil Postman laid out five concepts everyone should know in order to confront technological change. Postman was a prolific author, writing eighteen books, including *Amusing Ourselves to Death* and *Technopoly: The Surrender of Culture to Technology* and numerous journal articles in the area of media ecology. He was a professor at New York University for forty years and served as a chairman on the Department of Culture and Communication before his death in 2003. Though Postman has since passed, his teaching continues to influence technological discussions today. In any discussion about the inclusion or exclusion of technology into ministry, it is beneficial to hear Postman's concerns so as to make appropriate precautions before blindly accepting a practice which could potentially have negative consequences. Each concept helps to reinforce and strengthen one's development of digital discernment. If ministers are to have a chance of making an intelligent decision about introducing new technologies or rejecting them all together, they will need to have a filter or lens through which to critique those tools.

### **For Every Advantage Technology Provides, There is a Disadvantage**

First, Postman warned that for every advantage technology may seem to provide, there is a corresponding disadvantage (Postman, 1998a, p. 1). The benefit may outweigh the consequence but when the beneficiaries of such a change includes youth and children, the stakes are higher

and worthy of greater attention. According to Postman, there is always a price to pay for integrating technology and students will ultimately be the ones paying the bill. Postman raised the questions, “What will a new technology do?” and “What will a new technology undo?” (Postman, 1998a, p. 1). In an earlier speech given to Calvin College, Postman raised a similar question, “What is the problem to which this technology is the solution?” and a follow-up question “Is this a problem most of us yearn to have solved?” (Postman, 1998b).

These questions are crucial in determining whether a new piece of technology or web resource is a good fit for one’s ministry. A youth minister may consider encouraging students to use a Bible app to help teens carry God’s Word with them, but doing so without considering the potential consequences of using an app instead of a physical copy of God’s Word may prove counterproductive. Using digital apps is very different from studying a physical copy of scripture, turning actual pages, searching for verses through skimming their context as opposed to using a search box. In the end, Postman might question if such a strenuous activity of turning physical pages of the Bible is such a significant problem at all. Making further applications, how would encouraging people to share their faith online encourage or discourage witnessing offline? Social media and virtual communities provide points of connection for some and yet lead to disconnection for others (Turkle, 2011, p. 154). Youth ministers need understand the consequences of introducing digital tools into their ministries and how this integration might affect their students.

### **There Will be Winners and Losers**

Secondly, Postman warns that technology benefits some individuals while disadvantaging others. (Postman, 1998a, p. 2). Social media companies offer a service, seemingly for free, but in reality, these companies profit from the content their users

provide. For example, benefiting from the advantages of the latest technology or software and participating in virtual communities often comes at the price of one's privacy.

Participants are tracked and influenced by the choices they make online. Social media may provide new opportunities to build community, but it is important to understand that organizations like Facebook are not ultimately in the business of people, but to make a profit. Blindly trusting in an application with one's most private information may turn out to haunt those who provide this information without thinking about the consequences (Postman, 1998a, p. 3)

As technology seemingly becomes a *natural* part of adolescent life, teenagers are inadvertently dropping their defenses and releasing greater amounts of personal information more than any other generation before them (Palfrey and Gasser, 2016, 53-54). According to Pew Research, teenagers are sharing significantly more information in 2016 than they had in a 2006 study (Madden et al., 2013, para 2). According to this study, 91% post a photo of themselves, up from 79% in 2006, 71% post their school name, up from 49%, 71% post the city or town where they live, up from 61%, 53% post their email address, up from 29% and 20% post their cell phone number, up from 2% (Madden et al., 2013, para 2). Even if by some measure students could limit the amount of information they provide about themselves, every choice they make online is tracked across multiple devices and platforms; data used by advertisers to better market their products and services (Palfrey and Gasser, 2016, 57).

In spite of this practice, Facebook has become the most popular social media company in the world. Facebook, a free to use social media platform, uses allows users to build a unique profiles that truly represents who they are as individuals by answering a few simple questions about their location, age, gender, education, relationship status, job title, interests and hobbies. Facebook wants its users to feel like they are in charge of their information and have the power to control who sees it and to some extent, this

is true (Facebook, 2017a). Facebook may proclaim their efforts to keep user information private and provide a safe place for self expression, but the information people provide and the choices they make while using these applications, is sold to anyone willing to pay for it. Users may have the ability to control who sees their information and content on their profile but this is just at the surface level. Facebook would not be able to continue to exist without revenue from its advertisers. Marketers can pay to target the specific audience for their product. It is no surprise that the targeting factors include location, age, gender, education, relationship status, job title, interests and hobbies (Facebook, 2017b). In 2016, Facebook raised 26.9 billion dollars in advertising revenue. (Facebook, 2017c, p. 33). Facebook and its advertisers use this information to tailor an experience that is engineered to influence and control its users and their choices. Facebook is certainly not the only company who profits off the information of its users. The same could be said for Twitter, Snapchat, and the host of other social networks teenagers are using every day.

One might consider avoiding these privacy issues altogether and end their social media use but disconnecting from social media becomes a social challenge for teenagers. People in general feel like social networks and connectivity is inevitable and that disconnecting from is too difficult and will be next to impossible within the next ten years (Rainie and Anderson, 2017, “Theme 1;” “Theme 2”). Palfrey and Gasser wrote, “For youth, it would mean opting out of much of social life and being deprived of the wonderful opportunities for self-expression, learning, and entrepreneurship that come with digital technologies” (2016, p. 55). This challenge means that teens are left with few options if they want to remain connected to their networks when physically separated from their friends. Many are willing to give up personal information in order to gain entrance into public spaces and social gatherings that are increasingly taking place online.

## **Every Technology has Unforeseen Embedded Ideas**

Postman's third point was that every technology is embedded with powerful ideas that are often hidden from the participants. Every digital application includes a value system which is often accepted by those who allow it to do so. The Internet places great emphasis on information, endless amounts of information only a few keystrokes away. What often gets lost – devalued – is knowledge and wisdom (Postman, 1998a, p. 3). While it may be easier for young people to adapt and learn new technology than their older counterparts, it stands to reason that one crucial building block for life in general is the development of knowledge and wisdom. It is here that older generations gain the advantage and can greatly contribute to the introduction of new technologies. Technologies often are merely new methods of dealing with old challenges. In other words, the challenges remain the same and those who have navigated through real-world problems are better equipped to educate those who are now facing those challenges anew in the virtual space of the Internet.

In today's culture, speed is valued over depth of learning. Search engines have in many ways replaced the necessity to drive to the library, spend countless hours scouring musky bookshelves hoping to find that one book that could possibly have the content. Search engines like Google make it easier to access a world of information that was previously only held by knowledgeable experts. This is an amazing tool but the consequence of efficiency and devaluing the classroom or library may ultimately stunt learning. Psychologist Elizabeth Bonawitz and colleagues developed an experiment in which groups of toddlers were given a toy. In the first group, the adult leader would demonstrate how to properly play with the toy. In the second group, the adult was instructed to act naive and only by "accident" discover what the toy could do. When given the chance to play on their own, the first group of toddlers followed the example of their adult counterpart without deviating to a large extent from the proper way in which

to play with the toy. The second group was much more creative in how they played with the toy. Without knowing specifically how to elicit a response from the toy, the second group of toddlers were free to explore various ways to play with the item (Bonawitz, 2011, p.322-330). This study demonstrated that when individuals are not given the chance to go through the process of learning, they lose the opportunity for creative exploration. As it relates to technology integration, one might question if the ability to instantly locate answers by searching Google hinder the development of creativity, exploration, and discovery? To what extent does the capability of instantly searching the Bible for a particular verse on any given topic limit one's ability to understand context or how to properly apply a verse to their lives? One might also ask that even if a student has the ability to instantly locate a verse, and by chance or divine intervention is able to understand the authorial intent of said verse, how much is lost in skipping over the journey to find it? Some of the greatest lessons may go unlearned because there was never any need to slowly scan surrounding passages.

This is even more of a complex issue when one takes into account the algorithms that allow search engines like Google to provide users with personalized content. As Eli Pariser noted, two people can look up the same phrase in Google and receive different results based off of their previous behaviors and choices online (2011, p. 2). Overtime, as people become accustomed to tailor-made searches, they fail to realize that these results are limited and controlled by the code written by engineers (p. 14). If this generation becomes accustomed to searching Google for truth instead of God's Word, it is worth noting that this truth will be governed and limited by that algorithm; determined not by the context of the word of God but by their search history.

Having the tools is not the same as knowing how to use them wisely, safely, and efficiently. The problem is that the inexperienced often lack the knowledge and may not even realize the change that is taking place in their attitudes and behaviors. When



Marshall McLuhan wrote the “Medium is The Message,” what he was attempting to communicate is that inherent in every medium is an influence that changes everything including the message at least on some level (1964, p. 1). He noted, “This is merely to say that the personal and social consequences of any medium—that is, of any extension of ourselves—result from the new scale that is introduced into our affairs by each extension of ourselves or by any new technology” (McLuhan, 1964, p. 1). All technology brings change. Twenty-first century ministers need to be aware of the potential influence in order to make informed decisions about what will be most beneficial to students.

Were McLuhan to analyze the church’s use of technology today, he might likely instruct ministry leaders that reading the Bible through a mobile device is not the same as reading it on paper. The tool itself embodies a message for its user (Challies, 2011, p. 39). Postman said, “every technology has a philosophy which is given expression in how the technology makes people use their minds, in what it makes us do with our bodies, in how it codifies the world, in which of our senses it amplifies, in which of our emotional and intellectual tendencies it disregards” (Postman, 1998a, p. 3). McLuhan’s axiom pointed to the power of the tool and served as a warning for those who were unaware of its power to influence their perceptions (Carr, 2011, p. 2). If it is true that the medium has a transformative effect on the message, then ministry leaders, must consider how introducing new technology will alter their teaching. If they do not possess this awareness or have developed a dismissive attitude toward potential threats, they may inadvertently communicate a message they never intended to convey. Youth ministers must give as much consideration to the media they use as they do the message they teach (Wise, 2014, p. 103).

As McLuhan and his son Eric McLuhan developed their theory of media, they asked themselves what are the verifiable statements that can be made about media (1988, p. 7). They came up with four questions which help observers make informed decisions

about media use. Twenty years later, technophiles are still using these four questions to shape their discussion on technology integration and build their ideas about digital discernment.

The first question one should ask before integrating new technology is what does it enhance or intensify (p. 7). In other words, what is the benefit of introducing it into one's system? Every new medium enhances, amplifies, or extends some human capacity. (Hippo, 2005, p. 41). Youth ministers need to consider how various types of technology within the church are used as extensions of their capacity to minister to students. These would include sound systems, lighting, projection to mention only a few. Having an understanding of how one utilizes these technologies as extensions of their natural abilities allows one to discern their effects on students and to have an understanding that goes beyond technologies as mere tools neutral in their influence (Hippo, 2005, p. 37).

Since the fall of mankind in Genesis 3, humanity has been trying to survive in a broken world. The development of technology is in many ways an effort to fix and correct course. With each new innovation, society convinces itself that this new tool will bring about a better world (Dyer, 2011, p. 35). The great danger here is that humanity puts its hope in its creation—technology—dismissing what broke the world in the first place. This misplaced hope may lead to incredible inventions, technologies that will benefit mankind greatly, but technology is just as broken and limited as its creators. Psalm 115:4-7 speaks of humanity's idols and their inherent weakness in comparison to God. The psalmist wrote, "Their idols are silver and gold, the work of human hands. They have mouths, but do not speak; eyes, but do not see. They have ears, but do not hear; noses, but do not smell. They have hands, but do not feel; feet, but do not walk; and they do not make a sound in their throat" (ESV). What drives humanity and its insatiable desire to use and advance technology is a deep need of hope. This deep-seated desire is evidenced in the words of the Humanist Manifesto II. The writers of the American Humanist Association (AHA)

wrote:

Using technology wisely, we can control our environment, conquer poverty, markedly reduce disease, extend our lifespan, significantly modify our behavior, alter the course of human evolution and cultural development, unlock vast new powers, and provide humankind with unparalleled opportunity for achieving an *abundant and meaningful life*. (Emphasis added, American Humanist Association, 1973, para. 5)

These words are steeped in optimism and hope viewing technology as the source of abundant and meaningful life. Even groups like the AHA understand that society is broken; that the world is not as it should be. Refusing to put their trust in God, who by their perspective is absent or non-existent, they would rather place their trust in that which they can control—technology. Man-made works may effectively advance humanity, but, as the psalmist noted above, exalting these inventions to god-like status, as the source of humanity’s salvation, is a mistake. Challies wrote, “Technology becomes an idol when we start to believe that humanity’s hope, humanity’s future, will be found in more and better technology. It becomes an idol when we place greater hope in technology than in God” (2011, p. 30). Technology will never completely satisfy humanity’s need for a savior. Jesus stated, “The thief comes only to steal and kill and destroy . I came that they may have life and have it abundantly” (John 10:10, ESV). Technology is not the devil, but neither is it a savior. This is a role only Jesus Christ can fulfill. John Dyer wrote, “Technology plays a role in [God’s] story, but it is a subservient role, not an ultimate one. The only true salvation offered to humanity comes from God himself, through his Son Jesus Christ” (Dyer, 2011, p. 41). The psalmist continued with a striking warning in the following verse regarding the implications for society’s misplaced hope. The psalmist wrote, “Those who make them become like them; so do all who trust in them” (Psalm 118:8, ESV) When humanity fails to see technology as an extension of itself what results

is a culture that becomes enslaved to its tools, powerless and unfulfilled (Hippis, 2005, p. 35).

Continuing with McLuhan's questions for evaluating technology, the second and third are what existing technology is made obsolete or displaced and what does it retrieve from that which was previously obsolesced (McLuhan, 1988, p. 7). New technologies tend to replace old ones. Where as a primitive technology may have had one function, newer technologies tend to combine multiple functions and, therefore, eliminate the need for its predecessor. Without a basic knowledge of how technology works, this can be a challenging task. Students may lack the necessary schema upon which to make proper applications. Postman stated that he would not trust anyone who was pushing for technological integration unless they could demonstrate a knowledge of the social and psychic effects of the various types of technology that had shaped communication throughout history; technologies such as the alphabet, the mechanical clock, the printing press, and telegraphy (1998a, p. 2). It is one's understanding of history that allows him or her to have greater perspective of the present. New technologies are often new methods of solving old problems, but that which is new often retains the same weaknesses of its predecessor. If one has an understanding of the history of technology, he or she is able to prepare and adjust to accommodate for those weaknesses.

Lastly, Eric McLuhan (2007), Marshall McLuhan's son, published his father's work which encouraged readers to ask themselves, "What does it produce or become when pressed to an extreme?" This question drives the observer to identify unintended negative effects before the extreme takes place. This important last step helps one to develop a digital discernment is necessary to expose potential weaknesses and allow for preparation time in order to counteract the contributing factors. For example, a youth minister may attempt to reduce the chances of a student feeling uncomfortable about not having a Bible by projecting scripture on large screens. Projection screens may benefit a

service by eliminating the time it takes students to locate passages in their Bible. Instead of thumbing through pages, they simply follow along with the projected slides. Projection screens allow everyone to read from the same translation decreasing the likelihood of students disengaging from the speaker as they attempt to catch up in the reading. Additionally, new students who may not have a Bible with them are less likely to feel out of place because as they join others in viewing the screen. Projection screens also help to maintain students' focus up front where the speaker is and therefore reduces the chance of distractions. McLuhan's process highlights that digital projectors have the potential to extend the youth pastor's mouth by enhancing his ability to teach, adding visual elements to his verbal communication. He might would also remind youth ministers that technology has the tendency of making old technology obsolete. For example, utilizing projection screens to digitally display scripture means students no longer need to bring their Bibles at all. What is the advantage of having to hunt for verses when it is readily available in front of their eyes? Youth ministers need to know how to assess their choices in the safe environment of the classroom so that when an opportunity to introduce a new technology presents itself in their youth ministry, they will have the tools necessary to assess whether or not it will be beneficial their students or hinder their efforts to disciple teenagers.

### **Technological Change is not Additive, but Ecological**

Next Postman instructed his audience that technological change is not additive, but ecological (Postman, 1998a, p. 4). Ecology refers to the way in which environments change in response to makeup (Hippo, 2005, p. 40). Introducing technology into ministry does not equate to ministry as usual plus technology, instead what results is an entirely different ministry. More significantly, not only will the new technology change the youth ministry, it will also have transformative effects on the students and not necessarily for

the better (Dyer, 2011, p. 35). The technological advancements sometimes change how one participates in the practice of worship. For example, projecting scripture on a screen or allowing students to access their Bible from their smart phone may result in less students bringing their physical Bibles to youth group. Initially this may be disconcerting to the youth minister and may bring unsolicited complaints from church members, but one should remember that bringing a personal copy of the Bible to church is a relatively new practice in the scope of history. Dyer wrote, “Every single believer from Moses to Martin Luther—from 1500 B.C. to A.D. 1500—encountered God’s Word by going to church and listening to it alongside others. They almost never had the chance to read the Bible for themselves” (John Dyer, 2011, p.24). In fact, Gutenberg’s printing press paved the way for people to own their own Bible, in their own language; a disturbing change for religious leaders during that time. Today, Christian leaders want their members to invest time reading their Bibles. Dyer wrote:

What this tells us is that the way we talk about and understand technology is in some ways dictated by where we sit along the time line of technological progress. Rather than taking our cues about technology from the Scriptures and the outline of God’s plan for humanity, we seem to be locked in a cycle of questioning the really, really new but accepting the just barely old. (2011, p.28)

One should not forget the fact that the media through which one studies God’s Word have evolved over time. What is important is that youth ministers need standards by which to measure and evaluate introducing technology into ministry. Without understanding the ecological changes which will occur, student ministers run the risk of adapting their ministries in order to meet the demands of the tool instead of the choosing tools which will fulfill the needs of the ministry (John Dyer, 2011, p.25).

## **The Familiar Feels Less Like a Threat**

Finally, Postman warned that media will often become mythic to the people who have no recollection of life without it (Postman, 1998a, p. 4). Dyer defined a myth as a “story that develops over time about how the world works and what makes sense to a group of people (Dyer, 2011, p. 25). When technology becomes mythic, people begin to trust it without question and exalt it to a position of perfection. They forget that the programmers which engineer technological applications themselves experience the effects of their sin nature which limits their ability to understand their creation’s influence on its users (Challies, 2011, p. 26-27). For anyone born after 1979, the Internet has always existed. It feels like a natural part of life, an intuitive part of their life unworthy of deeper thought. Youth ministers should resist this mentality and intentionally assess technology as they consider introducing it into their ministry environment with biblical discernment. Postman wrote:

Enthusiasm for technology can turn into a form of idolatry and our belief in its beneficence can be a false absolute. The best way to view technology is as a strange intruder, to remember that technology is not part of God’s plan but a product of human creativity and hubris, and that its capacity for good or evil rests entirely on human awareness of what it does for us and to us. (Postman, 1998a, p. 5).

As advanced and seemingly beneficial as technology becomes, it is still developed and created by flawed individuals. It can benefit its users but there always exists the potential for harm and it is wise to approach it with skepticism and forethought.

## **The History of Communication Technology**

Postman highlighted that one could not accurately contribute to the conversation of technology integration unless he or she could demonstrate a knowledge of how

technology shaped communication throughout history (1998a, p. 2). As past technology assimilates into new innovations, as McLuhan noted, the weaknesses of the preceding technologies often transfer into the new technology. This means that through studying the past weaknesses of predecessors, one can predict with a certain degree of certainty the potential weaknesses of future technology. One can prepare for the challenges of the future by examining the past.

### **The Alphabet**

The Greeks adapted their alphabet from the earlier Phoenician alphabet in the late 8th century (Cook, 1987, p. 9). Socrates worried that writing would signal the end of memorization and would create a society that was increasingly forgetful. It would create a people who would have a quantity of information but without proper instruction in how to use it. (Plato & Hamilton, 1973, p. 96). Socrates' warnings could just as easily apply to the vast quantities of information available on the Internet with little regulation as to its quality. With society's growing dependency of online databases, Socrates' fears may not be as comical as one might assume.

### **The Mechanical Clock**

As for the mechanical clock, Postman wrote that it originated in the twelfth and thirteenth century Benedictine monasteries. The monks used the precision of the mechanical clock to regulate their work, leisure, and their devotional activities such as prayer (1992, p. 14). Monks were not the only ones to see the value of using time to regulate activity. Soon businessmen began to understand that monitoring and regulating time allowed them to create a more efficient, productive workplace. They used clocks as a tool for control. Postman wrote, "The paradox, the surprise and the wonder are that the clock was invented by men who wanted to devote themselves more rigorously to God; it



ended as the technology of greatest use to men who wished to devote themselves to the accumulation of money. In the eternal struggle between God and Mammon, the clock quite unpredictably favored the latter.” (1992, pp. 14-15)

### **The Printing Press**

The printing press is often associated with launching the Protestant Reformation. Martin Luther praised printing as “God’s highest and extremest act of grace, whereby the business of the Gospel is driven forward” (cited in Black, 1963, p. 432). Gutenberg wrote in the preface of the Gutenberg Bible:

God suffers in the multitude of souls whom His word can not reach. Religious truth is imprisoned in a small number of manuscript books, which confine instead of spread the public treasure. Let us break the seal which seals up holy things and give wings to Truth in order that she may win every soul that comes into the world by her word no longer written at great expense by hands easily palsied, but multiplied like the wind by an untiring machine. (as cited by Bourgeois, 2013, p. 15-17)

It may be a surprise to know that its inventor, Johannes Gutenberg, was not a religious rebel of any sort but a faithful Roman Catholic. Along with the Bible that would forever change the makeup of the modern church, he also printed indulgences; the very practice that ignited Reformers to arms. Had Gutenberg known that his invention would be the catalyst and impetus of a religious movement that would strike at the heart of Catholicism, he may have had second thoughts about how it was used (Challies, 2011, p. 42). The Protestant Reformation was not the only beneficiary of the printing press. By lowering the cost of books, scientists could present longer, more complex ideas which in turn would lead to the Scientific Revolution as well (Dyer, 2011, p.126).

Concerning the Gutenberg press, Francis Bacon wrote, “no empire or sect or

star seems to have exercised a greater power and influence on human affairs” (2000, p. 100). Indeed, the press fostered many changes in society and the church. The Gutenberg Bible was the crowning achievement of Gutenberg’s life. It was a two volume edition of the Bible, consisting of 1200 pages, a process which took three years to produce. He painstakingly crafted the press so that the typeface would mimic the hand writing of the German scribes (Carr, 2011, p. 68). It is important to repeat here that Gutenberg designed this master work in such away that it would resemble a hand written book, but as realistic as it may have looked, it was not the same. This was an entirely different kind of literature that would have a tremendous influence on the church.

Shane Hipps noted four changes which took place at the advent of print as it related to the church. First, thanks in large part to the Reformation Movement, print encouraged individualistic faith. In an oral culture, people rely on the community for information, but the invention of print allows individuals to learn and think in isolation (2014, p. 53). Prior to the Reformation Movement, believers had to depend on a priest to explain what the Scriptures said. As literacy increased and individuals were able to read the Bible in their own language, faith became a personal, private experience.

Second, print led to greater objectivity as books allowed people the time to obtain perspective and weigh arguments (Hipps, 2014, p. 55). Print allowed the floodgates of information to open and people were no longer limited to the word of their leaders, particularly the church. With so much information circulating, mass education was able to take place. It was no longer necessary to simply accept the judgment of a few authorities and a more critical spirit emerged (Gardner and Davis, 2013, p. 21). While the intended consequence of a mass-produced vernacular Bible was that people could read the Bible for themselves and determine their own understanding of its truths, the unintended consequence was a revolution that led to bloodshed and a church split (Wise, 2014, p. 108).

Third, retention was a necessary part of oral culture so in order to extend the life of any type of information, it had to be repeated and memorialized. Hipps wrote that by becoming dependent on print technology, society could spend less time and effort on repetition and memorization. As it related to the church in an increasingly literate culture, visual sacraments were deemphasized whereas doctrine and the preaching of the word of God grew in importance. (Hipps, 2014, p. 56-57). Print and the plethora of literature which was made possible through its invention allowed people to work through ideas and process information in a new way (Wise, 2014, p. 103). The invention of movable type was a defining moment in the advancement of communication technology to such an extent that it would be another 450 years before the world would discover the next significant advancement in electronic communication.

### **The Telegraph**

In the mid-nineteenth century, after studying the electromagnet, Samuel F. B. Morse believed that it could be used to send coded messages electronically over wires. After several failed attempts, he enlisted the help of Leonard D. Gail, a professor of chemistry at the University of the City of New York. Gail introduced Morse to the work of Joseph Henry, who had written on the idea of an electric telegraph. Gail's insight provided Morse with the knowledge and tools he needed to invent a system that was superior to the work of Henry ("*Samuel F. B. Morse,*" *n.d.*). While Morse is not considered the inventor of the telegraph, what he did was create a standardized system, a coded alphabet, through which communication could occur (Challies, 2011, p. 49-50). Morse's first message was a quote from Numbers 23:23, "What hath God wrought?" which was sent 37 miles across wires from Washington to Baltimore on May 24, 1844. It is not insignificant that a second monumental shift in communication would once again be accompanied by a proclamation of God's glory. It is a testament to the ongoing work

of God to communicate to the world through his people; yet another tool for God's people to utilize to fulfill the Great Commission (Bourgeois, 2013, p. 16). The telegraph ushered in a new era in electronic communication that connected distant communities, facilitated the growth of the railroad industry, and allowed for an increase in the rate news could travel around the world (Volti, 2014, p. 241).

The telegraph changed how people valued information. Society valued speed over accuracy, and amusement over functional information. Through the efforts of the press corps, information became a commodity that could be sold (Postman, 1993, p. 67). Postman continued, "within two years...the fortunes of newspapers came to depend not on the quality or utility of the news they provided but on how much, from what distances, and at what speed" (1993, p. 68). This created an atmosphere in which truth was ripped away from its context and veiled by a plethora of disconnected perspectives. This resulted in a pluralistic culture in which relativism could flourish (2014, p. 66-67).

### **The Radio**

When radio technology arrived at the beginning of the 20th century, many considered it to be wireless telegraphy, initially used only by amateurs as well as for maritime and military communication. Radio technology allowed for the possibility of broadcasting out to millions of people all over the world simultaneously; a shared experience which established a mass culture (Wise, 2014, p. 37). Unlike print which tended to individualize people, radio brought everyone together as they huddled around a wooden box to hear the latest morsels of media (Hipps, 2014, p. 71). Business enterprises started to see value in the new technology and followed the model of the news media, seizing the opportunity to profit from public thirst for entertainment (Volti, 2014, p. 243). Gathering around the radio became an integral part of family life but the cost for this entertainment was a steady flow of product peddling. Volti concluded, "As had happened

before with other advances in the ability to communicate, impressive technological achievements were put into the service of the mindless and the mercenary” (2014, p.245). By the 1920s, 60 Christian radio licenses had been issued to mostly evangelical churches and of those, most were Baptist; however, due to the toil of the Great Depression and over-regulation by organizations antagonistic to the evangelical ideology, most of these did not last (Lochte, 2005, p. 21-24). Reminiscent of Postman’s axiom that in the world of technology there are winners and losers, these media organizations exerted their power to maintain control over communication and in so doing Christian broadcasts found themselves on the losing side of the equation.

### **The Television**

Radio’s successor, the television, would again radically transform the media culture. Even as radio technology was in its prime, ideas were in motion for the first television (TV). Unlike Radio, which utilized one sense, TV also engaged sight and sound (Volti, 2014, p. 245). Television was so captivating to its audience to such an extent that its viewers were oblivious to its potential effects on society. Whereas print placed value on logic and reasoning, the visual component of television emphasized intuition and experience (Hippis, 2005, p. 38). In 1939, while limited in range, RCA was able to begin regular broadcasts to thousands of people in New York City. Television made it easier for media agents to disseminate important news faster than ever before and brought families together as they shared in the experience of the happenings of the world (Challies, 2011, p. 36). Although the TV had humble beginnings, today it has had a dominant place in households around the planet. Smart TVs allow consumers to stream media content from the Internet and access media content on demand. Nielsen is a research company that studies consumers from more than a 100 countries in order to track current trends and habits of media consumers. According to Nielsen’s Q2 2017

Total Audience Report, as of June 2017, “58.7% of TV Households (or 69.5 million TV households) own at least one Internet-enabled device that is capable of streaming content to the television set. Penetration of these devices grew by 12% from June 2016” (Nielsen, 2017, para. 3). Ultimately, this means that consumers have an endless amount of entertainment to consume their time and attention.

## **The Internet**

In 1970s, the Internet was starting to become a reality but its applications were primarily used for military and experimental communications in educational institutions (Volti, 2014, p. 264). During this same time, several personal computers made their debut. Although primitive and incredibly underpowered compared to their evolutions today, each laid the groundwork for the technologies that would soon follow (Challies, 2011, p. 55). Networking continued to develop and while there was a limited pay-to-play group of networks, the potential for a global network found its impetus in 1991 when Tim Berners-Lee created hypertext transfer protocol, or http, for accessing files within a computer network. This laid the foundation for the World Wide Web (WWW) and as monumental as this development was, the decision to not limit it through a patent meant that any computer could become an integral part of the Web; anyone could become a contributor and user of the Internet (Volti, 2014, p. 264). Web technology reduced the financial and technological limitations which once held back the mainstream community. “The Internet allowed the ‘few’ to become ‘many.’ Unlike broadcast technology, no single person or organization held the means for message dissemination,” Wise wrote, “Communication became a two-way street between the ‘haves’ and the ‘have-nots’” (2014, p. 45).

The Internet has become an integral part in nearly all aspects of life from the mobile smart phones people carry in their pockets to the appliances that have become

servants to voice operated digital assistants such as Apple's Siri or Amazon's Alexa. Nicolas Carr argued that the Internet is negatively effecting society. He noted that the Internet with its endless distractions is leading to cognitive overload, physically transforming the brain in such a way that it will begin to hinder one's ability to learn, leading to a shallowing of understanding (2011, p. 124). Boyd challenged this perspective, stating that Carr's argument put too great an emphasis on the influence of technology on culture and did not accurately reflect the sociocultural contexts in which technology is situated (2014, p. 93). Throughout Carr's book, the author makes references to being a user while at the same time proclaiming the dangers of the web which would tend to weaken his argument. Still, it is worth acknowledging that the Internet, with all its advantages, may pose a threat to one's ability to reason and process information over time. In light of the fact that Christians mature in their faith significantly through the extended reading of God's Word, Carr's point should not be easily dismissed. A Christian educator's goal is to help students develop a better deeper understanding of God's Word, therefore if a certain technology may hinder that process, it would seem like a wise course of action to proceed with caution.

### **Mobile Technology**

As computers increased in power, they also shrunk in size. This allowed for the development of cellular networks and mobile technology (Challies, 2013, p. 57). Smart phones allow individuals to not only connect with others via the phone but also take advantage of all the resources the Internet provides. The iPhone was launched in 2007 with a hefty price tag of \$500. The new phone garnered so much praise that it even prompted the Pope to question publicly if people thought more highly of the phone than of Jesus. He questioned, "Is a Saviour needed by a humanity which has invented interactive communication, which navigates in the virtual ocean of the Internet and,

thanks to the most advanced modern communications technologies, has now made the Earth, our great common home, a global village?" (Benedict, 2006, para. 2). The Pope's words prompted people in the news media to dub the new device the "Jesus Phone" (Kedrosky, 2007, para. 1). Apple would go on to sell millions of the iPhones and obtained over half of the total profits generated in the global cell phone market upon its introduction (Isaacson, 2011, p. 474). Within less than a year of its release, Apple had sold 15 million iPads world-wide. Users could purchase inexpensive apps, most of which were free or sold for only a few dollars. Isaacson wrote, "With the iPod, Jobs had transformed the music business. With the iPad and its App Store, he began to transform all media, from publishing to journalism to television and movies" (2011, p. 503). Smart phones allow users to maintain their connection to technology 24 hours a day, seven days a week. Amanda Lenhart of the Pew Research Center found that in terms of the American teenager, accessing the web through their mobile phones is becoming a way of life and an integral part of personality and identity development with 92% reporting that they go online daily and 24% say do so almost constantly (2015, p. 2).

The smart phones of today provide almost unlimited functionality through the use of mobile applications. In terms of ministry, mobile apps allow users to no longer have to carry bulky bibles with them to youth group, they can read a digital version of their bible on their mobile phones. These apps allow them to read scripture in various translations and since the entire Bible is digitally indexed, students can search the entire Bible and locate related topics instantly. With all this being said, the device through which one reads scripture, be it a tablet or a book, will have consequences ultimately for the reader. Using a Bible app like YouVersion may allow the user to readily access cross references quickly but it also means there may be more opportunities for distraction.

The introduction of mobile phones broke the boundaries which once delineated work with family life and increased the likelihood of intrusion. According to Sherry



Turkle, teenagers today are increasingly growing up in homes in which they rarely experience intentional uninterrupted conversation (Turkle, 2015, p. 16). Youth ministers also experience these interruptions as teenagers disengage during youth meetings and other inappropriate times to use their smart phones.

Conscientious parents and their teens use self-regulation and turn off their cellular devices during certain times, for example the family dinner or at a particular time in the evening. Youth workers often attempt to deal with the challenges of disciplining always-on-always-connected students by taking up mobile devices during their youth service. Turkle noted these strategies may not be enough to address the problem. She wrote that the mere presence of a mobile phone invites distraction even if it is turned off (2015, p. 4). Andrew Przybyliski and Netta Weinstein conducted a study in 2012 to research the influence of mobile phones on social interactions. Pairing participants up with unfamiliar partners, the facilitators wanted to test to see if the presence of a mobile phone had an influence on the depth of their interactions. The results of the experiment showed that the presence of a mobile phone had a negative influence with participants stating that they felt less close with their partners and reported a lower quality of relationships than the groups which were allowed to get to know one another without the presence of a mobile phone (2012, p. 241). The researchers concluded that mobile phones “inhibited the development of interpersonal closeness and trust, and reduced the extent to which individuals felt empathy and understanding of their partners” (p. 244). The researchers found that this negative influence was particularly noticeable if the conversations were personally meaningful (p. 244). Turkle wrote, “If we think we might be interrupted, we keep conversations light, on topics of little controversy or consequence. And conversations with phones on the landscape block empathic connection” (2015, p. 21).

This study exposes a potential threat to the kind of life-giving community a

youth group can provide. Without continued discussion in properly addressing these challenges, youth ministers may find themselves in a war for the focus and attention of their teenagers. Michael Hausauer, a psychotherapist in Oakland, California, told a reporter for the New York Times that teenagers had a “terrific interest in knowing what’s going on in the lives of their peers, coupled with a terrific anxiety about being out of the loop.” This demonstrates the grip mobile technology has on teenage life. He continued, “Texting can be an enormous tool,” he said. “It offers companionship and the promise of connectedness. At the same time, texting can make a youngster feel frightened and overly exposed” (Hafner, 2009, para. 11). Mobile phones have become a staple in the life of many teenagers today, and ministers need training in order to overcome the obstacles that mobile phones introduce into youth ministry and to begin to use these types of devices in a way that is productive and engaging. The smart phones today connect students to the world of the Internet, meaning that youth pastors must find new ways to engage students or else they may find themselves competing against a virtual space of endless amusement and distraction. Simply taking a phone away or turning them off may not be enough to engage adolescent minds. New strategies need to be developed in order to address these challenges.

## **Web 2.0**

Originating from a brainstorming session between O’Reilly and MediaLive International in 2004, the term *Web 2.0* quickly became a recognized concept although its exact definition in part depended on its user. According to O’Reilly, this was because its boundaries were not clear cut (O’Reilly, 2005, para. 2,3). Web 2.0 marked a shift from the Internet acting purely as a content retrieval system to a virtual space marked by interaction and user created content which resulted in a participatory digital culture (Mason, 2016, p. 1). In this system of web design, a new set of web 2.0 tools and services

made their debut including wikis, blogs and commenting systems, podcasts, interactive virtual boards, and the various social media networks.

### **Social Media and Adolescence**

Historians have identified and defined past generations by the major military, political, and cultural events of that time, but Gardner and Davis predict the identification of future generations will be dependent upon the shelf-life of their gadgets (2013, pp. 13-14). Social media in particular has come to have a dominant presence in adolescent life. Social media refer to social networking sites that emphasize relationships and encourage participants to post images, videos, and links as well as create and display their own content through blogging, microblogging, developing art portfolios, and maintaining video albums, so that others can share in their interests and make comments (Boyd, 2014, p. 6-7). Social media networks have come to dominate the world of many teenagers today. A recent census taken by the *Common Sense Media* group, noted that a significant number of teenagers say they use social media “every day” (45 percent), 36 percent said they enjoyed using social media “a lot,” reaffirming the always-on-always-connected lifestyles of most teenagers (2015, p. 21).

Mobile applications, commonly referred to as *apps*, have made these services easily accessible to students and have provided these teens with a plethora of tools in which to broadcast their lives and creatively express themselves. Understanding the various types of apps a student has on his or her smartphone provides a valuable window into their life, identifying their interests, habits, and social connections (Gardner and Davis, 2013, p. 60). For students between the ages of 8 and 18, mobile devices account for 41 percent of all screen time among *tweens* (8-12 years) and 46 percent among teenagers (Common Sense, 2015, p. 21). According to Christine Elgersma, teenagers prefer a variety of social media networks rather than limiting themselves to a particular

favorite (2017, para. 1). She compiled a list of currently trending web and mobile applications (apps) among teens. These include *texting apps* like *GroupMe* and *WhatsApp* which allow users to send photos, videos, and calendar links without limits of direct or group messaging; *photo and video-sharing apps* like *Instagram* which allows users to snap, edit, and share photos and 15-second videos with artistic effects filters, either publicly or within a private network of followers; live-streaming video apps *Houseparty* - *Group Video Chat* to connect with others via live video; *self-destructing apps* like *Snapchat* which is a messaging app that allows users to send pictures and videos that will disappear after a set amount of time as well as *Whisper* which is a “confessional” app that allows users to post whatever is on their minds, paired with an image. Elgersma wrote concerning this last category, “with all the emotions running through teens, anonymous outlets give them the freedom to share their feelings without fear of judgment” (2017, “Self-Destructing/Secret Apps,” para. 3). This list will change over-time, but one should note the various forms of interaction and expression each of these social applications provide teenagers. Apps like these on mobile platforms allow students to have the ability to develop profiles, create content and push that content out to their followers.

Coders develop these social networking applications to maximize and extend engagement. Teenagers experience psychosocial changes which may increase their desire to interact on social networks with their peers. Psychologist, Erik Erikson (1998) developed his psychoanalytic theory of psychosocial development which consisted of eight stages each having a psychosocial crisis through which each individual had to successfully complete in order to make a healthy transition into the next stage. Erikson’s fifth and sixth stages deal with a teenager’s transition into adulthood. The fifth stage, *ego identity versus role confusion*, generally refers to individuals between the ages of 12 and 18 years of age. In this stage, teenagers develop their sense of self and identity through developing their values, beliefs, and goals (McLeod, 2013, “5. Identity vs.

Role Confusion”, para. 1). Erikson wrote, “The adolescent mind is essentially a mind or moratorium, a psychosocial stage between childhood and adulthood, and between the morality learned by the child, and the ethics to be developed by the adult” (Erikson, 1963, p. 245). Social media applications require participants to develop their profiles, their online identity, in order to use their service; a process very similar to identity development off-line. In developing their profile, they must provide information that identifies their values, beliefs, and goals. In Erikson’s sixth stage, *intimacy vs. isolation*, individuals desire to establish deeper relationships with others. While this stage falls generally outside the age range of adolescence, 19- 40 years of age, one should note that teenagers are experimenting with relationships; a phenomenon which drives the popularity of social media today.

From a biblical perspective, identity and intimacy find their roots in the very beginning of the foundation of the earth when God decided to create the human race in His image. The Bible says, “Then God said, ‘Let us make man in our image, after our likeness. And let them have dominion over the fish of the sea and over the birds of the heavens and over the livestock and over all the earth and over every creeping thing that creeps on the earth.’ So God created man in his own image, in the image of God he created him; male and female he created them” (Genesis 1:26-27, ESV). In the natural order, God created humanity, both male and female, in such away that they would reflect his very being, to thrive in relationship to one another. The triune nature of God, the commune between the Father, Son, and Holy Spirit is origin of humanity’s innate desire for intimacy and the theological foundation upon which society seeks community and communication (Zsupan-Jerome, 2014, p. 49). As God looked upon what he had made, Adam and the rest of creation, as good as it was, He assessed that it was not good for man to be alone; he needed another to complete God’s grand design (Gen. 2:18). So he crowned his work with the creation of a suitable helpmate, a woman, and it was not only

good, but very good.

Since that moment in time, humanity continues to gravitate toward and congregate with like-minded people, with whom they can share their ideas, passions, and even the most intimate details of life (Terrace, 2012, p. 32). Psychologist Janet L. Surrey wrote that authentic connection is essential for growth and healing as it allows people to escape the bonds of isolation and develop a type of communal resilience that is formed from groups of all sizes, from intimate relationships to large networks (2005, p. 92). In this sense, social media feels almost intuitive, natural even. The reason why social media has resonated with modern culture is because it has provided the means through which humanity can pursue constant connection.

Social media platforms find impetus and profit from their ability to provide people with effective means of establishing these connections. Jesse Rice wrote that, “The kind of connection we are longing for—whether consciously or unconsciously—is the kind that creates a sense of belonging within us, a sense that we are ‘safe, cared for, protected, and loved.’ In other words, we feel most at home—most ourselves—around people with whom we experience that deep and authentic connection” (Rice, 2009, p. 47). In 2014, the Information School at University of Washington brought together thought leaders in the area of technology and adolescence to discuss current policy and ongoing research as well as exchange ideas and address challenges facing study and learning from digital youth. These were certainly high level discussions but what drew the most attention was a small panel of teenagers who were willing to share their experiences with using social media and mobile technology. One of the young female panelists stated that, “Technology opens doors, you can communicate. Like on Snapchat you can share what’s going on with friends really quickly and it lets them see what’s going on. You could just tell them. But it’s different when they can see it by sending them a photo. You can share more of your life. Like, I can take a picture of being on this panel and send it to them”

(Fisher et al., 2016, p. 7). The highly relational and personal nature of this young lady's comment brings clarity to how teenagers perceive their use of technology. Adolescent desire for continuous connection in the world that is increasingly disconnected (Zirschky, 2015, p. 5). Zirschky noted, "the irony is that youth ministers who try to stay 'relevant' by adopting the latest social media apps secure their own irrelevance if they fail to understand the true attraction of youth to social media and fail to offer the deep community that God intended and that youth long for" (2015, p. 6).

Teenagers want continuous communication with their network of communities. The combination of social media and increased access to mobile technology has provided a mechanism through which teens can maintain this constant connection. As teenagers develop relationships with others, they naturally want to establish places where they can hang out with those friends and be themselves. These places used to be physical locations such as the local mall or movie theater, but since the advent of social media, more often today, social networking sites have surpassed the mall in popularity (Boyd, 2014, p. 5). It is important to note here that teenagers prefer off-line meet ups as opposed to virtual ones. Social media is not a replacement for real-world relationships but serves as a sustained connection between times of physical connection.

According to Davis' research, teens reported that one of the key reasons they engage in social media is to strengthen their relationships across a broad spectrum of people. For instance, one participant noted that being disconnected from social media would have a significant impact on their relationships in the sense that it allows them to follow multiple conversations. Staying up-to-date with all of their friends allowed them to engage in more face-to-face conversations. Without this feed of information, the participant feared that he would become isolated from his peers and left out of activities (Davis, 2012, p. 1533). Teenagers who have grown accustomed to the always-on-always-connected lifestyle often experience intense anxiety when separated from

the networks and mobile devices that allow this way of life to be possible. This has led to a phenomenon among teenagers labeled as FOMO, which stands for *fear of missing out*, in which teenagers feel perpetually locked in a state in which they must maintain their digital connections in order to prevent exclusion from their social circles (Palfrey & Gasser, 2016, p. 153). In this sense, the hyper-connectedness of mobile technology has created a culture which has devalued solitude; a necessary component of a healthy lifestyle. (Turkle, 2015, p. 10).

Much of adolescent identity development is connected to their roles within their network of relationships which is only amplified by the public nature of social media networks. Justin Wise noted:

As we develop through adolescence, living for what psychologists call an “imaginary audience” is part of how we organize our inner worlds. Talking or acting out ideas in our head for our “invisible entourage” helps us sort through our beliefs about ourselves and the world around us. What is new is a technology that takes our naturally adolescent assumption that the world is watching, and offers us a spotlight, a microphone, and a stage as vast as cyberspace from which to act out our assumption—with our legion of friends serving as an invisible entourage” (Rice, 2009, p. 111).

For this reason, Rosen argues that the kinds of relationships formed within social networks cannot qualify as genuine friendships because true friendship necessitates mutual revelations, hidden from the rest of the public (2007, “The New Taxonomy of Friendship,” para. 2). Rice dismissed this line of reasoning, arguing that teenagers simply do not delineate their community between online and offline relationships; they are simply a combination of both (Rice, 2007, p. 170).

Interestingly, believers also find in Genesis, God’s command to rule over the earth, otherwise known as the *Creation Mandate*. As part of humanity’s design to reflect



the very nature of God, is a innate desire to work and care for God's creation (Rice, 2007, p. 116; Gen. 2:15). It is out of this nature that people find their capacity to be innovative and pursue better technologies. Just as God looked upon His Creation and believed it to be Good, people intuitively find satisfaction in their own creativity (Zuspan-Jerome, 2014, p. 48). Teenagers actively create, share, and comment on content strategically in order to maintain engagement with their network (Zirschky, 2015, p. 107). Teenagers have developed strategies like these in some cases to garner attention and increase their visibility, but if anything unexpected happens, they may be unprepared to deal with the fallout (Boyd, 2014, p. 13).

As much as social media connects communities together, it also creates additional challenges both for teenagers and the adults responsible for their welfare. When an individual communicates, he or she often assesses the environment and context in order to determine his or her subject matter and vocabulary. For example, a teenager may speak and act differently around their peers than they would in front of their parents, teachers, or employers. The context matters and plays a crucial role in their choices and behaviors. Social media collapses or collides these various contexts for all to see (Boyd, 2014, p. 31). Off-line students can easily departmentalize their various contexts, but online, teenagers to some extent lose this choice. For example, students may act and speak differently at home than they would at their favorite hangout spot. The content of their conversations will be different because their friends have a different kind of relationship with the teen than they share with adults. Were an adult to overhear one of their conversations, they may not fully make sense of it because the unintended receiver lacks information and context.

As vast as the Internet is, social media and networked life has created a small room in which all of one's social circles get to judge, engage, and comment on every expression. Online, unintended audience members such as one's parents or potential

employers, see shared content originally intended the student's peer audience. In the physical world, should an unintended individual intrude into a closed conversation, teenagers can easily change the subject and in essence change the environment. It is far more difficult to do so online, when every word and image is on the record and broadcasted to the world. *Context collapse* occurs when previously delineated contexts merge so that everyone is in the same space. Teenagers have to learn how to communicate in multiple contexts simultaneously. Boyd wrote that in order to stabilize their contexts online, teenagers will often create an imaginary audience much like journalist and politicians imagine the audience they are trying to reach (2014, p. 31). This imaginary audience becomes the dominant force and filter for all content shared online.

Turkle (2011) noted that the underlying theme of Mark Twain's *Huck Finn*, was a teenager's journey to find independence. In the past, teenagers were able to find ways to develop their identity out of the watchful eye of the adult world. The evolution of technology has removed the veil of life and created a system in which teenagers are never alone. The journey down the river is being live-streamed or live-tweeted. "The tethered child," wrote Turkle, "does not have the experience of being alone with only him or her to count on" (Turkle, 2011, p. 173). In the networked world, teenagers have had to adapt and use subterfuge to pursue their journey of independence.

Teenagers have developed their own ways of protecting their social media activity such as *obfuscation*, deliberately providing false information about themselves which is easily recognized and decoded by their close network of friends (Palfrey & Gasser, 2016, p. 73). What makes perfect sense to one social circle may be confusing and even disconcerting to another. In their attempt to gain back control in their networked world, teenagers may find that their actions can have significant consequences especially in their professional endeavors. Posts can be misinterpreted or taken out of context by unintended viewers (Boyd, 2014, p. 33). Context collapse is sure to be a growing problem

as employers, parents, and youth workers request to be added to one's social networks (Rice, 2007, 131). Social media platforms are continually changing their systems in order to give participants greater control over who sees what on their profiles; however, these settings do not always guarantee content will not fall into view of an unintended audience (Rice, 2007, 132).

Religious leaders have reported that young people are less likely to entertain membership into the church, even ones in which they had spent their youth. Instead, they openly spread their time and efforts across a broad range of interest groups (Gardner and Davis, 2013, p. 87). Wise speculated that the reason why attendance is dropping may be contributed to the idea that church is no longer necessary to hear a sermon because these can be found online. In light of this, the church needs to reaffirm its position as a communal refuge (Wise, 2014, p. 95). Teenagers may not be turning away from church in this case because it is no longer a valuable option in their lives, rather it is simply one of many activities and interests from which to choose. Connection to so many different groups increases distraction, limiting students ability to focus on any one thing, including even activities that may have eternal value.

Unfortunately, as Rice pointed out, this affordance also affects their personal relationships as they experience *hyper-connection*, which he defined as having so many connections that it becomes difficult to manage the fabric of relationships he or she has established to the extent that teenagers are losing relational focus (Rice, 2009, p. 101). Without discernment into how one uses mobile technology, there is a real potential that technology will influence how he or she relates with others by encouraging superficial virtual relationships online while at the same time discouraging off-line, face-to-face interactions (Gardner & Davis, 2013, p. 32-33). Many teens use digital forms of communication to make and break on-the-fly arrangements to meet in person, a practice known as *microcoordination*. Gardner and Davis believe this tentative behavior results

from an Internet culture in which information, goods, and services are always and immediately accessible. In this environment, young people grow up believing that people should be always and immediately accessible as well (Gardner and Davis, 2013, p. 94).

While technology provides immediate access, it also affords students the option to immediately drop out of the relationship. Students can leave online interactions whenever they desire or worse, attempt to multi-task, playing with mobile apps while attempting to maintain the conversation. This half-hearted effort rarely results in a focused conversation, distracting the student from relational focus. The hidden embedded idea of virtual interactions is that genuine relationships no longer require continual attention (Turkle, 2015, p. 140). Students want to be connected but lasting relationships take time in order to grow in intimacy and strength, but time is always at war with efficiency. Turkle wrote, “These days, we want to be with each other but also elsewhere, connected to wherever else we want to be, because what we value most is control.” (Turkle, 2015, p. 19). What is lost is a relationship in which intentional focus is exchanged for amusement and distraction. As a result students find themselves with a vast network of friends, which may qualify as connections but do not resemble genuine life-giving relationships (Rice, 2009, 110). Their invisible entourage may be growing in number, but in addition teenagers are experiencing increasing feelings of isolation (Gardner and Davis, 2013, p. 44; Turkle, 2011, p. 154).

### **The Affordances of Technology**

It appears that technology is in fact influencing the choices individuals make and over time changes how they perceive the world, but why? Don Norman referred to the term *affordance* as a relationship between an inanimate object and an interacting agent; specifically how the properties of that object influence the actions and choices of the individual (2013, p. 11) For example, if someone walks up to a door with a rectangular

panel, it is unlikely that he or she will try to pull that door open, but instead intuitively decides that the door opens by pushing against the panel. Alternatively, if that panel was replaced by a vertical handle, his or her first thought, will mostly likely be that the door opens by pulling. Neither the panel nor the handle *determines* the person perception, but these clues naturally *influence* one's choices to such an extent that it often changes their behavior. *Affordances* influence behavior and choice intuitively. Accordingly, every context, every environment, changes the nature of the kinds of relationships that can take place and affords the opportunity for action (Boyd, 2014, p.10). For example, every teacher has to determine how he or she is going to set up the seating arrangement for his or her classroom. How she arranges her classroom will communicate her expectations for the class. Grouping desks in such a way that they face each other will create an environment in which students will naturally, intuitively want to converse with one another. Alternatively, the teacher who has a particularly talkative classroom, may drastically alter student behavior simply by rearranging desks to face forward in rows. Anyone who is considering integrating technology into his or her ministry must consider the kinds of affordances it will bring into the ministry context.

Danah Boyd talks about four affordances that shape the mediated and online environments teenagers populate like those found on social networking platforms. These include *persistence*, *visibility*, *spreadability*, and *searchability* (2014, p. 11). In light of these affordances, students have radically changed their behavior as they navigate their networked existence.

First, *persistence* has to do with the durability of online expression and content. Content placed on the web tends to remain on the web. Conversations broadcasted online endure far longer than the kinds of conversations that people have off-line (Boyd, 2014, p. 11). Off-line conversations are temporal in nature, recorded only in the minds of those currently present. Therefore, what one said in the past, often stays in the past. Not only

does one determine word choice based off his or her intended audience but also his or her intended historical context or culture. When it comes to communication, context is key. Everyone is now “on record” as they spend more of their time in virtual spaces and less in the off-line world. Every word is recorded and stored in a digital dossier to be reviewed by anyone who has the right connections to view it (Solove, 2004, p. 1-2). Teenagers do not always stop to consider the long-term implications of open transparency online; how the content they share now may be used against them as they become adults. The irony is that teenagers may not see anything wrong with *googling* someone or virtually stalking them online, but they have a problem if their future employer takes some of the same actions.

The second affordance of social media technology is its *visibility* (Boyd, 2014, p. 12). As noted earlier, mass communication is no longer a privilege for large agencies. Anyone with a networked device can broadcast content to millions of people and access content from anywhere in the world. In addition, social media allows anyone to repost content on their own feeds, extending its reach into their own networks and so forth. Content can quickly become viral and reach a broader audience than what was originally intended. If one can manage what he or she shares online, visibility can be a good thing. When one cannot it can be a never-ending, overwhelming nightmare. Friends can tag others in their own posts and link content. A person may choose not to post that picture of him or herself at a particular party, but that does not mean someone else will have the same inhibition. An image taken out of context could have irrevocable consequences.

The third affordance on Boyd’s list is *spreadability*, or the speed and ease at which content can spread over the Internet. Boyd wrote, “Social media is designed to help people spread information, whether by explicitly or implicitly encouraging the sharing of links, providing reblogging or favoriting tools that repost images or texts, or by making it easy to copy and paste content from one place to another. Thus, much of what people

post online is easily spreadable with a the click of a few keystrokes” (Boyd, 2014, p. 12). Social media, as the name suggests, is designed to be social, to spread through everyone’s personal networks. Although participants may feel they have a certain amount of control over their social media accounts, those who own social media companies have a vested interest in expansion and profit. In other words, social media outlets like Facebook and others increase their profits as activity increases online. The more people share, the more information they provide, the better these platforms operate.

No one is in complete control of their content; in fact, it becomes the property of the social media platform the moment it is shared online. This also means that any other user who has access to that content is free to do with it what they will. Participants may be able to control what they share about themselves but they cannot manage what other people share on their own feeds. This can be challenging for teenagers as they seek to present themselves in the best light online. Unfortunately, spreadability also aids those who have malicious intentions. Rumors, gossip, and explicit content can quickly spread out throughout various peer networks. Teenagers do not always make the best choices and one lapse in judgment, for instance a revealing image sent to a boyfriend or girlfriend, can expose young people and cast them in a undesirable light. Cyberbullying can absolutely devastate a teen so much so that they may consider taking their own lives to end the torture.

Lastly, everything on the web is *searchable* (Boyd, 2014, p. 12). This is an unprecedented time when anything one wants to know can, in most cases, be found on the Internet. Not only can one search for information but GPS software in most mobile devices allows one to locate people. In 1996, Sergey Brin and Larry Page developed what would become the search engine known today as Google. Interestingly, Google’s original name was *BackRub* because the software evaluated the importance of webpages using associated *back* links to other related sites. Although it started with two guys in

a garage, Google Inc. now employs over 60,000 employees in 50 different countries, making hundreds of technological devices, in addition to a growing library of web applications (Google, n.d., para. 1 & 5). According to one global statistic agency, Google now receives “over 40,000 search queries every second on average, which translates to over 3.5 billion searches per day and 1.2 trillion searches per year worldwide” (Berners-Lee, n.d., “Google Search Statistics” para. 1). Google has become so popular that today people commonly use the term *google* to refer to searching for anything online regardless of whether or not one uses Google’s services or not. NBC News reported that Google is actively discouraging people to avoid using their company’s name in this way and have taken legal action against countries who have tried to standardize the term (Choney, 2013 para. 1-3). The implication of these reports is that Google has become major source for life’s biggest, and smallest, questions. It is so simple. Type or verbally ask Google for information and almost immediately it produces thousands of responses.

Having the ability to search the world’s libraries for information raises another challenge. Since web content endures over time, is highly visible, sharable and searchable, seekers can easily surface isolated interactions. Context provides a limited amount of protection for the individual in that it can offer justification for words and actions; however, when observers remove content from their original context, one loses these protections. Boyd wrote, “These tools are often designed to eliminate contextual cues, increasing the likelihood that searchers will take what they found out of context” (Boyd, 2014, p. 12). A comment made a decade ago, perhaps uncontroversial then, years later can become culturally insidious and lead to a maelstrom of negative consequences for the individual. Just because teens can and do manipulate social media to attract attention and increase visibility does not mean that they automatically have the skills to navigate what unfolds as others view their online record of activity and speech in the future (Boyd, 2014, p. 13).



Adolescence can be a difficult time as teenagers adjust the physical, mental, and social changes that take place during this time in their lives. The harsh reality of current technology with its social components is that, today, teens feel pressure to broadcast their lives for all to see. The catch of it all is that engaging in social media seems to be doing little to address the feelings of isolation that accompany it; however, teens feel disengaging also means isolation from conversations which is increasingly taking place online. Apart from attaining any sort of relevance, youth ministers need methods, resources, and tools to help them minister to students in the world in which they live, but equipping these next-gen leaders is not without its challenges.

### **Technology and Self-Efficacy**

According to Albert Bandura, *self-efficacy* is “the exercise of human agency through people’s beliefs in their capabilities to produce desired effects by their actions” (Bandura, 1997, p. VII). Self-efficacy, also referred to as *efficacy*, is a perception of ability and not actual competence of any particular skill. Therefore, efficacy beliefs are only a part of the equation and insufficient to guarantee successful practice. Still, efficacy is a strong motivator which provides the energy necessary to attempt an unfamiliar task (Rice, 2009, p. 99). Much of Bandura’s research focused on this relationship between one’s beliefs and one’s actions. How people feel about their ability to successfully complete a task can act as either an incentive or deterrent. This led Bandura to state that efficacy beliefs were a major basis for action (1997, p. 2-3).

This quantitative study is built upon the foundational belief that as self-efficacy goes, so goes a person’s use of the information and practice. In short, is self-efficacy a sufficient predictor of action? Even if this study can show a correlation between the self-efficacy perceptions of youth ministers and the extent to which they integrate technology and proper use of it in their ministry, what role does education play in improving these

connections.

Recent studies of efficacy levels in integrating technology into the classroom support Bandura's findings. Coleen Moore-Hayes conducted a study in 2011, in order to research how teachers were integrating technology into their classroom. Of particular interest in this study were the self-efficacy beliefs of experienced teachers versus those who were just getting started in their teaching careers. *Self-efficacy* is one's personal beliefs in the likelihood of successfully completing a given task. For this case study, Moore-Hayes wanted to evaluate the preparedness of teachers and to expose any correlations between efficacy perceptions and experience in order to highlight any areas which could be improved in order to make integration easier.

If one were to hypothesize about the outcomes of the Moore-Hayes study, one might guess that new teachers would be much more willing to integrate technology into the classroom than the experience teachers who may have been satisfied with their current methods of teaching. Surprisingly, Moore-Hayes found that there was little difference between beginning teachers and those who had been in the classroom for many years. (2011, p. 8). In fact, neither experienced teachers nor beginners were incorporating technology into their classroom, even if they claimed to be knowledgeable about technology. When asked to explain their responses, many claimed that they had not been adequately prepared to do so.

Similarly, in Grunwald Associates study which included over one thousand U.S. teachers, principal and assistant principals, and educators reported that they believed that technology helped students develop critical thinking and problem solving skills, as well as strengthened communication and collaboration, which led to greater creativity and innovation (2010, p. 6). When the research agency asked these same educators about the frequency of their technology use in the classroom, 29 percent said they used it 20 percent of the time in their class, and another 34 percent of teachers said they used

it 10 percent or less (p. 8). The majority of these educators recognized the benefits of integrating technology, but they were not able to put these beliefs into practice.

According to these studies, efficacy beliefs play a significant role in their behaviors and choices as it related to their classroom, but why do these beliefs play such a crucial role? According to Bandura:

Beliefs influence the courses of action people choose to pursue, how much effort they put forth in given endeavors, how long they will persevere in the face of obstacles and failures, their resilience to adversity, whether thought patterns are self-hindering or self-aiding, how much stress and depression they experience in coping with taxing environmental demands, and the level of accomplishments they realize. (1997, p. 3)

The reader should note that the teachers in the Moore-Hayes or Grunwald Associates studies did not report about a lack of access to technology. Rather, despite their positive impressions about the benefits of technology, their negative efficacy perceptions dictated their methodology. They simply chose to focus on other aspects of the classroom regardless of the potential benefits of incorporating it into their lessons. Ultimately, fear had more of a bearing than did their aptitude in using technology. Moore-Hayes stated, “The rapid growth of technology in education continues to have a profound effect on the teaching profession. The changing nature of how we receive and distribute information suggests that educators need new strategies and tools for teaching and learning” (2011, p. 3). She continued, “As the demand for innovative web-based strategies and assistive technologies increases, so too does the need to provide support for those charged with delivering instruction” (2011, p.3). What these studies expose is that educators need more than a simple knowledge of technology and access to a computer; they need someone to guide them in the technique of incorporating technology in order to supplement and enhance teaching whenever there is a possibility of improvement.

Bandura wrote that there is a reciprocal causal relationship between internal factors, meaning the cognitive, affective, and biological events in one's life, and external environmental factors that influence one's beliefs. (Bandura, 1986, p. 6). These various factors may not have equal weight in one's life but they can effectively motivate or impede one's beliefs and actions. Bandura wrote:

Efficacious people are quick to take advantage of opportunity structures and figure out ways to circumvent institutional constraints or change them by collective action. Inefficacious people are less apt to take advantage of environmental factors and are easily discouraged by impediments. (Bandura, 1997, p. 6)

Comparative tests have repeatedly demonstrated the predictive power of self-efficacy perspectives which have been found to even supersede one's self-concept (Pajares & Kranzler, 1995; Pajares & Miller, 1994). Since efficacy levels to an extent predict action, and if it is true that technology benefits students in the classroom and has the potential to benefit young believers in the youth room, colleges, divinity schools, and seminaries should consider how to improve efficacy in their students.

Self-efficacy should not be confused with self-esteem. Efficacy has to do with one's belief in his or her capabilities; whereas, esteem is related to one's concept of self-worth (Bandura, 1997, p. 11). Self efficacy, unlike one's self-esteem, helps one to develop personal goals and motivates him or her to achieve those attainments (Mone, Baker, & Jeffries, 1995). Additionally, self-efficacy should not be understood as one's talent. Efficacy involves one's beliefs in his or her capabilities and not in the capabilities themselves (Bandura, 1997, p. 37). Low efficacy perspectives can easily reduce the power of one's ability because doubt and fear can overrule talent. (Bandura & Jourden, 1991; Wood & Bandura, 1989). When faced with seemingly insurmountable odds,

efficacy levels can lower to such an extent that one's potential contribution is negated and oppressed by fear. Low efficacy perspectives will conjure negative outcomes to such an extent that individuals may choose not to act at all, where as highly efficacious people believe in the possibility of victorious outcomes (Bandura, 1997, p. 24).

Bandura wrote, "It is because people see outcomes as contingent on the adequacy of their performance and care about those outcomes, that they rely on efficacy beliefs in deciding which course of action to pursue and how long to pursue it" (1997, p. 24). This is particularly important in the technology education as it relates to those who would consider themselves inferior to their tech-savvy students. If educators see themselves in competition with their knowledgeable students, they too may conjure up negative outcomes. They do not want to risk the embarrassment of appearing foolish or ignorant. This attitude positions teachers at a disadvantage before education has a chance to begin. Instead a partnering approach sees the teacher and student as a mutually beneficial relationship in which both have an opportunity to learn from the other. Fear and self-doubt dissuade educators from attempting unfamiliar tasks, where as higher efficacy perceptions and positive expectations tend to empower educators to push themselves through taxing situations because they believe in the payoff (p. 24). Since efficacy has such a powerful influence on one's actions and can either empower or restrict action, it is a worthwhile endeavor to consider how efficacy can be nurtured so that beneficial action is not held captive to fear and doubt.

Bandura noted four sources of efficacy: *enactive mastery experiences*, *vicarious experiences*, *verbal persuasion*, and *physiological and affective states* (1997, pp. 79-113). *Enactive mastery experience* strengthens self-efficacy because successful experiences teach the individual that he or she has what it takes to accomplish greater tasks (1997, p. 80). Adversely, failures reinforce one's negative perceptions, highlighting one's incapability of completing a task. Negative experiences will reduce one's incentive to

even attempt taxing endeavors.

Bandura also noted that people develop efficacy through watching others model attainment, or through *vicarious experience* (1997, p. 86) In other words, one gauges his or her performance in relation to others who have made a performance achievement. For example, if a seminary wanted to help student ministers develop their efficacy beliefs in technology integration, they might consider bringing in an experienced youth minister to give testimony of his or her success in that endeavor. Ministry students observe the success of others and visualize their own success. This also takes place in one's workplace if he or she is surrounded by individuals who can provide guidance and support to attempt that which is unfamiliar to them.

Third, Bandura stated that one strengthens self-efficacy through *verbal persuasion*. He wrote, "It is easier to sustain a sense of efficacy, especially when struggling with difficulties, if significant others express faith in one's capabilities than if they convey doubts" (1997, p. 101). Persuasive speech in the form of affirmation and positive feedback energizes performers to try harder and push themselves to develop their skills. This encouragement must eventually be evidenced by a success or else it will lose its authenticity and validity.

Lastly, Bandura added that *physiological and emotional states* have a bearing on how people evaluate their capability. These biological factors predispose individuals to be able to maintain assurance and cope with stress. Experiencing higher levels of anxiety can debilitate performance (1997, p. 106). These factors can also be physical in nature that indicate inefficacy. For example, a new year's resolution to run a 5K race may end prematurely when in preparation for the task, one experiences fatigue and muscle aches. The potential athlete may perceive these as indications that he or she is not up for the task.

## **Ministry in the 21st Century**

The church of the 21st century needs highly efficacious student ministers, capable of meeting student needs whether off-line or within their digital hangouts. Youth ministers have to make the best use of the short amount of time they spend with teenagers in order to engage them in the process of discipleship, not just the practice of Christian education but in the endeavor to develop self-directed students, capable of furthering their own spiritual development. Neither cultural acceptance nor the pursuit of relevance should determine one's acceptance of technology into ministry. Rather that decision should be grounded in one's biblical calling to change lives through intentional and purposeful discipleship. Youth ministers need to be able to assess whether a tool is beneficial to their vision as well as the ability to approach popular applications with an open but discerning mind. Rejection of technology should not be determined by fear of the unknown but rather by its inability to fulfill purpose or add value. Challenges can be overcome but so can ministries without purpose.

If teachers face difficulties related to technology and self-efficacy, it would stand to reason that youth ministers, who work with the same kinds of students, struggle with the same challenges. Seminarians may be well-trained and knowledgeable of the Word of God, but inadequately prepared to engage youth culture in a beneficial way. Without question, biblical literacy must always have primacy over digital literacy. The message, especially as it concerns the Word of God, must always take precedence over the medium. Still, digital literacy can support one's efforts to develop biblical literacy more effectively in others. Youth ministers need to understand how to wisely model technology use given their unique position to speak into the lives of teenagers who have grown up in a world in which technology has always existed. Gardner and Davis note that teenagers long for mentors to help them deal with the personal ethical dilemmas they face online, formerly analogue problems manifesting themselves in a new digital environment. They

need wise individuals to come along side them to help them address the challenges of an always-on-always-connected life (Gardner and Davis, 2013, p. 171). The Internet can be a dark place, but ministers of the Gospel have the tools and systems necessary to be a beacons of light.

Zirschky, who has written extensively in the area of youth ministry and technology, warns that much of the discussion about technology integration, centers around determining whether or not technology is good or bad, should it be accepted or rejected, and not given proper perspective as to the Church's responsibility and influence in a technological society (2015, p. 6). While certainly this dissertation seeks to highlight and address some of the challenges of practicing ministry in a digital world, it is ultimately not a paper about technology, but about the various people involved in the process of passing on the truths of God's Word from one generation to the next. It is about the professors who will equip future youth ministers who in turn will put that training into practice as they seek to engage and disciple 21st century students. Technology is not a savior, but a tool, a means to an end and the goal should always be a stronger church; a church that uses every resource it can to point as many people as it can to Jesus Christ. This is a nearly impossible task without knowledge and discernment, without the ability to properly evaluate their choices, actions, and tools. Marc Prensky wrote concerning one's pedagogy, "We need to best configure students' brains so they can constantly learn, create, program, adopt, adapt, and relate positively to whatever and whomever they meet, and in whatever way they meet them, which increasingly means through technology" (2010, p. 12). While Prensky certainly had the classroom in mind in this statement, it has far greater implications for those in ministry and the students under their leadership. It is inadequate to equip student ministers with the greatest message on earth without also examining the tools through which many will communicate it. Youth ministers and the teenagers under their care live their lives both off-line and through



social media. To focus only on one half of the equation will leave these ministers ill-prepared to address the challenges of modern society with its online-off-line lifestyle. Youth ministers need to have a basic understanding of how to use technology so that they can make the best use of their time and resources.

As this study considers the preparedness and self-efficacy perceptions of youth ministers in integrating technology, modeling becomes a crucial component of integration instruction. Bandura wrote:

Learning would be exceedingly laborious, not to mention hazardous, if people had to rely solely on the effects of their own actions to inform them what to do. Fortunately, most human behavior is learned observationally through modeling: from observing others one forms an idea of how new behaviors are performed, and on later occasions this coded information serves as a guide for action. (1977, p. 22)

Without adequate modeling in classroom, youth ministers may begin to follow the practices of the business world; a field dominated by the desire for profit and brand recognition. For instance, youth ministers often use social media as merely a promotional tool to send out informational content in order to engage students. The message is still unidirectional and fails to make use of the interactive qualities of the platform. While social media networks can be a powerful tool to promote the ministry, it makes the ministry the commodity, not the means through which one comes to know the love of Christ. To truly integrate these kinds of technologies ministerially, youth leaders could seek to encourage personal and meaningful involvement between students and adults and thereby extend community and service beyond the walls of the church (Zirschky, 2015, p. 38). In this way, the focus is less about attractive branding of a ministry, and more about the relationships through which modern technology can support and enhance.

Youth ministers can utilize social media to enhance their teaching in number of

ways, moving beyond simple broadcasting to more of a focused conversation with their community. Unlike the unidirectional technologies of the past, like radio and television, modern technologies promote interactivity and encourage users to comment on, create and share content themselves (Gardner and Davis, 2013, p. 23) Wise suggested that it may be time to consider how social media has created an atmosphere in which the members of one's congregation want to have a more interactive experience (2014, p. 30). This interactivity does not mean control over content. Ultimately, this is determined by scripture and the ministers who are called to proclaim it. Interactivity has more to do with a conversation than it does with any particular content.

For example, interactivity can take place before the sermon, after the sermon, and even during the sermon. A youth minister can use social media prior to his sermon to engage his online community with a discussion question to assess their understanding of a particular passage or topic. The minister could then use that information to address any challenges and correct misunderstanding in his sermon. The minister could also use social media to extend the points after the sermon, by training his congregation to post examples of how the sermon impacted their life that week. He could also create social cards for each of his sermon points. Social cards are graphic representations which members can easily share and spread throughout their social networks. Adventurous ministers could even utilize social media during their sermon, allowing their members to post questions on social media and saving time at some point to address those questions live. In each of these examples, the preacher remains in control of the content while allowing his audience members to interact with each other, the minister, and the content. Ministry 2.0 looks beyond the main worship experience in that it provides a platform for members to dwell upon what has been presented, to ask questions they would never have an opportunity to ask within the time constraints and structure of a youth group or sanctuary. This is not to say that every church, every youth group, should integrate all technology or

all of these approaches in the same sermon; it is simply to say that a discussion needs to be ongoing in how technology is influencing the church and how to utilize it properly for the advancement of God's Kingdom.

A quick survey of the user data of the current social media platforms demonstrates that participation is increasingly growing. For instance, Jessica Wade from *SmartInsights* reported that Snapchat, whose primary audience is 12-17 year olds (83.4%), within the last two years has more than doubled their daily users from 80 million to 173 million (2017, para. 4). Its closest competitor, Instagram, boasts over 500 million daily users ("Strengthening", 2017) but no organization comes close to achieving the success of number one used platform in the world. In September, 2017, Facebook outpaced its nearest rivals significantly reporting to have 1.37 billion daily active users on average ("Statistics," 2017d). These statistics will experience highs and lows but this data alone should be enough to consider how the church is infiltrating this space. Social media has advanced resources of the church and added additional means through which ministry leaders can offer community, pastoral care, and discipleship on an ongoing basis. Justin Wise raised some valid questions about the future of ministry in the age of social media. He wrote:

How can the church become more social? How can we become a community-based organization that intentionally seeks to make its cause more accessible? How can we embrace the changes brought on by social media rather than sticking our collective head in the ground, pretending they don't exist? How can we use social to tear down the wall between "us" and "them," whoever "them" might be in our given contexts (e.g., young people, older people, the gay and lesbian community, people of color)? (Wise, 2014, p. 49)

This conversation needs to take place in higher education and ministry preparation. While the platforms may change overtime, the very nature of social media with its interactivity,

ubiquity of networked devices, and ongoing personalization, will be around for the foreseeable future (Wise, 2014, p. 48-49). For this reason, educators are not locked into a futile effort of chasing expertise in any one technology but through understanding its basic elements, professors can effectively equip ministry students to approach future evolutions with wisdom and discernment.

### **Summary**

Considering the works of Marshall and Eric McLuhan, Niel Postman and countless others who raise questions about technology use, it becomes clear that technology is not a neutral invention of humanity. It has the power to advance humanity but also the potential to cause great harm. Social media has had unprecedented success in connecting people together but as the literature has highlighted, studies have demonstrated that users increasingly feel disconnected. Before youth ministers blindly attempt to incorporate technology into their mix of ministry tools, they should weigh its cost and assess its benefit. One cannot be so blinded by optimism that he or she neglects to consider the inadequacy of technology to do what only the Holy Spirit can do in a biblical community of believers. Technology has been shaped in the image of man and man in the image of God. Therefore, technology has the power to bring glory to God, but like all of creation, it has the power to become an idol and misperceived to possess the power to save. Technology is such a dominate force in the lives of teens that it has come to define their identity, intimacy, and community. Just as it has shaped the lives of teenagers both positively and negatively, it will influence one's ministry as well. Technology will continue to evolve and it will always have its advocates and its detractors. Ministry leaders must push past irrational concerns and blind optimism and instead use biblical and purposeful discernment in deciding whether or not technology should be integrated into ministry.

## **CHAPTER THREE**

### **RESEARCH DESIGN AND METHODOLOGY**

#### **Introduction**

According to recent studies of efficacy levels in integrating technology into the classroom (Moore-Hayes, 2011; Grünewald, 2010), teachers appear to have a receptive attitudes about its potential to enhance learning. Particularly in the Moore-Hayes study, teachers report inadequate preparation and limited modeling prevents the actual implementation of technology into the classroom. While younger teachers are more likely to integrate technology, the Moore-Hayes noted that inexperienced teachers face the same integration challenges as their older, more experienced counterparts (2011, p. 8). Since student ministers are in many ways akin to middle school and high school educators, they likely face some of these same challenges as they attempt to integrate technology into their own ministry.

#### **Research Purpose**

The purpose of this study is to ascertain preparedness as it relates to ministerial training and self-efficacy perceptions of youth ministers in integrating technology into student ministry. The importance of this study is to determine if ministry education is adequately providing youth ministers with integration training and to determine if this type of preparation needs to be altered to improve self-efficacy beliefs related to technology integration in youth ministry. This study examines the following research questions.

## **Research Questions**

1. What is the relationship between self-efficacy perceptions in integrating technology into youth ministry and demographic factors?
2. What is the relationship between self-efficacy perceptions and the extent of technology use?
3. What is the relationship between self-efficacy perceptions and exposure to technology integration methodology in formal ministry training?
4. What is the relationship between self-efficacy perceptions of youth ministers and support from their various social networks?
5. What do youth ministers consider to be the greatest need relating to improving self-efficacy perceptions and technology use?

## **Research Methodology**

In light of the ubiquitous nature of technology and the vast range of perceptions about its use, the researcher determined that a mix-method approach would be the best option to use in order to collect informative data as it related to the research topic. The study uses a descriptive embedded mix-method design (Clark & Creswell, 2007, p. 376). This methodology utilizes both quantitative and qualitative questions collected concurrently within the same online survey instrument. For this study, quantitative data serves as the dominant data type with qualitative data serving in a secondary, supportive role (Leedy & Ormrod, 2013, p. 10). In addition to using quantitative closed-ended questions, the researcher incorporated open-ended questions in order to provide participants a chance to clarify their survey responses or provide additional information that would be difficult to obtain strictly utilizing a quantitative approach.

## **Population and Sample**

The population for this study is youth ministers who are currently serving as the primary minister in their Christian church. These include full-time, part-time, bi-vocational, and volunteer youth ministers. In order to harvest the largest amount of participants, the researcher used several means to promote the online survey. First, the researcher used Twitter and Facebook to connect with youth ministers on social media. On Facebook, the researcher posted a participation request in the Youth Ministry Round Table group consisting of 695 members. Also, the South Carolina Baptist Convention agreed to send an invite to participate in the study to all of the youth ministers in their network. Additionally, Youth Ministry Magazine, formerly known as Youth Worker Journal, agreed to send out the survey to all of their subscribers. This amounted to approximately four thousand participation requests which yielded 288 participants who agreed to participate in the study. These included youth ministers, both male and female, multiple ethnicities, denominational backgrounds, and socio-economic environments. The quantitative data was imported into SPSS software for analysis. The open-ended questions were individually assessed and coded to ascertain whether there are any reoccurring themes or issues.

## **Instrument Concept**

Colleen Moore-Hayes acknowledged that her research report was limited because she was pulling her data from a larger study which had broader interests. Additionally, she noted that her the primary study did not examine the influencing factors that affect self-efficacy perceptions. In light of these limitations, the researcher designed this instrument in order to focus entirely on preparedness and self-efficacy perspectives of youth ministers in regard to technology integration (See Appendix A). In addition, the instrument was patterned loosely around Bandura's four sources of self-efficacy which

include *enactive mastery experience, vicarious experience, verbal persuasion, and physiological and emotional states* (1997, p. 79-113). Table 3.1 examines each of these four sources.

Table 3.1

*Survey Items Related to Bandura's Sources of Self-Efficacy*

Source	Definition	Survey Item #
<i>Enactive Mastery Experience</i>	Past achievements affirms potential for future accomplishments (p. 80).	25-33
<i>Vicarious Experience</i>	Efficacious models provide examples and support for one's own achievement (p. 86).	12,14-23, 35-36
<i>Verbal Persuasion</i>	Affirmation energizes performers to push through the challenges of the unfamiliar tasks (p. 101).	11,13
<i>Physiological and Emotional States</i>	Biological factors that predispose certain individuals to be able to maintain assurance and cope with stress (p. 106).	24

**Instrument Validity**

According to Leedy and Ormrod, the validity determines the extent to which an instrument measures what it is intended to measure. (2007, p. 89). In order to strengthen



construct validity, the researcher utilized an expert panel of professors and practitioners in the areas of youth ministry, psychology, and technology to determine if any adjustments were necessary before opening up the survey (Leedy & Ormrod, 2013, p. 90). This panel included Dr. Tim McKnight, who earned his Ph.D. from The Southern Baptist Theological Seminary. He serves as Assistant Professor of Youth Ministry, Missions, and Evangelism at Anderson University and Clamp Divinity School, Anderson, South Carolina. Anderson University is affiliated with the South Carolina Baptist Convention. Dr. McKnight's wisdom and experience in youth ministry help to refine the instrument and provided the forethought needed to ensure the instrument was simultaneously practical and penetrating.

Dr. Robbie Franklin, who earned his Ph.D. in Psychology from Pennsylvania State University, is Assistant Professor of Psychology at Anderson University, teaching courses in Advanced Research Methods, Cognitive Neuroscience, History and Systems of Psychology, Introduction to Psychology, Statistics I and II. As a master statistician, Dr. Franklin was able to examine the instrument to help eliminate any potential weaknesses and increase the likelihood of quality data collection.

Brandon Cox, who has 19 years of pastoral experience, currently serves Senior Pastor of Gracehills Church in Rogers, Arkansas. He previously served as a pastor at Saddleback Church and continues to work for Saddleback as Editor of Rick Warren's online resource, Pastors.com. He is also the author of *Rewired: How using today's technology can bring you back to deeper relationships, real conversations, and the age-old methods of sharing God's love*. Cox provided valuable insight into the technological challenges ministers face as they seek to integrate technology into their ministry.

Once the survey passed through the expert panel's inspection, the researcher decided that the best method of distribution of the survey would be to use the resources available online through SurveyMonkey.com. The researcher understood that this may

bias the results of the study to some degree. In spite of this bias, this seemed to be the most cost-effective and productive means in order to reach a broad range of youth ministers.

In addition to the expert panel, in order to strengthen internal validity, the researcher field tested the instrument utilizing a pilot group of youth ministers who offered feedback related to the clarity of the questions (Leedy & Ormrod, p. 2007, 199; Karabenick et al., 2007, p. 143). This included a youth minister from a smaller congregation, a mega-church congregation and a mid-sized congregation. Their contribution was invaluable, because they represented the exact types of ministers who would make up the sample population of the survey. The researcher made the recommended adjustments both in the wording of the questions and the possible response choices. Upon approval of the expert panel the survey was ready to be distributed.

It was also determined that youth ministers would be more willing to participate in the survey, if the researcher offered an incentive. To increase participation, the researcher offered anyone wishing to provide their contact information a chance to win a \$50 amazon gift card and a year's subscription to *Youth Ministry Magazine*, formerly known as *YouthWorker Journal*. In order to protect the anonymity of the participants answers the participants were made aware at the first page of the survey that if they wished to be a part of the drawing, they would have a chance to provide their contact information in a separate survey. In this way, their initial survey responses would not be connected to their contact information.

### **Research Study Procedure**

After activating the SurveyMonkey.com survey in June, 2017, the researcher used various means to promote the survey and encourage participation. These included

email correspondence, social media, as well as the generous support of *Youth Ministry Magazine* to promote the survey to their subscribers. The South Carolina Baptist Convention also agreed to email my survey out to their network of youth ministers. These youth ministers included those who were full-time, part-time, bi-vocational, and volunteer. The survey was closed after four months in October, 2017.

### **Instrument Design**

Participants were first provided with a standard participation agreement in which respondents were informed about the topic and nature of the research study. The researcher described the kinds of questions that they would be answering. They were also informed that their responses were held strictly confidential. Participants were also told that their participation was totally voluntary and that they could withdraw from the survey at any point. At this point, they could agree to participate or disagree to participate.

In addition, since the researcher was providing a participation incentive, contact information was necessary in order to award the reward. Participants were given instructions about how to qualify for the survey incentive. In order to maintain confidentiality, the researcher constructed a secondary survey in order to record participants contact information. The secondary survey allowed for this information to be separated from their study responses. This was also voluntary. They could participate in the survey without participating in the drawing.

The instrument questions were divided into five groups which included questions related to demographics, access and support, preparation for technology use, confidence and comfort using technology, and technology integration needs in education. These groups are represented in Table 3.2.

Table 3.2  
*Delineation of Questions Within the Survey Instrument*

Group	Survey Item #
Demographics	1-10
Access and Support	11-15
Preparation for Technology Use	16-23
Confidence and Comfort Using Technology	24-33
Technology Integration Needs	34-35

The first section of instrument were questions related to demographic information. These questions were designed to identify characteristics to help provide context and meaning to responses. These included questions related to gender, age range, ethnicity, and education level. In addition, the research asked questions related to their work, for example job status, how many years of experience in youth ministry, and how many years they have served at their current position. Participants were also asked questions about their youth ministry status, their group size and budget. Finally, researcher asked the participants to identify their highest level of education as well as their major in order to determine if their education was in ministry or theology, or from a field of study outside of these areas. Since the education level included an open-ended option to write in their degree provided it did not fit in any of the other categories, those responses were coded. After analyzing these responses, the researcher determined that some of the responses actually did fit into the categories provided and, therefore, needed to be recoded within SPSS. Additionally, responses that did not fit within the preselected answers were coded in order to be processed through SPSS. The researcher also combined non-theological/ ministerial degrees and recoded these within SPSS into one category in light of the fact that these would be analyzed as a group in comparison to those within the theological/ ministerial fields.

The next section was related to access to technology and general questions about support systems. These questions were designed to determine the influence of

environmental factors related to technology-assisted ministry. Respondents were asked to indicate the various types of technology provided by their church which included but not limited to a computer, laptop, tablet, Internet-access, digital projects, among others. They were also provided with several questions related to technological activity among their senior pastor, students, and their own personal activity. The participants also reported on the support that they receive in their area. This includes support from their senior pastor, support groups, and additional staff. The researcher also asked about church policy in regard to technology integration and media use.

The following section was designed to examine preparedness for technology integration. These questions were designed to assess training and education regarding technology integration. Respondents were asked what source they attributed most of their understanding regarding integration of technology into ministry such as formal training, print materials, online resources, observation, and trial and error. Participants also identified starting and ending dates for their education in order to determine the time period in which they received their education. They were then asked to rate the instruction they received at the time regarding technology integration. The respondents were then given examples of various types of technology integration training and asked to rate their schools use of those methods. Participants were also asked two open-ended questions, one regarding additional comments they would like to make about their education, as well as one regarding potential areas of improvement.

The next section in the instrument focused on the areas of confidence and comfort integrating technology. These questions were designed to determine how comfortable participants are using technology as well as how they are using those technologies in their ministry. Participants were asked about the level of pressure they felt to use various types of technology to minister to students. They were also asked to rate the level of success they were able to achieve in integrating technology. In addition to their own use, they

were asked to identify the types of social media platforms utilized by their students. Participants were also asked about their comfort level in their ability to use technology as well as their ministry philosophy about integrating technology. They were also asked an open-ended question so that they could identify any potential concerns they have about using various types of technology as ministry tools.

### **Summary**

As previous studies have demonstrated a correlation between efficacy levels and integration, it is expected in this research study will show similar results among student ministers who share some of the same challenges as public school teachers. This descriptive, embedded mixed-method strategy focuses on quantitative data while providing opportunities for participants to provide open-ended qualitative responses. The survey instrument was designed in order to pinpoint the beliefs of student ministers in integrating technology and help to provide perspective to Christian colleges and universities, divinity schools, and seminaries in order to either affirm integration efforts or highlight areas for improvement. The following chapter will explore the data and provide a detailed analysis of the results.

## CHAPTER FOUR

### RESULTS

The purpose of this study was to ascertain preparedness as it relates to ministerial training and self-efficacy perceptions of youth ministers in integrating technology into ministry. In addition, the researcher tried to determine if ministry education is adequately providing youth ministers with integration training and to determine if this type of preparation needs to be altered to improve self-efficacy beliefs related to technology integration in youth ministry. The previous chapters have outlined the problem, provided an overview of the relevant literature, and laid out the methodological design of the study. Chapter 4 presents the results of the study and provides analysis of the findings in order to address each of the research questions.

#### Sources of Data

A total of 288 respondents participated in this research study. The researcher used various methods to collect data. The 133 of the participants responded to a request sent out to the subscribers of *Youth Ministry Magazine*, formerly known as *YouthWorker Journal* during the study, a magazine publication which specifically seeks to equip and encourage youth ministers; 91 participants responded to an email request through the mailing list of Clamp Divinity School, and the remaining 64 participants responded through social media. As Table 4.1 demonstrates, of those who provided their gender for the study, 18.3% were female (n=48), 81.7% were male (n=215).

Table 4.1

*Participants by Gender*

Gender	n	%
Female	48	18.3
Male	215	81.7
Total	263	

Table 4.2 demonstrates that of the respondents who answered the question, the highest percentage of participants were those who were either 26 to 35 (17.4%) or 31 to 35 years old (17.7%). These were followed by those who were 41 to 45 (14.3%), 18 to 25 (13.2%), 46 to 50, 55 or older (8.7%) and finishing out with the lowest percentage 51-55 years old. Dividing the cumulative frequency by two, the researcher was able to determine the median age range which was 36 to 40. Perhaps, more interesting is that the accumulative percentage of those over the age of 35 is slightly higher than those below it.

Table 4.2

*Participants by Age Range*

Age Range	Frequency	Cumulative Frequency	%
18 to 25	35	35	13.2
26 to 30	46	81	17.4
31 to 35	47	128	17.7
36 to 40	30	158*	11.3
41 to 45	38	196	14.3
46 to 50	32	228	12.1
51 to 55	14	242	5.3
55 or older	23	265	8.7
Total	265		

\*Median range is 36-40 years of age.

As Table 4.3 demonstrates, the ethnicity makeup of respondents was predominantly white or Caucasian topping the chart at 88.5%, 231 of the 261 participants. Although not pertinent to the focus of this research study, this statistic may indicate a



lack of diversity in student ministry or potentially highlighting a limitation of the study to access the other minorities. All other ethnicities came in at less than 4%, including black or African Americans (3.4%), Asian or Pacific Islanders (3.1%), Hispanic or Latinos (2.3%), American Indians or Alaska Natives (.8%), African (.4%) as well as 1.1% of respondents who considered themselves multi-ethnic. One additional respondent stated that they preferred to be considered only as human.

Table 4.3

*Participants by Ethnicity*

Ethnicity	n	%
White / Caucasian	231	88.5%
Black or African American	9	3.4%
Asian or Pacific Islander	8	3.1%
Hispanic or Latino	6	2.3%
Multi-ethnic	3	1.1%
American Indian or Alaskan Native	2	0.8%
Other: African	1	0.4%
Other: Human	1	0.4%
<b>Total</b>	<b>261</b>	

Next, participants were asked about their highest level of education. Their responses are demonstrated in Table 4.4. This question proved to be more problematic and complex than the researcher originally intended due to participants having highly specialized degrees as well as the numerous degree offerings of universities, divinity schools, and seminaries. Of the 264 responses to this question, 20 (7.6%) stated that their highest level of education was high school or equivalent and 45 (17%) reported having an Associates Degree or less than 4 years of college. Eighty four (31.8%) of the respondents had completed a Bachelor’s degree. Of those who had completed at least a Master level degree, 31 (11.7%) had a Master of Ministry, 42 (15.9%) had earned a Master of Divinity, six (2.3%) a Master of Arts in Christian Education, three (1.1%) a Master of Religion, one (.4%) a Master of Religious Education, and one (.4%) a Master

of Arts in Theology. In addition to these, there were 10 (3.8%) who had completed a non-theological/ministerial masters degree. Of the respondents who had earned a Doctorate, 7 (2.7%) had a Doctor of Ministry, one (.4%) had a Doctor of Education, five (1.9%) had a Doctor of Philosophy, and one (.4%) had completed a Doctor of Missiology. This data is represented in Table 4.4.

Upon analyzing the data there were no meaningful differences between the theological/ministerial degrees and the non-theological/ministerial degrees as it related to technology integration in ministry. Those with education degrees were more likely to have longer tenures at their current church. In addition, over forty-five percent of those with an education degree had more than twenty years of experience in youth ministry as compared to those with a theological degree of which only 18.85%.

Table 4.4

*Highest Completed Level of Education*

Degree	Frequency	%
High school or equivalent	20	7.6
Associates Degree or less than 4 years of college	45	17.0
Bachelor's Degree (B.A.)	84	31.8
Master of Ministry (M.Min.)	31	11.7
Master of Divinity (M.Div.)	42	15.9
Master of Theology (Th.M.)	7	2.7
Doctor of Ministry (D.Min.)	7	2.7
Doctor of Education (Ed.D.)	1	.4
Doctor of Philosophy (Ph.D.)	5	1.9
Master of Arts in Christian Education	6	2.3
Master of Arts in Religion	3	1.1
Master of Arts in Theology	1	.4
Masters of Education and Masters of Religious Education	1	.4
Doctor of Missiology	1	.4
Non-Theological/Ministerial Master	10	3.8
Total	264	

Participants were also asked about their current job status. Of the respondents, 26 (9.8%) were Volunteers, 20 (7.6) were Bi-Vocational, 25 (9.5) were part-time youth ministers, and 29 (11%) were not currently serving. The majority (62%) consisted of 164 participants who responded that they were employed as Full-Time youth ministers. The mean was 3.39 with a standard deviation of 1.03. These results are represented in Table 4.5.

Table 4.5

<i>Current Position Status</i>		
Current Status	Frequency	%
Volunteer Youth Minister (1)	26	11.06
Bi-Vocational Youth Minister (2)	20	8.51
Part-time Youth Minister (3)	25	10.64
Full-time Youth Minister (4)	164	69.79
Total	235	
Mean	3.39	
Standard Deviation	1.03	

Participants were also asked how many years they had served in their current ministry position in order to determine if the extent of their current tenure had any bearing on their integration of technology. Of the 263 respondents who were currently serving in ministry, 31 (11.79%) had served less than a year, 51 (19.39%) one to two years, 61 (23.19%) three to four years, 66 (25.10%) five to nine years, 34 (12.93%) ten to fifteen years, and 20 (7.60%) had served over 16 years. The mean was 3.31 with a standard deviation of 1.42. This data is represented in Table 4.6 below.

Table 4.6

*Years Served in Current Ministry Position*

Yrs at Current Position	Frequency	Cumulative Frequency	%
Less than 1 year (1)	31	31	11.79
1-2 years (2)	51	82	19.39
3-4 years (3)	61	143	23.19
5-9 years (4)	66	209	25.10
10-15 years (5)	34	243	12.93
16+ years (6)	20	263	7.60
Total	263		
Mean	3.31		
Standard Deviation	1.42		

The study required respondents to provide their total years of service in youth ministry which will later be used to determine any correlation between ministry experience and efficacy levels as well as the extent to which they integrate technology into their ministry. Of the 264 participants who responded to this question only five (1.9%) had less than one year of experience in youth ministry which was followed by 11 (4.2 %) respondents who had one to two years experience. At the three year line, frequencies start to increase with 49 (18.6%) claiming three to five years in ministry, 60 (22.7%) six to ten years, 86 (32.6%) 11 - 19 years, and 53 (20.1%) serving more than 20 years. The mean was 4.40 with a standard deviation of 1.22. This data is represented in Table 4.7.

Table 4.7

*Years Served in Youth Ministry Altogether*

Years	Frequency	Cumulative Frequency	%
Less than 1 year (1)	5	5	1.89
1-2 years (2)	11	16	4.17
3-5 years (3)	49	65	18.56
6-10 years (4)	60	125	22.73
11-19 years (5)	86	211	32.58
20+ years (6)	53	264	20.08
Total	264		
Mean	4.40		
Standard Deviation	1.22		

As Table 4.8 will demonstrate, the youth groups of the study participants varied widely in size ranging from less than ten students to over 200 in size with the most youth minister reporting to have under 30 students. These included 18 (6.82%) having less than ten students, 98 (37.12%) having between ten and 29 students, 57 (21.59%) having 30-49 students, 35 (13.26%) 50-74 students, 17 (6.44%) having 75-100 students, 26 (9.85) 101-199 students, and 13 (4.92%) having more than 200 students in their youth ministry. The mean was 3.25 with a standard deviation of 1.63.

Table 4.8

*Students who Attend Ministry at Least Twice Per Month*

Size	Frequency	Cumulative Frequency	%
1-9 students (1)	18	18	6.82
10-29 students (2)	98	116	37.12
30-49 students (3)	57	173	21.59
50-74 students (4)	35	208	13.26
75-100 students (5)	17	225	6.44
101-199 students (6)	26	251	9.85
200+ students (7)	13	264	4.92
Total	264		
Mean	3.25		
Standard Deviation	1.63		

Lastly, the participants were asked to identify the range of their annual youth ministry budget in an effort to determine if there is a correlation between financial support and the extent to which they integrate technology. Table 4.9 will demonstrate the results for this question in the study. Twenty seven (10.23%) youth ministers in the study reported their church provides less than \$1000 annually or no official budget at all. In light of the other cost-prohibitive necessities of student ministry, such a meager budget would undoubtedly limit the youth minister's ability to be able to maintain up-to-date technology within their ministry. This is not to say they are without options because many web applications are free to use but technology integration itself extends beyond Internet access. Of the participants who responded to this question, 33 (12.50%) reported to have a budget of \$1,000-\$3,000, 23 (8.71%) were provided \$3,001-\$5,000, 59 (22.35%) \$5,001-\$10,000, 40 (15.15%) \$10,001-\$15,000, and 73 (27.65%) reported having more than \$15,000 in their youth ministry budget. Since the last range was the highest frequency of respondents in the study, it may highlight the need of higher size ranges in order to ascertain more accurate correlations with larger budgets. Additionally, nine respondents (3.4%) preferred not to answer this question. The mean was 4.16 with a standard deviation of 1.75.

Table 4.9

*Range of Annual Youth Ministry Budget*

Range	Frequency	Cumulative Frequency	%
Less than \$1000 or no official budget (1)	27	27	10.23
\$1,000-\$3,000 (2)	33	60	12.50
\$3,001-\$5,000 (3)	23	83	8.71
\$5,001-\$10,000 (4)	59	142	22.35
\$10,001-\$15,000 (5)	40	182	15.15
More than \$15,000 (6)	73	255	27.65
Prefer not to answer (7)	9	264	3.41
Total	264		
Mean	4.16		
Standard Deviation	1.75		

In summary, as the demographic make up of this sample is youth ministers who are predominantly identify themselves as white or Caucasian males, under the age of 40 years old. Most are serving full-time at their church. In addition, the majority of respondents have been at their current church for four years or less and have 11 to 19 years of youth ministry experience. The average youth group is under 30 students with ministry budgets of upwards of \$10,000.

### **Research Questions**

#### **Research Question One | What is the relationship between self-efficacy perceptions in integrating technology into youth ministry and demographic factors?**

The demographic section of the survey included questions of gender, age, ethnicity, education level and field, job status, years of service at their current church and in ministry as a whole, youth group size, and budget. These questions help to give responses context and meaning and expose any factors which might contribute to one's efficacy levels and extent of integration of technology into youth ministry.

**Gender.** Participants were asked about the frequency of their use of particular technologies. When asked specifically about multimedia presentations in their teaching, females were less likely to use multimedia in their teaching on a weekly basis (33.33%) than male participants (51.65%). Additionally, in terms of producing video content, females were much more likely to select *never*. Of the female participants, 66.67% answered that they never produce video content as a ministry tool. Of the male participants, 36.11% stated they never produce video content for their ministry. Participants were asked to complete the following phrase, “When I have a technological problem my first instinct is to...” Females were more likely to ask someone for help than their male counterparts. Only 10.11% of men answered that they would ask someone else for help whereas 29.41% of females were open to outside help. Males (30.9%) were more likely than females (11.76%) to strongly agree that technology improves their ability to successfully communicate complex principles.

**Age.** Participants chose between several ranges of ages. These included, 18 to 25, 26 to 30, 31 to 35, 36 to 40, 41 to 45, 46 to 50, 51 to 55, and 56 or older. There were several variables which differ between these two age groups; youth ministers who are 26 to 30 and 31 to 35. Of the participants, age 26 to 30, 15% believed that they had been unsuccessful in integrating technology into ministry; the highest percentage among all other groups. The next highest percentage was from the 56 or older ministers at 10.53%. All other age groups were much lower, ranging from 3.85% to 0%.

In terms of actual use, this negative element of efficacy does not seem to have any bearing on their integration. The younger group used technology similar to their surrounding age ranges with the exception of using technology to assist them in maintaining student records. This was particularly important to the younger group so much so that over fifty percentage (52.5%) practices this administrative task on a weekly basis more than any other age group with the exception of those over 50 years old of



which 63.64% supported this activity weekly. Of the older group, 31 to 35, 57.14% of which chose that they use programs to produce paper-based products such as newsletters, brochures, and handouts on a monthly basis. This is higher than the younger group in this category with only 35% choosing monthly. The older group was far more likely 52.38% to feel very comfortable using live-streaming platforms than their younger counterpart coming in at only 26.32%. The younger age range had a higher percentage (51.35%) than the older group (24.39%) to strongly agree with the statement “technology is a valuable instructional tool.” Similarly, the younger group had a higher percentage (48.65%) than the older group (26.83%) to strongly agree with the statement “Technology enhances my professional development.” On their own, these elements may be of little value but together they highlight a point that the older group may have slightly higher efficacy levels in spite of a lower expectation of technology. The younger group, alternatively, has a higher expectation of technology and yet experiences a more negative perception of their chances of successfully implementing its use.

**Experience.** Experience levels also highlighted differences among the participants. Those with 20 years of ministry or more had the highest percentage of respondents who believed themselves to have been very successful in integrating technology in their ministry coming in at 28.57% and had the highest weighted mean among the other ranges of experience. Additionally, those who had three to five years experience had the highest percentage of participants among the experience ranges to answer that they had been unsuccessful in integrating technology at 17.95%. The next highest percentage is 2.7% demonstrating a vast difference between the three to five year youth ministers and everyone else. Of those who had two years of experience or less, 0% answered that they were unsuccessful in integrating technology. This could point to a high efficacy level or lack of discernment due to inexperience. The results of their success levels is demonstrated in Table 4.10.

Table 4.10

*Degree of Success in Integrating Technology into Ministry*

Experience	VS	MS	US	NI	WM
<1 Year	20%	80%	0%	0%	3.20
1-2 Years	16.67%	83.33%	0%	0%	3.17
3-5 Years	23.08%	58.97%	17.95%	0%	3.05
6-10 Years	22.45%	71.43%	2.04%	4.08%	3.12
11-19 Years	12.16%	83.78%	2.70%	1.35%	3.07
20+ Years	28.57%	69.39%	2.04%	0%	3.27

VS=Very Successful MS=Moderately Successful  
 US = Unsuccessful NI=Not interested WM=Weighted Mean

Particularly when asked about the frequency of texting students, of those who were the least experienced, one year or less, 80% of them responded that they either text only monthly (40%) or never (40%). The remaining 20% of participants answered daily. This one year or less experience group percentage was the highest in the most frequent category of texting, daily, with those who had one to two years experience coming in next at 16.67% and the remaining experience ranges settling around ten to twelve percent daily. On average, youth ministers were the most likely to choose monthly for texting students.

When asked specifically about using programs to produce image-based content, one to two year ministers also had the highest percentage (66.67%) to respond that they never produce image-based content. They were closely followed by those with three to five years of experience with 44.47% responding never as well. Those with six to ten years of experience had a higher percentage (35.42%) of weekly occurrences of image-based content production. This data is represented in Table 4.11.

Table 4.11

*Use Programs to Produce Pictures or Artwork by Years of Experience*

Experience	Yearly	Monthly	Weekly	>1/Week	Daily	Never
Less Than One Year	40.00%	20.00%	20.00%	0.00%	0.00%	20.00%
1-2 Years	0.00%	16.67%	16.67%	16.67%	0.00%	66.67%
3-5 Years	13.16%	21.05%	10.53%	10.53%	0.00%	44.74%
6-10 Years	6.25%	22.92%	35.42%	6.25%	4.17%	25.00%
11-19 Years	15.07%	23.29%	20.55%	10.96%	4.11%	26.03%
20+ Years	10.42%	22.92%	25.00%	16.67%	2.08%	22.92%

Of all the experience ranges, 20-30% produced video-based content at least monthly, but with the exception of those with one to two years of experience which were unanimous (100%) that they never create video content. Those with the highest amount of experience, 20+ years, were the least likely (29.17%) to select never when it came to creating video content. Of those respondents, 40% of those with one year or less experience selected never, 48.65% of those with three to five years experience, 38.78% of those with six to ten years experience, and 43.84% of those with 11-19 years of experience. This data is represented in Table 4.12.

Table 4.12

*Use Programs to Produce Video Content by Years of Experience*

Experience	Yearly	Monthly	Weekly	>1/Week	Daily	Never
Less Than One Year	20.00%	20.00%	0.00%	20.00%	0.00%	40.00%
1-2 Years	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
3-5 Years	18.92%	27.03%	2.70%	2.70%	0.00%	48.65%
6-10 Years	16.33%	26.53%	14.29%	0.00%	4.08%	38.78%
11-19 Years	10.96%	28.77%	8.22%	6.85%	1.37%	43.84%
20+ Years	16.67%	27.08%	16.67%	6.25%	4.17%	29.17%

**Highest Level of Education and Field of Study.** There were no meaningful differences between those whose field of study was theological or ministerial in nature with those whose field of study was out side of the theological or ministerial focus. In terms of the highest level of completed education, nearly all of the education levels fell mostly in the moderately successful category in integrating technology. Those who had a high school diploma or equivalent were most likely to believe that they were very successful in integrating technology. Of those who selected unsuccessful, youth ministers with a bachelor’s degree had the highest percentage of their group at 8.22%.

**Research Question Two | What is the relationship between self-efficacy perceptions and the extent of technology use?**

Concerning *texting* on mobile devices and *text-based apps* such as Facebook Messenger, Twitter, Whatsapp, and the like, 79% of youth ministers reported feeling pressure to use this format to interact with students with over 40% claiming to feel strong pressure. This feeling does not seem to be substantiated by their perception of what types of formats students use to interact with their peers. When asked what social media platform their students were most likely to use, only 4.5% believed that choice format to be text-based platforms. The highest percentage of youth ministers text (45%) or use a text text-based apps (34.1%) at least on a weekly basis. The mean for texting use was 3.66 with a standard deviation of 1.35 and the mean for text-based apps was 3.35 with a standard deviation of 1.56. This data is represented in Table 4.13.

Table 4.13

*Frequency of Use for Texting and Text-based Apps*

Time	Texting		Text-Based Apps	
	Frequency	%	Frequency	%
Never	10	4.5	45	20.5
Daily	47	21.4	27	12.3
More than once a week	48	21.8	33	15.0
Weekly	99	45.0	75	34.1
Monthly	16	7.3	38	17.3
Yearly	0	0	2	.9
Total	220		220	
Mean	3.66		3.35	
Standard Deviation	1.35		1.56	

Participants were asked to consider their ability and their comfort level in personally using text-based social media platforms. Of the 217 respondents, the vast majority (76.96%) reported being very comfortable using text-based platforms, followed by 20.74% who answered that they were somewhat uncomfortable or little uncomfortable using text-based platforms, and the remaining 2.30% responded that they were very uncomfortable using text-based social media programs. This data is represented in Table 4.14. Due to the ubiquity of mobile devices, one should expect comfort levels to be fairly high. Youth ministers are likely to use mobile devices in their personal lives resulting in greater efficacy in their ministry in using texting and text-based media platforms.

Table 4.14

*Considering Ability, Comfort Levels Personally Using Text-based Platforms*

Comfort Level	Frequency	%
Very Uncomfortable	5	2.30
Somewhat Uncomfortable to Little Comfortable	45	20.74
Very Comfortable	167	76.96%
Total	217	

Integration is not only influenced by one’s comfort levels in using these platforms, it is also affected by his or her philosophy of ministry. In other words, it does not matter if youth ministers know how to use these platforms if they have strong views against integration in the first place. When participants were asked to consider their philosophy of ministry rating their comfort level using text-based platforms as ministry tools, again the vast majority (73.1%) stated that they were very comfortable using these platforms in ministry. The remaining participants reported that they were somewhat uncomfortable to very uncomfortable as demonstrated in Table 4.15.

Table 4.15

*Considering Philosophy, Comfort Levels Using Text-based Platforms*

Comfort Level	Frequency	%
Very Uncomfortable	3	1.4
Somewhat Uncomfortable to Little Comfortable	55	25.4
Very Comfortable	158	73.1
Total	216	

Since communicating through text has become an acceptable and often preferable form of communication for both teenagers and adults, using text in ministry should be a familiar task to most youth ministers. The results related to text-based forms of communication demonstrate that respondents believed themselves to be efficacious in integrating text-based tools in ministry. The participants feel substantial pressure to communicate through text-based services while acknowledging that they feel their teens are mostly likely to prefer other forms of communication.

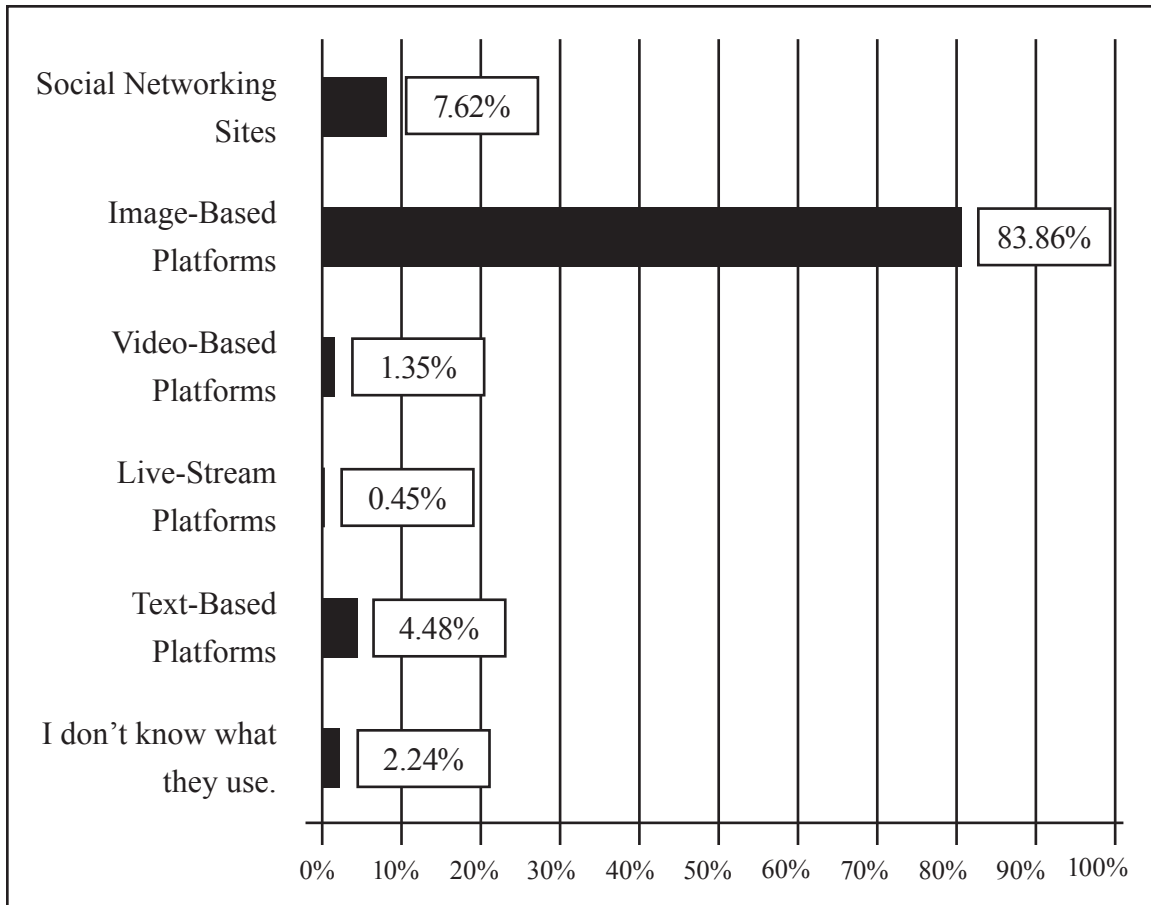
Concerning *image-based* social media such as Snapchat, Instagram, and the like, 73.6% of respondents identified that they felt some pressure (41.3%) or strong pressure (32.3%) to use these platforms. Thirty-three respondents (14.80%) felt very little pressure and the remaining 11.7% felt no pressure at all. The mean was 2.06 with a standard deviation of .97. This data is represented in Table 4.16.

Table 4.16

*Pressure to Use Image-based Social Media to Interact with Students*

Pressure Level	Frequency	%
No Pressure (4)	26	11.66
Very Little Pressure (3)	33	14.80
Some Pressure (2)	92	41.26
Strong Pressure (1)	72	32.29
Total	223	
Mean	2.06	
Standard Deviation	.97	

It is important at this point to notice the differences between the pressure levels of the text-based services and the image-based services particularly the shallowing out of the percentages. The lower categories of pressure (No Pressure & Very Little Pressure) have increased while the higher stress levels have diminished. One would expect that this may demonstrate that these youth ministers do not see image-based services too be as crucial to students as text-based services. When asked what types of social media their students were most likely to use, the response was overwhelmingly image-based apps as demonstrated in Figure 4.1. This is an accurate assumption according to the current research which identifies Snapchat, an image-based social media platform, as their preferred social media service (Edison Research, 2018, p. 65).



*Figure 4.1.* Based on perception of your group of students, what social media platform are your students MOST LIKELY to use?

The discrepancy between Table 4.16 and Figure 4.1 could be highlighting a disconnect between the pressure, or lack thereof, youth ministers feel and the social media preferences of their students. More than likely the diminished pressure speaks to an efficacy deficiency. Text-based services are more familiar because they have been around longer than the other formats. While this form of communication has moved to a virtual space on the Internet and mobile phones, writing has been well integrated into society. Unlike text-based services, image-based applications can feel unfamiliar because most youth ministers are accustomed to communicating by other means, such as texting. Teenagers today have grown up surrounded by visual images and therefore just as comfortable communicating through images or emojis on their phone as they



do communicating through text. It is no coincidence that image-based services like Instagram and Snapchat are more attractive to young people than past generations.

This is not to say that individuals who have grown accustomed to text-based forms of communication cannot use images to communicate. Humanity has used images to communicate throughout history; however, as literacy rates increased, the need for image-based communication would have declined until the advent of television. Still, the convenience and ease of texting can often outweigh the skill and effort necessary to produce image content. Over half (59.4%) of survey participants reported that they were very comfortable using image-based services. This is a sign of higher efficacy levels among youth ministers, meaning they have a positive attitude when it comes to their ability to integrate image-based forms of communication. These levels are slightly lower than that of text-based services (73.9%), but as already stated, this is to be expected. Of the remaining respondents, 47 (21.7%) answered that they were somewhat uncomfortable, 27 (12.4%) said a little comfortable, and the remaining 14 (6.5%) said that they were very uncomfortable personally using image-based platforms for communication. This data is represented in Table 4.17.

Table 4.17

*Considering Ability, Comfort Levels Personally Using Image-based Platforms*

Comfort Level	Frequency	%
Very Uncomfortable	14	6.5
Moderately Comfortable/ Somewhat Uncomfortable	74	34.1
Very Comfortable	129	59.4
Total	217	

Regarding their philosophy of ministry and the integration of image-based platform as ministry tools, 119 (54.8%) stated that they were very comfortable, 53 (24.4%) stated that they were somewhat comfortable, 30 (13.8%) were a little uncomfortable, and the remaining 15 (6.9%) reported that they were very uncomfortable.

This seems to indicate that youth ministers are generally comfortable integrating image-based services in their ministry; however, youth ministers have many concerns about using the most popular image-based service among teenagers, Snapchat (Edison Research, 2017, p. 65). Even if these ministers use an alternative service such as Instagram, it is doubtful that it would as effective because teenagers are not using it. In light of this concern, youth ministers are left with having to decide between using a program that in their opinion involves significant risks in terms of accountability and privacy or use a service that is safer but ineffective. Faced with legal and moral jeopardy in light of inappropriate content, youth ministers are likely to attempt reaching students using less popular service.

When asked specifically about the frequency they use programs to produce image-based content, the highest percentage (29.36%) responded they never do so. Additionally, 26 (11.93%) use these programs yearly, 49 (22.48%) answered monthly, 50 (22.94%) weekly, 23 (10.55%) more than once a week, and the remaining six (2.75%) use these programs daily. This data is represented in Table 4.18.

Table 4.18

*Frequency of Use of Programs to Produce Image-based Content*

Frequency of Use	Frequency	%
Never	64	29.36
Daily	6	2.75
More than once a week	23	10.55
Weekly	50	22.94
Monthly	49	22.48
Yearly	26	11.93
Total	218	

Concerning *Video-based* social media such as YouTube, and the like, only 13.90% felt a strong pressure to interact with teenagers using this platform. This marks a significant drop in pressure. The majority of respondents answered that they felt either

some pressure (34.53%) or very little pressure (31.39%). A fifth of the respondents reported that they felt no pressure at all to integrate video-based services. The mean was 2.58 with a standard deviation of .96. This data is represented in Table 4.19.

Table 4.19

*Pressure to Use Video-based Platforms to Interact with Teenagers*

Pressure Level	Frequency	%
No Pressure (4)	45	20.2
Very Little Pressure (3)	70	31.4
Some Pressure (2)	77	34.5
Strong Pressure (1)	31	13.9
Total	223	
Mean	2.58	
Standard Deviation	.96	

Additionally, when one considers the live-streaming which is video that is recorded and broadcasted live, the numbers continue to drop. Only 11.66% reported that they felt a strong pressure to integrate live-streaming into their ministry. This was followed by 51 (22.87%) who felt some pressure, but the majority of respondents reported feeling either very little pressure (37.67%) or no pressure at all (27.80%). The mean was 2.82 with a standard deviation of .97. This data is represented in Table 4.20.

Table 4.20

*Pressure to Use Live-Streaming Platforms to Interact with Teenagers*

Pressure Level	Frequency	%
No Pressure	62	27.80
Very Little Pressure	84	37.67
Some Pressure	51	22.87
Strong Pressure	26	11.66
Total	223	
Mean	2.82	
Standard Deviation	.97	

When asked what social media platform their students were most likely to use,

the two categories which received the lowest responses were video-based platforms (1.3%) and live-stream platforms (.4%). In terms of their ability, less than half (48.4%) stated that they were very comfortable, 44.7% were little comfortable to somewhat uncomfortable, and the remaining 6.9% stated that they were very uncomfortable using video-based platforms. In terms of live-stream video platforms, the data demonstrates a shift in comfort levels. Whereas most youth pastors selected comfortable on previous platforms, live-streaming appears to be the most challenging for youth ministers. Of the 217 respondents, 77 (35.48%) answered that they were very comfortable. The answer that received the highest response was a little comfortable to somewhat uncomfortable (48.39%) with the remaining 16.13% responding that personally using live-streaming platforms makes them very uncomfortable. The mean for video-based platforms was 1.87 with a standard deviation of .98 and the mean for live-stream platforms was 2.19 with a standard deviation of 1.09. This data is represented in Table 4.21.

Table 4.21

*Considering Ability, Comfort Levels Using Video-Based Platforms and Live-Stream Platforms*

Comfort Level	Video-Based Platforms		Live-Stream Platforms	
	Frequency	%	Frequency	%
Very Uncomfortable	15	6.91	35	16.13
Little Comfortable/ Somewhat Uncomfortable	97	44.70	105	48.39
Very Comfortable	105	48.39	77	35.48
Total	217		217	
Mean	1.87		2.19	
Standard Deviation	.98		1.09	

Similarly, when youth pastors were asked about their philosophy of ministry and their comfort levels in terms of using video-based platforms as ministry tools, 106 (49.30%) responded that they were very comfortable. Of the respondents, 95

(44.19%) answered that they were a little comfortable to somewhat uncomfortable, and the remaining 14 (6.51%) responded that they were very uncomfortable using these services as ministry tools. In terms of live-stream platforms, 85 (39.35%) answered that they were very comfortable, 107 (49.54%) responded that they were a little comfortable to somewhat uncomfortable, and the remaining 24 (11.11%) said they were very uncomfortable using live-streaming as a ministry tool. The mean for video-based platforms was 1.79 with a standard deviation of .93 and the mean for live-stream platforms was 2.05 with a standard deviation of 1.03. This data is represented in Table 4.22.

Table 4.22

*Considering Your Philosophy of Ministry, How Comfortable are You Using the Following Types of Social Media? Video-Based Platforms and Live-Stream Platforms*

Comfort Level	Video-Based Platforms		Live-Stream Platforms	
	Frequency	%	Frequency	%
Very Uncomfortable	14	6.51	24	11.11
Somewhat Uncomfortable/ Little Comfortable	95	44.19	107	49.54
Very Comfortable	106	49.30	85	39.35
Total	215		216	
Mean	1.79		2.05	
Standard Deviation	.93		1.03	

When asked specifically about how frequently youth ministers use programs to produce video content, the highest percentage, 41.7%, responded they never produce video content. Additionally, 32 (14.7%) answered they did so yearly, 58 (26.6%) chose monthly, 10 (4.6%) more than once a week, 22 (10.1%) weekly, and the remaining five (2.3%) create video content daily. The mean was 3.05 with a standard deviation of 1.92. This data is represented by Table 4.23.

Table 4.23

*Frequency of Use of Programs to Produce Video Content*

Frequency of Use	Frequency	%
Never	91	41.7
Daily	5	2.3
More than once a week	10	4.6
Weekly	22	10.1
Monthly	58	26.6
Yearly	32	14.7
Total	218	
Mean	3.05	
Standard Deviation	1.92	

Participants were also asked to identify the frequency of using certain types of technology. When asked how often the participants produced multimedia lessons that use digital images, video, and/or audio, 7.27% of the participants answered yearly, 21.82% monthly, 9.09% more than once a week, 49.09% weekly, .91% daily, and the remaining 11.82% answered never. When asked how often the participants used technology to assist them in maintaining student records, 2.26% of the participants answered yearly, 15.84% monthly, 14.57% more than once a week, 37.56% weekly, 12.67% daily, and the remaining 18.10% never. When asked how often the participants use technology for statistical analysis or evaluation for example charting growth, attendance, or characteristics, 10.05% of the respondents answered yearly, 24.20% monthly, 5.94% more than once a week, 24.66% weekly, 3.65% daily, and the remaining 31.51% answered never. When asked how often the participants used technology for recreational purpose for example games or entertainment, 6.36% of the respondents answered yearly, 30.45% monthly, 9.09% more than once a week, 34.09% weekly, 11.82% daily and the remaining 8.18% answered never. When asked how frequently participants use online collaboration tools such as Google Docs, 8.14% of the respondents answered yearly, 23.98% monthly, 9.05% more than once a week, 22.62% weekly, 9.50 daily, and the

remaining 26.70% answered never. When asked how often participants use technology to produce paper-based products for example newsletters and handouts, 5.00% of the respondents answered yearly, 45.91% monthly, 5.91% more than once a week, 29.09% weekly, 4.09% daily, and the remaining 10.00% answered never. This data is represented in Tables 4.24 - 4.25.

Table 4.24

*Frequency Participation Technology Activities Part 1*

Activity	Y	MTH	W	MW	D	NVR
Produce multimedia lessons that use digital images, video, audio	7.27%	21.82%	9.09%	49.09%	0.91%	11.82%
Use technology to assist you in maintaining student records	2.26%	15.84%	13.57%	37.56%	12.67%	18.10%
Use technology for statistical analysis or evaluation	10.05%	24.20%	5.94%	24.66%	3.65%	31.51%
Use technology for recreational purposes	6.36%	30.45%	9.09%	34.09%	11.82%	8.18%
Use online collaboration tools	8.14%	23.98%	9.05%	22.62%	9.50%	26.70%
Use programs to produce paper-based products	5.00%	45.91%	5.91%	29.09%	4.09%	10.00%

Y = Yearly    MTH = Monthly    W = Weekly  
 MW = More Than Weekly    D = Daily    NVR = Never

Table 4.25

*Mean Report: Frequency Participation Technology Activities Part 1*

Activity	$\mu$	$\sigma$
Produce multimedia lessons that use digital images, video, audio	4.17	1.39
Use technology to assist you in maintaining student records	3.48	1.57
Use technology for statistical analysis or evaluation	3.36	1.81
Use technology for recreational purposes	3.89	1.37
Use online collaboration tools	3.30	1.72
Use programs to produce paper-based products	3.95	1.27

When asked how often participants use technology for promotional purposes for example branding or to promote an event, 10.05% of the respondents answered yearly, 32.88% monthly, 30.59% weekly, 12.79% more than once a week, 6.85% daily, and the remaining 6.85% answered never. When asked how often participants use technology for expressive purposes such as a blog or podcast, 7.73% of the respondents answered yearly, 20.45% monthly, 9.09% weekly, 4.55% more than once a week, 1.35% daily, and the remaining 56.82% answered never. When asked how often the participants used technology to research topics and gather information, 0.46% of the respondents answered yearly, 9.13% monthly, 24.20% weekly, 19.63% more than once a week, 43.84% daily, and the remaining 2.74% answered never. When asked how often the participants use mobile apps for personal spiritual growth such as a Bible app, .91% of respondents answered yearly, 9.09% monthly, 27.73% weekly, 16.36% more than once a week, 36.82% daily, and the remaining 9.09% answered never. Lastly, when asked how often the participants built or maintained a website or webpage, 6.36% of the respondents answered yearly, 28.64% monthly, 25.45% weekly, 8.64% more than once a week, 3.64%



daily, and the remaining 27.27% answered never. This data is represented in Tables 4.26 - 4.27.

Table 4.26

*Frequency Participation Technology Activities Part 2*

Activity	Y	M	W	>W	D	N
Use technology for promotional purposes	10.05%	32.88%	12.79%	30.59%	6.85%	6.85%
Use technology for expressive purposes	7.73%	20.45%	4.55%	9.09%	1.36%	56.82%
Use technology to research topics and gather information	0.46%	9.13%	19.63%	24.20%	43.84%	2.74%
Use mobile apps for personal spiritual growth	0.91%	9.09%	16.36%	27.73%	36.82%	9.09%
Build or maintain a website or webpage	6.36%	28.64%	8.64%	25.45%	3.64%	27.27%

Table 4.27

*Mean Report: Frequency Participation Technology Activities Part 2*

Activity	$\mu$	$\sigma$
Use technology for promotional purposes	4.04	1.32
Use technology for expressive purposes	2.47	1.81
Use technology to research topics and gather information	3.09	1.28
"Use mobile apps for personal spiritual growth	3.12	1.42
Build or maintain a website or webpage	3.40	1.68

**Research Question Three | What is the relationship between self-efficacy perceptions and exposure to technology integration methodology in formal ministry training?**

The survey participants were asked to identify the source that the participants would attribute most of their understanding regarding integration of technology into ministry. Of 245 respondents, formal ministry training such as that found in a college or seminary was the least chosen response with only 6.1% of participants. This was followed by reading print materials such as books, journals, or magazines which received 7.3%. The next highest choice, which came in at 20.4%, was observing others via seminars, workshops and personal contacts. Online resources such as YouTube, blog articles, or newsletters received 28.6%. The highest selected option was trial and error at 37.6%. While it is often true that experience is the greatest teacher, this last statistic is important because it implies that teenagers are the test subjects of these trials. They are going to be the ones who experience the consequences of this form of education. Therefore, it is important that youth ministers have the wisdom to discern the potential negative effects of the tools they choose to use to administer their ministry. This data is represented in Table 4.28.

Table 4.28

*Attribution of Understanding Regarding Technology Integration in Ministry*

Source	Frequency	%
Formal ministry training (e.g. college, university, seminary)	15	6.1
Reading Print materials (e.g. books, journals, magazines)	18	7.3
Online resources (e.g. YouTube, blog articles, newsletters)	70	28.6
Observing others (e.g. seminars, workshops, personal contacts)	50	20.4
Trial and Error (e.g. experience)	92	37.6
Total	245	

The youth ministers were next asked to consider the existing technology that existed during their formal training and rate the level of instruction they received concerning its use at that time. Nearly 80% of the youth ministers rated their instruction at average to poor. Of the respondents, ten (4.4%) answered excellent, 37 (16.3%) above average, 97 (42.7%) average, 49 (21.6%) below average, and the remaining 34 (15%) stated that their instruction was poor. The mean was 3.26 with a standard deviation of 1.04. This data is represented in Table 4.29. When specifically looking at those whose major field of study was theological or ministerial in nature, the statistics change only slightly. Of the those whose major field of study was theological or ministerial, 6.9% answered excellent, 13.79% above average, 43.1% average, 25% below average, and 11.21% answered poor.

Table 4.29

*Rate Instruction Concerning Technology Integration*

Rating	Frequency	%
Poor (5)	34	15.0
Below Average (4)	49	21.6
Average (3)	97	42.7
Above Average (2)	37	16.3
Excellent (1)	10	4.4
Total	227	
Mean	3.26	
Standard Deviation	1.04	

Participants were asked to rate their level of agreement with several statements about their theological or ministerial training. Over half of the respondents either agreed (43.69%) or strongly agreed (10.81%) that their school expected them to learn the wise use of technology without providing formal training. Of the responses to this statement, 26.13% were disagree and only 5.86% strongly disagreed. The remaining 13.51% were uncertain. Again, over half either strongly disagreed (15.84%) or disagreed (31.67%) that their school provided various opportunities for technology training. Of the responses to this statement, 36.2% agreed and 4.52% strongly agreed. The remaining 11.76% were uncertain. Over 70 percent either agreed (56.76%) or strongly agreed (14.41%) that generally speaking, their professors integrated technology into their instruction. Only 13.96% disagreed and 7.21% strongly disagreed with that statement. The remaining 7.66% were uncertain. Next participants responded to the statement, “In general, the professors at my school provided examples of how to incorporate technology into the practice of ministry.” Only 6.82% strongly agreed, 30.45% agreed, 37.73% disagreed, and 14.09% strongly disagreed. The remaining 10.91% were uncertain. Participants were also asked to respond to the negative statement, “In general, the professors at my school did NOT discuss technology in any significant practical way.” Of the respondents, 11.31% strongly agreed, 38.91% agreed, 31.67% disagreed and 8.14% strongly disagreed.

The remaining 9.95% were uncertain. This data is represented in Table 4.30.

Table 4.30

*Agreement with Technology Integration Preparation Statements*

Statement	SA	A	D	SD	U
My school expected me to learn wise use of technology without providing formal training.	10.81%	43.69%	26.13%	5.86%	13.51%
My school provided various opportunities for technology training.	4.52%	36.2%	31.67%	15.84%	11.76%
In general, the professors at my school integrated technology into their instruction.	14.41%	56.76%	13.96%	7.21%	7.66%
In general, the professors at my school provided examples of how to incorporate technology into the practice of ministry.	6.82%	30.45%	37.73%	14.09%	10.91%
In general, the professors at my school did NOT discuss technology in any significant practical way.	11.31%	38.91%	31.67%	8.14%	9.95%

SA = Strongly Agree    A = Agree    D = Disagree  
SD = Strongly Disagree    U = Uncertain

Next, participants were provided an open-ended question to provide any additional comments regarding their professors' use of technology. There were a lot of references to technology not existing or in its infancy when they were in school. Many made statements eluding to the fact that their professors would use programs like PowerPoint to present their lessons but no training was given to help the youth minister integrate technology in their own ministries. Several stated that their school provided access to technology such as an up-to-date computer lab. One youth minister stated that it really depended on the professor and that some of his professors appeared annoyed that they even had to use technology. It was apparent by their statements that they had

an understanding that the emphasis on technology and its integration is a relatively new emphasis that was not present when they attended seminary. Technology simply was not as important an issue at that time as it is today.

Next participants were asked about their school's instruction regarding the basic categories of social media. Participants had to rate their level of agreement with provided statements. In order to ascertain a more accurate picture of the quality of instruction, respondents who answered that the technology did not exist at the time of their instruction were removed and percentages were recalculated. Over half of the respondents either disagreed (36.6%) or strongly disagreed (24.84%) that their school provided guidance for interacting with teenagers with text-based technologies. Of the responses, 27.45% agreed and 7.19% strongly agreed that they were provided with this guidance. The remaining 3.92% were uncertain.

Next participants were given the statement, "My school provided guidance for interacting with teenagers with image-based technologies to interact with students." Of the responses, 7.01% were strongly agree and 28.66% were agree. The most selected response was disagree at 41.40% and 20.38% answered strongly disagree. The remaining 2.55% were uncertain.

Nearly 70% either disagreed (45.45%) or strongly disagreed (24.03%) that their school provided guidance for interacting with teenagers with video-based social media. Of the remaining responses, 4.55% strongly agreed, 23.38% agreed, and 2.6% were uncertain. As might be expected live-stream video was even less likely to have occurred in ministerial training. Over 80% either disagreed (50.35%) or strongly disagreed (50.35%) that their school provided guidance for interacting with teenagers with live-streaming services. Of the remaining responses, 4.20% strongly agreed, 11.89% agreed, and the remaining 2.1% were uncertain.

In a somewhat unrelated question about social media platforms, youth ministers

were also ask to rate their level of agreement with the statement, “My school provided guidance regarding legal issues and the use of technology (e.g. copyrights, risk-management).” Of the responses, 7.45% strongly agreed, 33.54% agreed, 29.81% disagreed, and 25.47% strongly disagreed. The remaining 3.73 were uncertain. It is important to note here that over half of these responses are negative that their school did not provide any guidance regarding the law and the use of technology. This data is represented by Table 4.31.

Table 4.31

*Agreement Statements Relating to Social Media Formats and Preparation*

Statement	SA	A	D	SD	U
My school provided guidance for interacting with teenagers with text-based technologies.	7.19%	27.45%	36.60%	24.84%	3.92%
My school provided guidance for interacting with teenagers with image-based technologies.	7.01%	28.66%	41.40%	20.38%	2.55%
My school provided guidance for interacting with teenagers with video-based technologies.	4.55%	23.38%	45.45%	24.03%	2.60%
My school provided guidance for interacting with teenagers with live-streaming services.	4.20%	11.89%	50.35%	31.47%	2.10%
My school provided guidance regarding legal issues and the use of technology.	7.45%	33.54%	29.81%	25.47%	3.73%

SA = Strongly Agree    A = Agree    D = Disagree  
SD = Strongly Disagree    U = Uncertain

**Research Question Four | What is the relationship between self-efficacy perceptions of youth ministers and support from their various social networks?**

According to Bandura’s research, there were at least four sources of efficacy:

enactive mastery experiences, vicarious experiences, verbal persuasion, and physiological and effective states (1997, pp. 79-113). Research question four focuses on the support one receives through vicarious experience and verbal persuasion. Self-efficacy is strengthened when one has others in his or her life to offer positive affirmation as well as models who can demonstrate achievement (1997, p. 101). The participants were asked a series of questions designed to determine the influence of environmental factors related to technology-assisted ministry, particularly access and support.

When the church provides student ministers with the hardware and software to increase their efficiency and enhance their ability to lead, it serves as a positive acknowledgment of the potential of the student minister. Participants were asked to indicate which devices or software their current church provides them. Concerning computers, 36% were provided with a desktop computer and 64% were provided laptops. The larger percentage of laptops speaks to the mobility of modern culture. Nearly all of the participants (92.98%) had access to Wi-Fi or the Internet in their church office and 70.66% had it in their ministry location or youth room. In terms of mobile devices, 26.86% were provided with tablets and 33.06% were given smartphones. Over half of the participants (53.72%) had access to a digital display such as a TV, smartboard, or digital projector. Four of the participants (1.65%) were also provided a wearable smart device such as an Apple Watch. Of the respondents, 14.46% were provided a digital camera while 15.7% had access to a digital video camera. In terms of software, 30.17% were provided with creative software programs such as Adobe Photoshop, Final Cut, etc. Lastly, 36.36% were provided with student management software in order to track attendance and participation. This data is represented in Figure 4.2.



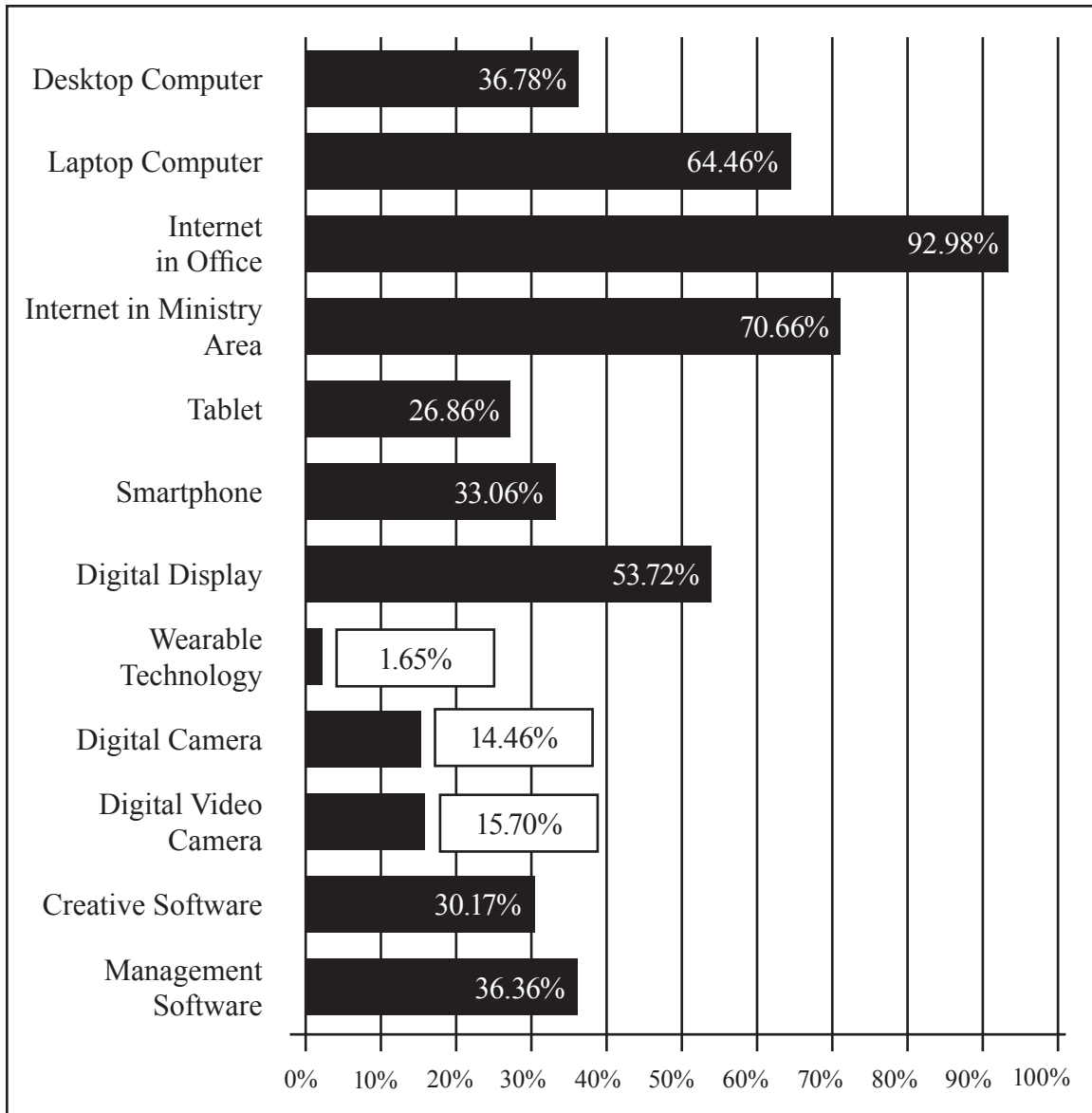


Figure 4.2. Church provided hardware and software.

Next, the participants were asked to rate their level of agreement with several general statements related to support in integrating technology. The first statement in this series was “In general, I believe there is a willingness in my church to be innovative in fulfilling its mission.” Of the respondents, 28.46% strongly agreed, 50.2% agreed, 14.23% disagreed, and 2.37% strongly disagreed. The remaining 4.74% were uncertain. The next statement in the survey was, “I have a strong support group or network of fellow ministers I interact with on a regular basis.” Of the respondents, 27.82% strongly agreed,

43.95% agreed, 18.55% disagreed and 5.65% strongly disagreed. The remaining 4.03% were uncertain. The next statement in the survey was, “In general, I am expected to learn new technologies without any training at my church.” Of the respondents 22.4% strongly agreed, 34.4% agreed, 27.2% disagreed, and 6.8% strongly disagreed. The remaining 9.2% were uncertain. This data is represented in Tables 4.32 and 4.33. These statements indicate that many of the youth ministers in the study are working in environments that are conducive to higher efficacy levels.

Table 4.32

*Statements Concerning Support for Technology Integration*

Statement	SA	A	D	SD	U
In general, I believe there is a willingness in my church to be innovative in fulfilling its mission.	28.46%	50.20%	14.23%	2.37%	4.74%
I have a strong support group or network of fellow ministers I interact with on a regular basis.	27.82%	43.95%	18.55%	5.65%	4.03%
In general, I am expected to learn new technologies without any training at my church.	22.40%	34.40%	27.2%	6.80%	9.20%

SA = Strongly Agree    A = Agree    D = Disagree  
SD = Strongly Disagree    U = Uncertain

Table 4.33

*Means Report: Statements Concerning Support for Technology Integration*

Statement	$\mu$	$\sigma$
In general, I believe there is a willingness in my church to be innovative in fulfilling its mission.	2.05	.97
I have a strong support group or network of fellow ministers I interact with on a regular basis.	2.14	1.02
In general, I am expected to learn new technologies without any training at my church.	2.46	1.18

Next participants were asked, “When you have a technology-related need, problem, or question, how helpful are the following people?” Positions provided in the survey were senior pastor, associate pastor, media minister, other youth ministers, a student, administrative staff and ministry volunteers. Participants were also given the opportunity to select Not Applicable if their church did not have anyone that fit that description. In order to ascertain the helpfulness of each position, the not applicable answers were removed and results were recalculated. Senior pastors were the least helpful with 56.95% responding that they were not helpful at all. Of the remaining responses, 28.25% answered moderately helpful, and 14.8% answered very helpful. Media ministers were rated as the most helpful with 54.46% responding that they were very helpful. Of the remaining responses, 37.62% answered moderately helpful, and 7.92% answered not helpful.

Concerning administrative staff, 42.19% of the participants answered not helpful, 41.67% answered moderately helpful, and the remaining 16.15% answered very helpful. Concerning an associate pastor, 44.70% of respondents answered not helpful, 30.3% answered moderately helpful, and the remaining 25% answered very helpful. Concerning ministry volunteers, 54.5% of the respondents answered moderately helpful, 22.75% answered very helpful and the remaining 22.75% responded not helpful.

At this point, the responses begin to shift toward moderately helpful to very helpful. Concerning other youth ministers, 56.57% answered that these fellow ministers were moderately helpful, 31.43% answered very helpful, and the remaining 12% answered not helpful. Lastly, 61.09% of participants answered that their students were moderately helpful, 29.41% answered very helpful, and the remaining 9.5% answered not helpful. This data is represented in Table 4.34.

Table 4.34

*Relating to Technology-Related Problems, How Helpful are the Following Individuals*

Individual	VH	MH	NH	$\mu$	$\sigma$
Senior Pastor	14.80%	28.25%	56.95%	2.42	.73
Administrative Staff	16.15%	41.67%	42.19%	2.20	.81
Associate Pastor	25.00%	30.30%	44.70%	1.53	.64
Ministry Volunteers	22.75%	54.50%	22.75%	1.81	.63
Other Youth Ministers	31.43%	56.57%	12.00%	1.80	.59
A Student	29.41%	61.09%	9.50%	2.26	.72
Media Minister	54.46%	37.62%	7.92%	2.00	.67
VH = Very Helpful    MH = Moderately Helpful    NH = Not Helpful					

Lastly, participants were asked, “What policies does your church have in place regarding technology use?” Out of the available options, 13.83% answered that their church had detailed policies that included detail information about issues like social media use and legal matters such as copying, distributing, or displaying of copyrighted materials; 42.29% answered their church had general policies which are intentionally vague and inclusive; 32.81% responded that their church had no policies; and the remaining 11.07 answered that they did not know if their church had policies at all regarding technology use. This data is represented in Figure 4.3.

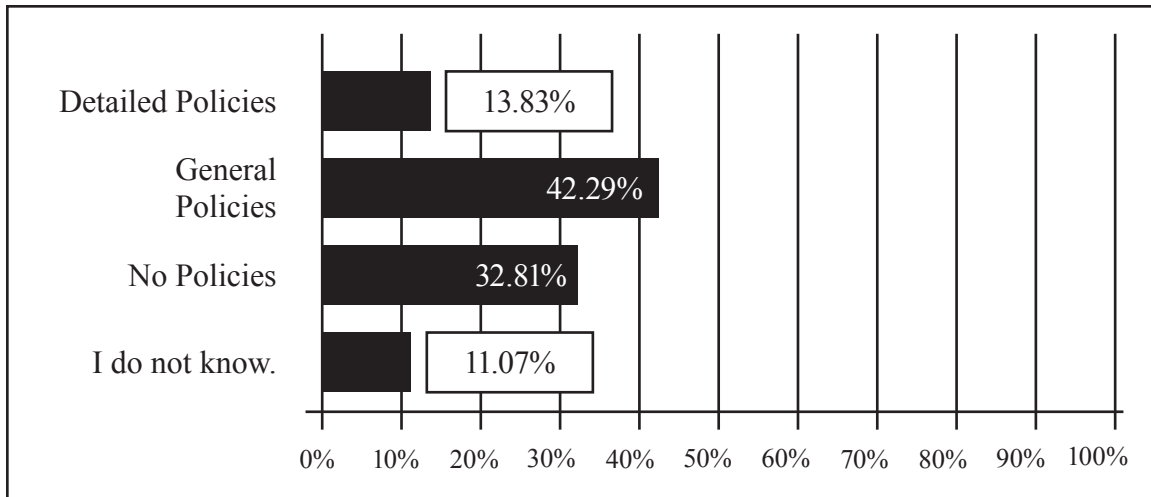


Figure 4.3. Church policies on technology use

Participants were also provided with an open-ended question in order to express any potential concerns about using social media as a ministry tool. Out of all of the open-ended questions, this one on social media garnered the most attention, receiving 147 responses. These responses were then coded and categorized in the four main categories: logistical challenges, legal crises, relational concerns, and theological cruxes.

Every youth minister's situation is unique to him or her as are the challenges they face. Logistical challenges can include one's personality, skills, time, social connections, and work environment. These obstacles include anything that may hinder one from really using technology to its greatest potential. One's personality and efficacy levels have a significant influence on their motivation to assert effort into action. Some respondents were actively defiant towards anything technological in ministry often stating in various ways that effective ministry has never needed technology *and it never will* (emphasis added). As one respondent articulated:

As a discipleship tool, it does not allow for intent, emotions, and nonverbal feedback, and has (in my current context) led itself to grave misunderstandings. In information dissemination (announcements), it is easy to ignore and thus not totally successful. In teaching, it is helpful only in the extent that whatever

information (blog, post, status, etc) is actually read and digested, rather than just “liked.”

This respondent was not alone in his depiction of social media, as many made similar comments. At least on some level, this is true. There are many challenges to communication, and technology can raise up as many barriers as it tears down, leading many to decide to dismiss it as a viable tool. Great ministers have a plethora of resources from which to pull that do not require a plug or access to the Internet.

Personality and preferences aside, youth ministers face other logistical challenges. Some participants desired to integrate technology into their ministry but lacked the time, skill, or knowledge to do it well. Unable to achieve success, many resolved to reject it altogether. Even the ones that possessed these resources often lamented that lack of support and even resistance from their church hindered their ability to be successful. Several participants commented that there too many social media platforms from which to choose and doing so would cost them considerable time and effort. One participant explained that by choosing one social media platform they might be able to communicate with their students but exclude their parents. While this is a challenge, it is also possible to chose more than one and distribute time and effort accordingly.

Another logistical challenge was the potential divide between those who have access to technology and those who do not. Particularly those who ministered in rural settings, stated that many of their teenagers did not have smart phones or social media accounts. By focusing too much on communicating through social media, they would be unintentionally excluding large portions of their youth groups. In this circumstance, the discerning minister could judge if his or her time would be better utilized in other aspects of ministry.

Several youth ministers had problems with social media and smart phones being a distraction not only during worship but in life in general. For these participants,

technology was the source of disengagement and from the sources provided in the literature review it very much can be. No one would deny that technology can steal one's attention. As noted in the literature review, even when mobile phones are turned off or removed from one's presence, they still have the power to take captive one's thoughts to the extent that they are unable to concentrate. It is also important to note at this point that anything can be a distraction when a teacher fails to engage their students. Technology may not be the only reason why students disengage, sometimes its simply ineffective teaching.

Some participants had theological cruxes when it came to technology and utilizing social media in general. Youth ministers stated that they feared integrating social media would be an endorsement of it. As the researcher will reveal in greater detail further down, many youth ministers have grave concerns about certain types of social media, and they worry that by utilizing popular social media platforms, those concerns will be minimized and discredited. Additionally, respondents stated in various ways that they believed teenagers were addicted to social media and that it would be irresponsible of a minister to condone anything that might draw attention away from God and encourage self-focus or draw attention to the youth minister himself. Ministers, at some level, viewed technology as a potential threat which is a positive and will help them to accurately identify potential hazards. For example, one respondent stated, "I do not want to limit my outreach to solely social media, but to use that as a tool to reach other students and teach them to use it for the gospel to reach others also. Not to be dependent on it." Youth ministers seemed to be aware of the potential benefit of technology but simultaneously conscious of its influence on real-world, face-to-face interactions.

Many of the youth ministers had *relational concerns* about using social media in their ministry. Participants believed that social media generally speaking diminishes their ability and their students' ability to have face-to-face interactions. One youth minister

commented that his role was to help prepare them to engage people and by encouraging them to use social media, he would be working against that ministry value. Another youth minister similarly commented, “[Social media] allows people to hide, say whatever they want, and remove themselves from the immediate reactions to individuals. It becomes a mode of self-ambition and advertising and less about communication and relationship building.”

Alternatively, several youth ministers also commented that they intentionally avoided friending, networking with other students on social media platforms, because they did not want to be on call twenty-four hours a day, seven days a week. They wanted to establish clear boundaries with their students so that they did not have to experience always-on-always-connected ministry. One youth minister stated that his youth would find it odd to see him on social media and had no desire for him to join them on their social media networks. Based off of their comments, these youth ministers believed it was a healthier approach for them to have times of separation than to attempt to maintain connection outside of chosen times of ministry. These youth ministers wanted to have balance in their ministry and by doing so they may be trying to model a healthy approach to social media.

Where youth ministers had the most concerns was regarding *legal crises*. First, several youth ministers understood the legal ramifications of posting images and content of their students on their social media feeds. There was a general concern that they would violate the privacy of their students by posting content without their permission. This is also a logistical challenge because youth ministers want to encourage their teenagers and promote their youth group but find this difficult to do when they have to worry about whether or not students or their parents are going to be offended because the youth minister posted a picture on social media. Additionally, some parents had valid reasons for not wanting their child to be posted on social media because of a contentious adoption



or foster care. In light of these challenges, youth ministers often resolved not to have an active social media presence as it related to their ministry.

The biggest concern for youth ministers based off of their responses to this question was the potential fallout as a result of inappropriate behavior and immoral content being shared over social media between students and the ministry leaders. There are still so many questions about social media and the feeling that there is lack of control generally speaking when it comes to social media. Youth ministers viewed Snapchat as the biggest threat to students and their ministry. In fact, outside of a couple of mentions of Facebook, no other social media platform was mentioned by name while the word Snapchat was specifically used in 17.69% of the comments provided and implied in many others.

Youth ministers seem fully aware that the vast majority of their youth are using Snapchat, but they fear the potential moral and legal pitfalls using Snapchat app. The platform itself is built on the premise of anonymity. Users are allowed to send image and video content that becomes inaccessible over a short period of time. Users have found ways to extend the life of these images by taking screen shots on their mobile devices and thereby copying the content onto their phones. Youth ministers fear that students may share explicit content with them or their leaders. Since there is little to no accountability using this app, there is a great danger for inappropriate behavior. Youth ministers would like the ability to monitor content which is simply not possible on Snapchat.

One participant commented, "Hidden communication is certainly a concern, although I just make it a point to save all communication and try to communicate during appropriate hours." These are certainly good first steps, but what happens if a student shares inappropriate content. Saving this content on one's phone would be a really bad idea and could later be used against the youth minister in a court of law. While the many teenagers will never send anything explicit, one vindictive or malicious student

can place a youth minister and his or her ministry in jeopardy. Additionally, everyone, including youth ministers, are vulnerable to sin and an application like Snapchat invites one to indulge those tendencies potentially in anonymity. The some participants would rather reject the use of Snapchat or attempt to use less popular apps than risk damaging their integrity or the safety of their students. One respondent wrote, “We have avoided Snapchat despite its popularity among our teens because of the lack of accountability it provides. Our youth ministry uses Instagram more than any other platform. It is also the social media platform I use most personally.” Other participants cautiously use Snapchat, reasoning that this is the virtual place where students are gathering and it is their role to bring light into those spaces and educate students and parents alike the proper use of the tool. As one participant wrote:

We use Snapchat as a student ministry. There are many parents who are against Snapchat and have great reason. We too are against those reasons! We want to help, however, our parents to be as EQUIPPED as possible when they are navigating these waters with their student. There are proper boundaries and we want to help them find them! Snapchat is not a sin... but it could be used for sinful things. (Just like Television, to the Internet in general. This is why principles are important.)

There are many reasons to reject Snapchat at face value as well as perfectly legitimate reasons to utilize it to communicate with students. All communication involves risk. Even when student ministers use it for positive reasons there is still the danger of being misperceived. Parents may find a youth minister’s posts to be inappropriate and offensive even though the youth minister was well intentioned. He or she may have originally believed the posts were humorous and harmless, but ultimately ended up embarrassing students. Still, with proper precautions these types of miscommunication and missteps can be limited or avoided altogether with some forethought into what is being shared

online.

**Research Question Five | What do youth ministers consider to be the greatest need relating to improving self-efficacy perceptions and technology use?**

Finally, participants were asked a series of questions to help assess their needs and determine improvement areas in education as it relates to addressing the challenges of integrating technology effectively. The researcher provided the participants with a list of statements and asked them to rate their level of agreement. The first statement was, “I need more time to learn to use digital applications.” Approximately two thirds of the participants either strongly agreed (9.39%) or agreed (52.58%) that they needed more time to learn to use digital applications. Of the remaining respondents, 30.05% disagreed, 5.63% strongly disagreed and 2.35% were uncertain. When provided with the statement, “I need more time to integrate technology into my instruction,” again, nearly two thirds of the participants either strongly agreed (8.92% ) or agreed (57.75%) that they needed more time. Of the remaining participants, 26.76% disagreed, 4.69% strongly disagreed and 1.88% were uncertain. When given the statement, “I need more training to use technology,” 11.74% of respondents strongly agreed, 52.11% agreed, 29.58% disagreed, 6.10% strongly disagreed and the remaining 0.47% were uncertain. When provided the statement, “I need more support from church leadership when it comes to technology needs,” 12.21% of respondents strongly agreed, 35.21% agreed, 40.38% disagreed, 8.45% strongly disagreed, and the remaining 3.76% were uncertain. When provided the statement, “I need more access to technology tools to integrate in my instruction,” 14.15% of respondents strongly agreed, 45.28% agreed, 32.55% disagreed, 5.66% strongly disagreed, and the remaining 2.36% were uncertain. Lastly, when given the statement, “I need more opportunities to collaborate with others on how to use technology,” 18.78% of the respondents strongly agreed, 51.17% agreed, 24.41%

disagreed, 5.16% strongly disagreed, and the remaining .47% were uncertain. This data is represented in Tables 4.35 and 4.36.

Table 4.35

*Assessing Minister Needs*

Statement	SA	A	D	SD	U
I need more time to learn to use digital applications.	9.39%	52.58%	30.05%	30.05%	5.63%
I need more time to integrate technology into my instruction	8.92%	57.75%	26.76%	26.76%	4.69%
I need more training to use technology.	11.74%	52.11%	29.58%	29.58%	6.10%
I need more support from church leadership when it comes to technology needs.	12.21%	35.21%	40.38%	40.38%	8.45%
I need more access to technology tools to integrate in my instruction	14.15%	45.28%	32.55%	32.55%	5.66%
I need more opportunities to collaborate with others on how to use technology	18.78%	51.17%	24.41%	24.41%	5.16%
SA = Strongly Agree    A = Agree    D = Disagree SD = Strongly Disagree    U = Uncertain					

Table 4.36

*Means Report: Assessing Minister Needs*

Statement	$\mu$	$\sigma$
I need more time to learn to use digital applications.	2.39	.82
I need more time to integrate technology into my instruction	2.33	.78
I need more training to use technology.	2.31	.77
I need more support from church leadership when it comes to technology needs.	2.56	.94
I need more access to technology tools to integrate in my instruction	2.37	.88
I need more opportunities to collaborate with others on how to use technology	2.17	.81

Survey participants were also provided an open-ended question to allow them to list any other thoughts about technology needs, training, or assistance. In general, youth ministers expressed the need for a balanced approach. For example, one tech-savvy participant expressed a great enthusiasm about technology, but acknowledged that students also need avenues to unplug and simply connect with God without a screen. Another participant stated that his youth did not use technology to learn but to connect and therefore there was no need to seek opportunities to integrate technology into his teaching but instead using it to connect people to Jesus and his church. This is an understandable position in light of the prominence of social media but it may be short-sighted in the potential of other possible benefits. Other participants mentioned that they only saw value in social media as a marketing tool and saw no need to use it to interact with students. One participant stated that they do not allow students to use their cell phones on trips and did not think they minded. Several ministers stated that they thought technology could be good but that it could also likely become a distraction.

There were also those who had negative views of technology and thought it more of a crutch than a tool. Some youth ministers find it difficult to convince leadership of

the importance of technology to ministering to students. One minister complained that leadership within his church tended to be of an older guard that did not see the benefits of technology, particularly creative and membership software. Sometimes youth ministers themselves questioned the value of technology. One of the older experienced participants, a 64 year old youth minister with 46 years of youth minister experience, 26 years of which at the same church, stated that he had a large youth group and had little interest in integrating technology. He had a growing ministry that utilized time-tested discipleship methods of talking with students face to face, sharing the gospel from a bound bible, and spending time with them. He acknowledged that they did not need the technology to reach students, just well executed discipleship. It is important to note that youth ministers have a variety of means to reach students and technology may or may not have a significant role in developing mature followers of Christ. As stated in the literature review, the gospel is as relevant today as it has always been for every generation past.

One youth minister acknowledged that the scope of youth ministry does not end with the students themselves but also extends to their families. He wrote, “Again we are the equippers! We are the partner to parents. We need to know technology well and help parents navigate the difficult and unpredictable waters that their students will be crossing.” In addition to parents, youth ministers desired help to train their ministry leaders. One participant wrote, “I would definitely go to a youth training technology conference or take a class to help me stay updated on the latest use of technology. I also need help training my youth leaders and workers in technology.”

Several ministers expressed the need for greater resources and help. One participant wrote, “I’d love to see teaching and discipleship resources that did a better job integrating technology. Right now, the best you can hope for is a video clip or stock Instagram bible verses. There are a lot of tech-based youth ministry game resources.” Several expressed the desire for more education in technology integration. One minister

wrote, “I would take a technology in youth ministry class in a heartbeat. I always end up having to teach myself, and I know there are things I miss.” Others expressed similar concerns about their ability to utilize technology. One participant wrote, “At times it feels like the wild west when it comes to learning how to use technology in ministry. Some sources love it and others despise it. I am in a rural, small town, Southern Baptist congregation and integrating technology has been a challenge. I believe there could have been more training or options in seminary to learn how to integrate technology (social media, keynote, research, apps, etc.) into everyday ministry.”

## CHAPTER FIVE

### CONCLUSIONS AND RECOMMENDATIONS

This study begins with a reference to a study led by Coleen Moore-Hayes in 2011, on *Technology Integration Preparedness and its Influence on Teacher-Efficacy*. By researching the preparedness and efficacy beliefs of both experienced teachers as well as those new to the field, Moore-Hayes found a discrepancy between what the knowledge teachers possessed and their willingness to actually integrate technology into their classroom. While teachers claimed to be knowledgeable about the technology, ultimately neither the seasoned teachers nor the newcomers integrated technology adequately in their classroom. The participants readily admitted that they believed technology would help their instruction but for various reasons decided not to integrate it because they lacked confidence that they could do it well. The respondents blamed the lack of adequate preparation and in light of this deficiency, teachers were hesitant to bring it into their classroom. This study, while limited in its scope, served as an inspiration for this study in the field of youth ministry.

Youth ministers and Christian educators face many of the same challenges as the teachers in the Moore-Hayes study. The concern of this study is that youth ministers may have similar beliefs about the preparation they received in their university, divinity school, or seminary. In light of the dominating presence of technology in youth culture and increasingly in the culture of the church, it is absolutely crucial that technology becomes a supporting component in one's preparation to become an effective communicator of the gospel. Just as missionaries go through extensive training to engage people in their own culture, youth ministers likewise need additional training



to engage students in their culture; a culture which is increasingly taking place through their technology. Without this training, youth ministers are left to a system not based off informed discernment but of trial and error with teenagers as the test subjects.

### **Research Purpose**

The purpose of this study is to ascertain preparedness as it relates to ministerial training and self-efficacy perceptions of youth ministers in integrating technology into ministry. The researcher's hypothesis is that this research would demonstrate that there is a need for more technology integration education particularly in ministerial contexts. As demonstrated in the literature view, while technology has come to have a dominant presence in society, it has had unforeseen negative effects on modern life. Even as social media has elevated one's ability to connect with others, users are reporting increasing feelings of isolation. Youth ministers may feel pressure to integrate technology because they see their teenagers using it, but doing so without forethought can be detrimental to their goals of discipling students. The importance of this study is to determine if ministry education is adequately providing youth ministers with integration training and to determine if this type of preparation needs to be altered to improve self-efficacy beliefs related to technology integration in youth ministry.

### **Conclusions**

#### **Research Question One | What is the Relationship Between Self-efficacy Perceptions in Integrating Technology into Ministry and Demographic Factors.**

The demographic makeup of the sample population of this study includes youth ministers from every job status from full-time staff to volunteer, but the majority of respondents are full-time staff members. The sample includes every size of youth group from those with small rural youth groups to those who were averaging over two hundred

students regularly. The average youth group size was under 30 students with an annual ministry budget of up to \$10,000.

**Conclusion #1. Female ministers are much more likely than their male counterparts to ask others for help.** There was a small contingency of female youth ministers; the vast majority of participants were male. According to the data, females are more willing to seek out others for help which according to Bandura's theory resulted in elevated efficacy levels (1997, p. 86). In fact, none of the female ministers in this study indicated that they felt unsuccessful in their efforts to integrate technology. This may indicate the importance of having others in one's life to observe and to collaborate and find support in one's time of need. Observation was one of the key components in his model, but youth minister who lack this support from others will not experience the benefits of increased efficacy (1997, p. 86).

**Conclusion #2. Younger youth ministers tended to have more negative views regarding their ability to integrate technology.** The median age range of the participants was 36 to 40 years of age, but all age groups were represented, from the young, some still in the midst of college life while others were well into their sixties, still serving faithfully in God's calling for their lives. In terms of perspectives and beliefs, there were several differences between two specific age ranges, those who were 26-30 and 31-35 years of age. The younger group were more likely to believe they were unsuccessful in their attempts to integrate technology than the next age range. This perception is not grounded in their actual integration of technology because there is little difference in the extent of their use of technology and that of their counterparts. The only major difference was the younger, 26-30 year old ministers were far more intentional about maintaining student records than any of the other groups. This group was also more likely to view technology as a valuable instructional tool. The college graduates had the highest percentage of respondents to answer that they had been unsuccessful in

integrating technology into their ministry. Their negative opinion of these two group's ability to successfully integrate technology may have less to do with a lack of perceived talent and more to do with a higher, possibly unattainable, expectation of themselves.

**Conclusion #3. Experienced youth ministers tend to have higher levels of efficacy.** Unlike the Moore-Hayes study, in which experienced teachers had similar efficacy levels as the inexperienced teachers, seasoned youth ministers tended to have higher efficacy levels and generally speaking more positive outlooks on their ability to integrate technology. This is not to say that they had integrated technology any more than their inexperienced counterparts. There was homogeneity among all the various experience levels in terms of their integration of technology into their ministry. Their experience may provide an atmosphere in which the pressures to perform and achieve are balanced with a seasoned understanding of how a healthy youth ministry should look and function. The youth minister who had served the longest also tended to minimize the importance of technology in building an effective ministry and in nurturing relationships. This would certainly reduce the pressure a youth ministers feels to connect with teenagers using the latest gadget or social media service.

### **Research Question Two | What is the Relationship Between Self-efficacy Perceptions and the Extent of Technology Use?**

**Conclusion #4. Youth ministers understand that their students are using image-based services, such as Snapchat, but have reservations about using these services in their ministry.** When the youth ministers were asked what type of media their students were most likely to use, they overwhelmingly agreed that their students were most likely to use image-based platforms. In light of qualitative responses, youth ministers had many concerns about using image-based platforms such as Snapchat, the leading image-based platform among teenagers (Edison Research, 2017, p. 65). For a variety of reasons,

including legal and moral concerns about using the service, youth ministers rejected the use of Snapchat, choosing instead to use texting and text-based services. This is a reasonable choice as youth ministers feel like they have greater control and there is less opportunity, according to participant responses, for inappropriate behavior. Participants claimed there was a lack of accountability for image-based platforms; that its anonymity establishes an environment which is conducive to temptation.

This seems like a superficial concern as texting by many accounts is just as private a form of communication as image-based programs. Unless churches' are keeping information about their minister's texting use, messages are just as private as say an image-based platforms. It is the researcher's opinion, based off of the qualitative responses, that youth ministers have rejected these services because they fear they have little control over what they will see and are unclear about the aftermath of receiving inappropriate content. They do not want their careers destroyed because of malicious conduct of teenagers. Youth ministers reported that they were very comfortable using image-based platforms, but that belief ends at their ability and does not apply to their philosophy of ministry. Rather than communicate with students in a way that is popular with teenagers, some youth ministers have opted out of using image-based platforms altogether.

While students certainly use texting to communicate with one another, youth ministers are correct in their assessment that students are using predominantly image-based platforms. If media tastes continue on their current trend, video-based platforms and live-streaming will become the media of choice in the near future. Youth ministers will need assurance that these platforms are safer than the image-based platforms. Since platforms like Snapchat have had so much success with teenagers, it is unlikely that video and live-stream services will entertain stronger measures to the extent that youth minister will be satisfied. Youth ministers may need additional training in order to overcome

some of the challenges and fears associated with these type services if they intend on communicating through the media of choice of teenagers. If current trends continue with student ministers, they will not be ready to start using these services when students begin switch from image-based platforms to video-based ones.

### **Research Question Three | What is the Relationship Between Self-efficacy Perceptions and Exposure to Technology Integration Methodology in Formal Ministry Training?**

**Conclusion #5. There is room for improvement in formal education as it relates to technology integration in ministry.** Participants attributed most of their understanding of technology integration to trial and error and web resources such as YouTube, blogs, and newsletters. While it is true that one learns from experience in many ways, it is particularly concerning when that education comes by testing integration practices on teenagers without fully understanding the potential harm it can cause them. It is unlikely that this will change even with greater improvements in formal education, but if youth ministers are trained in basic digital literacy as it relates to ministry, they may be able to have better discernment and make educated decisions in how they integrate technology.

Only 20% of participants gave their schools a positive rating in their instruction regarding existing technology at the time of their education. Exceptional education prepares students to meet the challenges of 21st century ministry. If ministry schools are to change this perception, they must be willing to train these ministers for the church of tomorrow instead of the church of yesterday.

The majority of the ministers in this study believed that their schools expected them to meet the challenges of digital communication without providing them with the training to do so. Participants agreed that their schools did not provide them with

opportunities to practice digital communication themselves. Professors received high marks for integrating technology into their own instruction but participants were not as kind when asked if their professors showed them how to incorporate technology into their own ministries in any practical ways. Several commented that their schools provided computer labs but the extent to which instructors demonstrated technology consisted of mainly PowerPoint. Some felt that their professors believed technology to be a nuisance and therefore dismissed any instruction in how to integrate it wisely. It is worth noting that participants were asked specifically to speak about the technology that existed during their seminary training. To a certain extent, it would be unfair and inaccurate to judge the practices of past education by modern standards, but it is also necessary to consider if present education standards are progressing to meet the demands of today and to prepare students for future challenges.

#### **Research Question Four | What is the Relationship Between Self-efficacy Perceptions of Youth Ministers and Support from their Various Social Networks?**

**Conclusion #6. Churches are generally conducive to higher levels of efficacy in technology integration.** Positive affirmation and the existence of competent models greatly contribute to one's self-efficacy (Bandura, 1997, p. 86). Participants reported that their churches are generally speaking conducive to higher levels of efficacy among youth ministry leaders. They provided them with adequate technology to meet the challenges of 21st century ministry. The majority of respondents agreed that their church was receptive to innovation and the majority also agreed that they had strong networks of people to support them. The majority of participants felt that their church expected them to learn new technology without any additional training. Senior pastors received the harshest criticisms for their lack of support in technology-related challenges. Media ministers considered the most helpful but when media ministers were not present, youth ministers

could also find moderate help in their students and volunteers.

**Conclusion #7. Youth ministers have a variety of concerns about social media use.** When provided an open-ended question to express any potential concerns about using social media as a ministry tool, respondents were very vocal about the challenges they face. These include logistical challenges such as the lack of people, skills, or time to integrate technology. Others had concerns that by using certain platforms they might appear as an endorsement of those platforms. They believed that teens were addicted to technology and they did not want to instigate unhealthy behavior. Others simply questioned if the benefits of technology outweigh its potential to harm the community atmosphere of the church and have a shallowing affect on relationships. Alternatively, some stated that they intentionally avoided technology so they would not get locked into an always-on-always connected kind of ministry. They would like to establish boundaries and technology appears to tear down proper boundaries. The greatest concern was over the legal ramifications about image-based communication. As noted earlier, they feared that anonymity of popular image-based platforms was unsafe and would potentially endanger their integrity and career.

#### **Research Question Five | What do Youth Ministers Consider to be the Greatest Need Relating to Improving Self-efficacy Perceptions and Technology Use**

**Conclusion # 8. Youth ministers need more resources and training in time management and collaboration.** Lack of time seems to be a great struggle for many of these youth ministers. Over 60% of the respondents stated that they needed more time in order to learn how to use new technologies and to integrate them into their ministries. In order to better meet the needs of these participants, school should consider more education in time management and strategies for increasing communication with students while administering their duties. Over sixty percent stated that they needed more training

to use technology. Nearly the same percentage wanted more access to technology in their churches. The highest percentage of youth ministers wanted more opportunities to collaborate with others on how to use technology. In terms of the school's responsibility, one possibility may be to train these ministers how to establish networks and building a community of collaborators which can serve to strengthen their ministries.

**Conclusion #9. Youth ministers believe that the best approach to technology integration is a balanced approach.** The participants did not view technology as a perfect tool but regarded it with a measure of reserve. They acknowledged that the youth ministers have to have accountability measures in place in order to protect themselves and other students, but if they were to connect with students, they felt a need to use the tools available to them regardless of the risks. Participants suggest that schools should promote a balanced approach to technology integration understanding that it has the potential to benefit ministries but at the same time acknowledging that ministries, and students, need opportunities to unplug. Youth ministers need to view social media through the eyes of their students, not merely as a marketing tool, but a system through which one can extend his or her connection; not to replace physical interactions, but to supplement those relationships during times of separation.

Technology integration may support ministry, but it is not the only means through which connection and life change can take place. Technology does not have to be a significant role in one's ministry. Particularly for youth ministers who had decades of experience in youth ministry, technology simply was not a necessary component. There were several participants who stated that they had thriving ministries with little to no technology integration. Youth ministers should regard technology as a tool only to be used when appropriate to do so.

**Conclusion #10. Technology integration education in youth ministry goes beyond serving teenagers.** Youth ministers sense a need for greater understanding in



how to integrate not only to communicate better with their students but with student parents as well. One youth minister stated that even if one does not integrate technology into their ministry, they still have an obligation to equip parents to address these technological challenges with their children.

### **Implications**

Youth ministers use technology on a regular basis both in their personal life as well as in their ministry. Even while they teach and preach, many of them are faced with the challenge of engaging teenagers who possess devices designed to capture their attention and hold it. Youth ministers face pressure, some more than others, to integrate technology in their ministry. Many youth ministers are the go-to people for technology in their church and yet they lack training in school and are expected to learn new technologies without any further education. This can be a losing proposition for these ministers, meeting an expectation without the support necessary to meet it. Additionally, youth ministers feel a sense of obligation to equip their students and parents with the skills necessary to lead healthy lives and make positive decisions in regard to their technology use.

This study is based on the hypothesis that there is a need for more technology integration in education in ministerial contexts. Based off of the participant response, the majority of youth ministers believed that their education was lacking in terms of technology education. Perhaps more importantly, these youth ministers desire more opportunities to learn how to effectively utilize current technologies to minister and equip students and their families. They want better resources which provide them opportunities to integrate technology but these are lacking because technology has not been an essential ingredient of ministerial training. It is necessary to improve ministerial training so that these resources will be available in the future. Without training and resources, youth

ministers will be limited in their ability to engage students whose lives are in many ways dominated by technology.

University, divinity school, and seminary professors may have low efficacy levels themselves as it relates to technology integration in ministry. This is a significant challenge, but it is not insurmountable. Practitioners can be brought in to demonstrate how they have integrated technology into their ministries. Professors can also attend seminars and workshops to educate them in how to train student ministers in technology integration. Just as missionaries are trained to engage their destination cultures, youth ministers must have training to engage student culture; a culture which is increasingly technological.

### **Limitations of the Study**

While the purpose of this study is to ascertain preparedness as it relates to ministerial training and self-efficacy perceptions of youth ministers in integrating technology into ministry, it is not in the purview to state the effectiveness of integrating technology into ministry. The researcher relied on the general acknowledgment of educators in the academic world and did not make a case for the effectiveness of technology in ministry. These are discussions that will need to take place within the scope of the ministry training and additional studies.

Since the research instrument is primarily quantitative in nature, the preselected answers in some cases are too limited. For example, the demographic question regarding the participant's highest level of education did not take into consideration the plethora of different labels and degree types utilized by various schools to identify their theological training. The researcher attempted to offset this limitation by providing an open-ended 'other' category. This required additional coding in order to identify additional degrees. In light of this limitation, the researcher decided to include the following degrees (Master of

Christian Education, Master of Religion, Master of Arts in Religion, Master of Religious Education, Master of Arts in Theology and Bachelor of Arts in Religious Education).

Due to the nature of self-reporting the effectiveness of this study is entirely dependent upon the respondent's ability to understand the questions. The study is limited to the extent that the respondents understood the questions of the survey instrument. Additionally, the study is limited to the extent that the respondents answered the questions honestly and accurately.

An additional limitation is the approach to data collection. The most cost-efficient means to collect data was the use of an online survey. Since the study instrument is an online survey, only those who had access to the Internet and the ability to understand how to take the survey online could participate in the study. While this creates minimal bias, the researcher made an assumption that the intended audience had the necessary skills to participate in the survey and it would not significantly influence the results of the survey.

Ethnic diversity also proved to be a limitation in the study. The respondents were predominantly white or Caucasian. The researcher could not identify any reasonable explanation as to why this occurred. This may have to do with the structure of minority led churches. It is also possible that the means through which the researcher obtained responses did not include a large base of minority youth ministers.

Additionally, the researcher attempted to distinguish between participants who had attended a ministerial or theological school from those who had attended higher institutions in other fields. This proved to be problematic, because many of the participants had earned degrees in multiple fields including ministry or theology. In cases when this delineation could take place, data analysis did not demonstrate any meaningful differences.

## **Recommendations for Future Research**

Given the aforementioned limitations, there are several avenues for further study. First, since this study did not evaluate the effectiveness of integrating technology into ministry, future studies could evaluate ministries that have made significant efforts to integrate technology and compare them to those who have chosen more analog methods. One could also attempt to ascertain what makes some of these technology ministries flourish while others experience difficulties.

Next, since ethnic diversity was limited in this study, one could adjust the research methods in order to intentionally seek out minority-led ministries to determine if there are differences in self-efficacy perceptions among minority-led ministries. Further studies may also need to take place to determine if the field of youth ministry itself is struggling with a diversity issue and if so, to ascertain the cause and to determine possible remedies in order to do a more effective job in reaching the full body of Christ.

A third avenue for additional study would be to evaluate the self-efficacy levels of higher-education professors in integrating technology literacy principles into their instruction. This study exposed some potential areas of improvement, but that knowledge will not gain any traction unless self-efficacy levels of professors is addressed. A related study might also evaluate the access and support seminaries provide students on their campus.

Lastly, there were many concerns about the use of image-based services like Snapchat. More investigation needs to take place in this area to pinpoint what makes these services more threatening to youth ministers than any other service. Unless these concerns are addressed, it is unlikely that youth ministers will be able to move forward in effective communication because the next evolutions of technology are likely to move into video and live-streaming which are potentially even more intimidating.

**APPENDIX A**  
**RESEARCH INSTRUMENT**

**Agreement to Participate**

The research in which you are about to participate is designed to assess your use of technology in youth ministry as well as any contribution your ministry training provided relating to technology integration. This research is being conducted by Sam Totman for purposes of dissertation research. In this research, you will answer questions relating to your ministry training, your ministry context, and your use of technology in your youth ministry. Any information you provide will be held strictly confidential, and at no time will your name be reported, or your name identified with your responses. *Participation in this study is totally voluntary and you are free to withdraw from the study at any time.* By your completion of this online survey, and checking the appropriate box below, you are giving informed consent for the use of your responses in this research.

- I agree to participate  
 I do not agree to participate

**Incentive Qualification**

Upon completion of the survey, you will be asked if you wish to be entered into a sweepstakes for a \$50 Amazon gift card. If you select YES, you will be taken to separate page, where you have the option of providing your email address. Your survey responses are not tied to your email and will remain anonymous. One respondent will receive the \$50 gift card.

**Survey**

**Demographic Questions**

*The following questions are designed to identify your ethnicity, gender, age, education, and experience. These characteristics help to give your responses context and meaning.*

1. What is your gender?  
 Male    Female
  
2. What is your age range?  
 18-25 years old    26-30    31-35    36-40  
 41-45    46-50    51-55    56+

3. What is your ethnicity?
- |   |  |
|---|--|
| <input type="checkbox"/> White or Caucasian                 | <input type="checkbox"/> Black or African American |
| <input type="checkbox"/> Hispanic or Latino                 | <input type="checkbox"/> Asian or Pacific Islander |
| <input type="checkbox"/> Native American or American Indian | <input type="checkbox"/> Multi-ethnic              |
| <input type="checkbox"/> Prefer not to answer               |  |
4. What is your highest completed level of education?
- High school or equivalent
  - Associates Degree or less than 4 years of college
  - Bachelor's Degree (B.A.)
  - Master of Ministry (M.Min.)
  - Master of Divinity (M.Div.)
  - Master of Theology (Th.M.)
  - Doctor of Ministry (D.Min.)
  - Doctor of Education (Ed.D.)
  - Doctor of Philosophy (Ph.D.)
5. What is your current status?
- Volunteer Youth Minister
  - Bi-Vocational Youth Minister
  - Part-time Youth Minister
  - Full-time Youth Minister
  - I am not currently serving as a Youth Minister
6. How many years have you served in your current ministry position?
- Less than 1 Year
  - 1 - 2 years
  - 3 - 4 years
  - 5 - 9 years
  - 10 - 15 years

- 16+ years
7. How many years have you served in youth ministry altogether?
- Less than 1 year
  - 1 - 2 years
  - 3 - 5 years
  - 6 - 10 years
  - 11 - 19 years
  - 20+ years
8. On average, how many students attend your ministry at least twice per month?
- 1 - 9 students
  - 10 - 29 students
  - 30 - 49 students
  - 50 - 74 students
  - 75 - 100 students
  - 100 - 200 students
  - 200+ Students
  - Prefer not to answer
9. What is the range of your yearly youth ministry budget?
- Less than \$1,000 or no official budget
  - \$1,000 - \$3,000
  - \$3,001 - \$5,000
  - \$5,001 - \$10,000
  - \$10,001-\$15,000
  - More than \$15,000
  - Prefer not to answer.

10. Was your major in a field outside of theological/ministerial education? If so, in what field of interest did you study?
- Theological/Ministerial
  - Accounting
  - Engineering
  - The Arts
  - Mass Communications
  - Education
  - Business
  - Medical
  - Public Service
  - Computer Science

### **Access and Support Questions**

*The following questions are designed to determine the influence of environmental factors related to technology-assisted ministry.*

11. Indicate which devices or software your current church provides you. *Check all that apply.*
- Desktop Computer
  - Laptop Computer
  - Wi-fi or Internet (Office)
  - Wi-fi (Ministry location - e.g. youth room)
  - Tablet
  - Smartphone
  - Digital Display (e.g. TV, Smartboard, Digital Projector)
  - Wearable Smart Devices (e.g. Apple Watch)



- Digital Camera
- Digital Video Camera
- Virtual Reality Glasses
- Creative Software (e.g. Photoshop, After Effects, FinalCut, Cinema4D)
- Student Management Software (e.g. Tracking Software - attendance, participation)

12. Rate the following individual's use of technology in their personal life?

HA = Highly Active; A = Active; SA = Somewhat Active; NA = Not Active; DNK = Do not know

	HA	A	SA	NA	DNK
Senior Pastor	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Students in your youth group	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Your own use	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

13. Rate your level of agreement with the following statements.

SA = Strongly Agree; A = Agree; D = Disagree; SD = Strongly Disagree; U = Uncertain

	SA	A	D	SD	U
In general, I believe there is a willingness in my church to be innovative in fulfilling its mission.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I have a strong support group or network of fellow ministers I interact with on a regular basis.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In general, I am expected to learn new technologies without any training at my church.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

14. When you have a technology-related need, problem or question, how helpful are the following people?

VH = Very Helpful; MH = Moderately Helpful; NH = Not Helpful; DNA = Does Not Apply

	VH	MH	NH	DNA
Senior Pastor	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Associate Pastor	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Media Minister	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other youth ministers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A student	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Administrative Staff	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ministry volunteers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

15. What policies does your church have in place regarding technology use?

- Detailed Policies (*e.g. concerning social media use; the copying, distributing, or displaying of copyrighted materials*)
- General Policies (*e.g. intentionally vague and inclusive*)
- No Policies.
- I do not know.

### Preparation for Technology Use Questions

*The following questions are designed to assess training and education regarding technology integration. For the online survey, abbreviated choices will be unabbreviated.*

16. Out of the following, what source would you attribute most of your understanding regarding integration of technology into ministry?

- Formal ministry training (*e.g. college, university, seminary*)
- Reading Print materials (*e.g. books, journals, magazines*)
- Online resources (*e.g. YouTube, blog articles, newsletters*)
- Observing others (*e.g. seminars, workshops, personal contacts*)
- Trial and Error (*e.g. experience*)

17. How frequently do you use statistical research relating to teenagers' use of technology to guide your ministry practice?

(e.g. census data, group surveys)

- Multiple times a year
- Once a year
- Occasionally
- Never or Almost Never

18. When did you receive the majority of your formal ministerial/theological training (e.g. college, seminary)?

- Starting Date \_\_\_\_\_
- End Date \_\_\_\_\_

19. In light of the existing technologies during your formal ministry training, how would you rate the instruction you received concerning their use at that time?

- |                          |                          |                          |                          |                          |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| Excellent                | Above Average            | Average                  | Below Average            | Poor                     |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

20. Rate your level of agreement according to the following statements. The term "school" refers to the location of your ministry training (e.g. college, university, seminary)

SA = Strongly Agree; A = Agree; D = Disagree; SD = Strongly Disagree; U = Uncertain

- |  |                          |                          |                          |                          |                          |
|--|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
|  | SA                       | A                        | D                        | SD                       | U                        |
| My school expected me to learn wise use of technology without providing formal training. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

	SA	A	D	SD	U
My school provided various opportunities for technology training.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In general, the professors at my school integrated technology into their instruction.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In general, the professors at my school provided examples of how to incorporate technology into the practice of ministry.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In general, the professors at my school did NOT discuss technology in any significant practical way.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In general, the professors at my school modeled the use of social media.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

21. Please provide any additional comments you may have about the influence of your professors' use of technology.

22. Rate your level of agreement according to the following statements concerning specific technologies during your formal ministry training.

SA = Strongly Agree; A = Agree; D = Disagree; SD = Strongly Disagree;  
U = Uncertain; N = Technology not available at that time

	SA	A	D	SD	U	N
My school provided guidance for interacting with teenagers with <i>text-based technologies</i> . (e.g. FB Messenger, Text Messaging, Twitter)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	SA	A	D	SD	U	N
My school provided guidance for interacting with teenagers with <i>image-based technologies</i> to interact with students. (e.g. PowerPoint, Snapchat, Instagram)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

My school provided guidance for interacting with teenagers with <i>video-based social media</i> to interact with students. (e.g. Podcasts, YouTube, Vimeo, Periscope)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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My school provided guidance for interacting with teenagers with <i>live-streaming services</i> to interact with students. (e.g. Facebook Live, YouTube Live)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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My school provided guidance regarding legal issues and the use of technology. (e.g. copyrights, risk-management)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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23. In your opinion, how can ministry schools better prepare future ministry leaders to address the challenges they face in the 21st century?

### **Confidence and Comfort Using Technology Questions**

*The following questions are designed to determine how comfortable you are using technology as well as how you are using those technologies in your ministry.*

24. As you consider your responsibility to engage teenagers, to what extent, if any, do you feel the following pressures in ministry?

NP = No Pressure; VLP = Very Little Pressure; SP = Some Pressure; ST = Strong Pressure

	NP	VLP	SP	ST
Use text-based messaging to interact with students. (FB Messenger, mobile texting)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Use image-based social media to interact with students. (e.g. Snapchat, Instagram)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Use video-based social media platforms to interact with students. (e.g. YouTube, Vimeo)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Use live-streaming to interact with students. (e.g. Facebook Live, YouTube Live)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

25. Rate the degree of success your youth ministry has had in integrating technology into ministry.

Unsuccessful	Moderate Success	Very Successful	Not interested
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

26. Based on perception of your group of students, what social media platform are your students MOST LIKELY to use?

- Social Networking Sites (Facebook, Google+, Myspace, etc.)
- Image-Based Platforms (Snapchat, Instagram, Pinterest, etc.)
- Video-Based Platforms (YouTube, Vimeo, Vine, etc.)

- Live-Stream Platforms (Facebook Live, YouTube Live, etc.)
- Text-based Platforms (Facebook Messenger, WhatsApp, Twitter, Tumblr, etc.)
- I don't know what they use.

27. How frequently do you support the following activities in your youth ministry?

YR = Yearly; MO = Monthly; WK = Weekly; MTW = More than once a week; DA = Daily; N = Never

	YR	MO	WK	MTW	DA	N
Produce multimedia lessons that use digital images, video, audio (e.g. PowerPoint, Keynote, ProPresenter)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Use texting to communicate with students.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	YR	MO	WK	MTW	DA	N
Use text-based mobile apps to communicate with students (Facebook Messenger, WhatsApp, Twitter, Tumblr, etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Use technology to assist you in maintaining student records	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Use technology for statistical analysis or evaluation (e.g. charting growth, attendance, characteristics)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Use technology for recreational purposes (e.g. games, entertainment)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	YR	MO	WK	MTW	DA	N
Use online collaboration tools (e.g. Google Docs, brainstorming, leadership meetings, event planning)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Use programs to produce video content (e.g. Adobe After Effects, Premiere; FinalCut Pro)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Use programs to produce pictures or artwork (e.g. Adobe Photoshop, Illustrator)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Use programs to produce paper-based products (e.g. newsletters, brochures, handouts)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Use technology for promotional purposes (e.g. ministry branding, events, series)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Use technology for expressive purposes (e.g. write a blog, podcast.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Use technology to research topics and gather information (e.g. Internet)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Use mobile apps for personal spiritual growth (e.g. Bible App, Church App, Scripture Memorization)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Build or maintain a website or webpage	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



28. Considering your ability, how comfortable are you personally using the following types of social media?

VC = Very Comfortable; C = Comfortable; U = Uncomfortable; VU = Very Uncomfortable

	V	C	U	VU
Social Networking Sites (e.g. Facebook, Google+)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Image-Based Platforms (e.g. Snapchat, Instagram)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Video-Based Platforms (e.g. YouTube, Vine)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Live-Stream Platforms (e.g. Facebook Live)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Text-based Platforms (e.g. FB Messenger, Twitter)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

29. Considering your philosophy of ministry, how comfortable are you using the following types of social media as a ministry tool?

VC = Very Comfortable; C = Comfortable; U = Uncomfortable; VU = Very Uncomfortable

	V	C	U	VU
Social Networking Sites (e.g. Facebook, Google+)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Image-Based Platforms (e.g. Snapchat, Instagram)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Video-Based Platforms (e.g. YouTube, Vine)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Live-Stream Platforms (e.g. Facebook Live)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	V	C	U	VU
Text-based Platforms	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(e.g. FB Messenger, Twitter)				

30. What are your potential concerns about using any particular social media as a ministry tool?

31. Rate your level of agreement according to the following statements.

SA = Strongly Agree; A = Agree; D = Disagree; SD = Strongly Disagree; U = Uncertain

	SA	A	D	SD	U
Learning new technologies that I can use in ministry is important to me.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I enjoy finding new ways that my students and I can use technology for ministry.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I regularly plan learning activities/lessons in which students use technology.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Students are more knowledgeable than I am when it comes to technology.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I try to model wise use of technology for my students.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

32. When I have a technological problem my first instinct is to...

- Experiment until I figure out a solution
- Read the instruction manual
- Ask someone for help
- Search the Internet (e.g. Google search, YouTube)
- Shop for new equipment

33. Rate your level of agreement according to the following statements. Technology...

SA = Strongly Agree; A = Agree; D = Disagree; SD = Strongly Disagree; U = Uncertain

	SA	A	D	SD	U
Technology improves my ability to successfully communicate complex principles.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Technology is unreliable.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Can increase students' spiritual growth.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hinders my ability to establish a strong sense of community in my youth ministry.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Promotes student engagement and participation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Is a valuable instructional tool	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Enhances my professional development	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Can accommodate students' personal learning styles.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	SA	A	D	SD	U
May be harmful to students' interpersonal skills (e.g., ability to relate or work with others, empathy).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### Technology Integration Needs Questions

*This final section is designed to determine areas training can be improved as it relates to addressing the challenges of integrating technology effectively.*

34. Assessing your needs, rate your level of agreement with the following statements.

SA = Strongly Agree; A = Agree; D = Disagree; SD = Strongly Disagree; U = Uncertain

	SA	A	D	SD	U
I need more time to learn to use digital applications.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I need more time to integrate technology into my instruction.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I need more training to use technology.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I need more support from church leadership when it comes to technology needs.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I need more access to technology tools to integrate in my instruction.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I need more opportunities to collaborate with others on how to use technology.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

35. Please list any other thoughts about technology needs, training, or assistance.

## APPENDIX B

### ETHICS COMMISSION PERMISSION



Approvals for Using Human Subjects in Research  
Southeastern Baptist Theological Seminary

**Researcher** Samuel E. Totman #000204363

**Research Type**     Student             Faculty             Institutional

**Human Subjects**     None             Ages 17 or Under     Ages 18 or Older

**Research Title**    Preparedness and Self-Efficacy Perceptions Regarding  
Technology Integration in Youth Ministry

Please initial each of the following statements as affirm with your full signature and enter the date signed

- X    I have accurately described the informed consent study to the best of my ability, and will implement incorporating modification as required.
- X    I understand that if I make changes and/or adjustments, approval of my Research Supervisor prior to the study is required.
- X    I understand that instrumentation developed for the study must be approved by my Research Supervisor.

  
Researcher/Team Representative

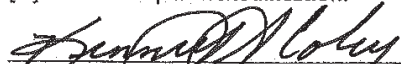
*See comments throughout survey. Question 16 asks participant to admit unethical if not illegal behavior. If it stays in, the survey is at least medium risk if not high risk. I'd omit it, or at least get Debra Hance's approval first. CL*

**SECTION BELOW FOR OFFICE USE ONLY**

The documentation of the research protocols submitted by the researcher/research team appropriately informs, acquires consents, and provides accommodations for the projects level/s of risk to human subjects participating in the study...

without required modification.

with required modification as attached.

  
Research Supervisor/Faculty Colleague

4/21/17  
Date

  
Research Ethics Committee

4/21/17  
Date

  
Provost *Sam*

4/21/17  
Date

Research Ethics Committee Assessment
<input type="checkbox"/> Low Risk
<input type="checkbox"/> Medium Risk
<input type="checkbox"/> High Risk

120 S. Wingate Street \* Wake Forest, NC 27587 \* [919-761-2100] \* www.sebts.edu

*Decision about question 16 must be made before determining risk. If it remains in, the survey is at least medium risk if not high. Assuming you will remove the question, I approve as revised. Student must re-do the survey and assessment form.*



**Assessments of Risk to Human Subjects**  
 Southeastern Baptist Theological Seminary

**Instructions**

Read each statement carefully, then mark with an "X" the level response for each item. Do not use "Y" or "N" as your

*The only medium risk item is #16 - How often do you copy an image w/out permission? see green Post it Note.*

RISK LEVELS				
High	Med	Low	NA	
			X	<b>Psychological Risk – mental stress and/or emotional distress</b> Subjects are to reflect upon their own behavior, values, relationships, or person in such a way that they are likely to be affected and/or long term.
	X			Subjects will reveal highly personal information in areas such as significant relationships, trauma, sexuality, potentially immoral, unethical, or illegal behavior.
			X	Subjects will give opinions or viewpoints on highly charged issues including but not limited to political, emotional, cultural, spiritual, or psychological matters.
			X	Subjects are to reflect upon their own behavior, values, relationships, or person in such a way that might result in anxiety, regrets, concerns, afterthoughts, or reactions after the procedure is completed.
			X	Subjects will reveal generally accepted personal information regarding individual viewpoints, background, behaviors, attitudes, or beliefs.
			X	Subjects will give opinions or viewpoints on sensitive matters including but not limited to political, emotional, cultural, spiritual, or psychological matters.
		X		Subjects are to give basic identifying information such as age, gender, ethnicity, and other general questions regarding non-personal information.
		X		Subjects will give opinions or viewpoints on common-place matters such as locality, general trends, or other benign topics.
	<b>1</b>	<b>2</b>	<b>5</b>	<i>Total the number of responses in each column for this area and enter here.</i>
<b>High</b>	<b>Med</b>	<b>Low</b>	<b>NA</b>	<b>Sociological Risk – relational stress and/or positional distress</b>
			X	Subjects may experience immediate and or long-term employment, political, legal, economic, and/or social consequences as a result of participating in the study.
			X	Subjects are required to reflect upon their own behavior, values, relationships, or person in such a way that might result in anxiety or concern regarding themselves in relationship to other persons and/or social groups.
		X		Subjects are to give opinions or viewpoints on common-place social relationships such as community characteristics, census-type data, general trends, or other benign topics.
		<b>1</b>	<b>2</b>	<i>Total the number of responses in each column for this area and enter here.</i>
<b>High</b>	<b>Med</b>	<b>Low</b>	<b>N/A</b>	<b>Physiological Risk – bodily harm to self and/or bodily harm to others.</b>
			X	Subjects may experience or be exposed to bodily harm as a result of the research and/or research methodology.
			X	Subjects may or be exposed to bodily harm as a result of participating in the gathering of data, such as entering high risk environments.
			X	Subjects may become tired or weakened physically or mentally in the completion of the research and/or research methodology.
			X	Subjects may become impatient as a result of the time involved in the completion of the research and/or research methodology.
			X	Subjects may become impatient as a result of environmental conditions endured in the completion of the research and/or research methodology.
			<b>5</b>	<i>Total the number of responses in each column for this area and enter here.</i>

**Instructions**

Read each statement carefully, then mark with an "X" either the non-shaded or not applicable (NA) risk level response for each item. Do not use "Y" or "N" as your response options.

RISK LEVELS				RISK AREAS
High	Med	Low	NA	
				<b>Spiritual Risk – individual stress and/or religious community distress</b>
			X	Subjects may experience immediate and/or long term negative consequences in their relationship to a religious community as a result of participating in the study.
			X	Subjects are required to reflect upon their own behavior, values, or relationships in such a way that might result in anxiety, regrets, or thoughts regarding their spirituality, or relationship with God.
			X	Subjects are required to reflect upon their own behavior, values, or relationships in such a way that might result in anxiety, regrets, or thoughts regarding their relationship with a religious community.
			X	Subjects are to give opinions or viewpoints on religious community belief systems and practices, characteristics, general religious community characteristics, and general religious community characteristics.
			5	Total the number of responses in each column.
High	Med	Low	N/A	<b>Vulnerability Risk – subjects under age 18</b>
			X	Subjects will be under the age of 18 regardless of their age.
			X	Subjects will be members of a vulnerable population and will be making decisions regardless of their age.
			2	Total the number of responses in each column.
High	Med	Low	NA	<b>Scoring – levels of risk by area</b>
	1	2	5	Psychological Risk totals from previous page.
		1	2	Sociological Risk totals from previous page.
			5	Physiological Risk totals from previous page.
			5	Spiritual Risk totals from this page.
			2	Vulnerability Risk totals from this page.
	1	3	19	Total – summary of levels of risk (see Interpretation of Total below)

← Q #16 requires at least a medium risk values here.

**Interpretation of Total**

**1 or more as High:** If you scored one or more items as "High", you must follow the *High Risk Informed Consent* protocols from the *Risk Assessment and Informed Consent Guide*.

**0 High, 1 or more as Medium:** If you scored no items as "High", but one or more items as "Medium," you must follow the *Medium Risk Informed Consent* protocols from the *Risk Assessment and Informed Consent Guide*.

**0 High, 0 Medium, 1 or more as Low:** If you scored no items as "High" or "Medium", but one or more items as "Low", you must follow the *Low Risk Informed Consent* protocols from the *Risk Assessment and Informed Consent Guide*.

**0 High, 0 Medium, 0 Low, 1 or more as Not Applicable:** If you scored no items as "High", "Medium", or "Low", but one or more items as "Not Applicable", you are encouraged to follow the *Low Risk Informed Consent Protocols* from the *Risk Assessment and Informed Consent Guide*.

END

## Reference

- Abramovic, S. (2006). Early algebra with graphics software as a type II application of technology. *Computers in the Schools* 22(3-4): 21-33.
- Alaniz, K and Wilson, D. (2015). *Naturalizing digital immigrants: The power of collegial coaching for technology integration*. Lanham, MD: Rowman & Littlefield.
- American Humanist Association. (1973). *Humanist manifesto II*. Retrieved from <https://americanhumanist.org/what-is-humanism/manifesto2/>
- Bacon, F. (2000). *The New Organon*, L. Jardine & M. Silverthorne (Eds.). Cambridge: Cambridge University Press.
- Bandura, A. (1986) *Social foundations of thought and action: A social cognitive theory*. Englewood Cliffs, NJ: Prentice-Hall.
- Bandura, A. (1997). *Self-efficacy: The exercise of control*. W.H. Freeman and Company.
- Bandura, A. & Jourden, F.J. (1991). Self-regulatory mechanisms governing the impact of social comparison on complex decision making. *Journal of Personality and Social Psychology*, 60, 941-951.
- Bauerlein, M. (2009). *The dumbest generation: How the digital age stupefies young Americans and jeopardizes our future, or don't trust anyone under 30*. New York, NY: Tarcher Penquin.
- Benedict XVI, Pope (2006). *Urbi et orbi message of his holiness Pope Benedict XVI*. Vatican City: Libreria Editrice Vaticana. Retrieved from [http://w2.vatican.va/content/benedict-xvi/en/messages/urbi/documents/hf\\_ben-xvi\\_mes\\_20061225\\_urbi.pdf](http://w2.vatican.va/content/benedict-xvi/en/messages/urbi/documents/hf_ben-xvi_mes_20061225_urbi.pdf)
- Berners-Lee, T. (n.d.). *Google search statistics*. Retrieved from <http://www.internetlivestats.com/google-search-statistics/>
- Black, M.H. (1963). The printed bible. *Cambridge History of the Bible, Volume 3: The West from the Reformation to the Present Day*, ed. S. L. Greenslade. Cambridge University Press.



- Bonawitz, E., Shafto, P. Gweon, H., Goodman, N., Spelk, E. & Schulz, L. (2011). The double-edged sword of pedagogy: Instruction limits spontaneous exploration and discovery. *Cognition* (2010), doi:10.1016/j.cognition.2010.10.001
- Bourgeois, D.T. (2013). *Ministry in the digital age: Strategies and best practices for a post-website world*. Downers Grove, IL: InterVarsity Press.
- Boyd, D. (2014). *It's complicated*. New Haven, CT: Yale Press.
- Carr, N. (2011). *The shallows: What the Internet is doing to our brains*. New York, NY: W.W. Norton & Company.
- Casas, M. (2002). *The use of Skinnerian teaching machines and programmed instruction in the United States*. Retrieved from <http://files.eric.ed.gov/fulltext/ED469942.pdf>
- Challies, T. (2011). *The next life: Life and faith after the digital explosion*. Grand Rapids, MI: Zondervan.
- Choney, S. (2013). No googling, says Google — unless you really mean it. *NBC News*. Retrieved from <https://www.nbcnews.com/tech/internet/no-googling-says-google-unless-you-really-mean-it-f1C9078566>
- Common Sense (2015). *Common Sense census: Media use by tweens (8-12 years old) and teens (12-18 years old)*. Retrieved from <https://www.commonsensemedia.org/research/the-common-sense-census-media-use-by-tweens-and-teens>
- Common Sense (2016a). Our mission. Retrieved from <https://www.commonsensemedia.org/about-us/our-mission>.
- Common Sense (2016b). *The Common Sense census: Media use of tweens and teens*. Retrieved from [https://www.commonsensemedia.org/sites/default/files/uploads/research/census\\_executivesummary.pdf](https://www.commonsensemedia.org/sites/default/files/uploads/research/census_executivesummary.pdf).
- Cook, B. F. (1987). *Greek inscriptions*. Berkeley, CA: University of California Press/British Museum.
- Crawford, T. (2012). *#Goingsocial: A practical guide on social media for church leaders*. Kansas City, AR: Beacon Hill Press.

- Davis, K. (2012). Friendship 2.0: Adolescents' experiences of belonging and self-disclosure online. *Journal of Adolescence* 35(6), 1527-1536. <https://doi.org/10.1016/j.adolescence.2012.02.013>
- Donnelly, G. (2017). *75 super-useful Facebook statistics for 2018*. Retrieved from <https://www.wordstream.com/blog/ws/2017/11/07/facebook-statistics>
- Dyer, J. (2011). *From the garden to the city: The redeeming and corrupting power of technology*. Grand Rapids, MI: Kregel Publications.
- Edison Research & Triton Digital. (2017). *The infinite dial 2017*. Retrieved from <http://www.rab.com/secure/radioDigital/Infinite-Dial-2017.pdf>
- Erikson, E. H. (Ed.). (1963). *Youth: Change and challenge*. Basic books.
- Erikson, E. H., and Erikson, J. M. (1998). *The life cycle completed*. New York, NY: W.W. Norton.
- Facebook (2017a). *Privacy basics*. Retrieved from <https://www.facebook.com/about/basics>
- Facebook (2017b). *Core audience*. Retrieved from <https://www.facebook.com/business/learn/facebook-ads-choose-audience>
- Facebook. (2017c), *Annual report 2016*. Retrieved from [https://s21.q4cdn.com/399680738/files/doc\\_financials/annual\\_reports/FB\\_AR\\_2016\\_FINAL.pdf](https://s21.q4cdn.com/399680738/files/doc_financials/annual_reports/FB_AR_2016_FINAL.pdf)
- Facebook. (2017d), *Statistics*. Retrieved from <https://newsroom.fb.com/company-info/>
- Fisher, K.E., Davis, K., Yip, J., Dahya, N., Mills, J.E., & Eisenberg, M.B. (2016). *Digital youth Seattle think tank* [White paper]. Retrieved November 17, 2017, from University of Washington Information School: <http://dystt.ischool.uw.edu/wp-content/uploads/2015/10/DigitalYouthSeattleThinkTank2016.pdf>
- Glaser, R. (1965). *Teaching machines and programmed learning, II: Data and directions*. Washington, D.C.: National Education Association of the United States.
- Google (n.d.). *From the garage to the googleplex*. Retrieved from <https://www.google.com/intl/en/about/our-story/>

- Grundwald Associates LLC. (2010). *Educators, technology, and 21st century skills: Dispelling five myths: A study on the connection between K-12 technology use and 21st century skills*. Retrieved from [http://www.grunwald.com/pdfs/Educators\\_Technology\\_21stCentury-Skills\\_GRUNWALD-WALDEN\\_Report.pdf](http://www.grunwald.com/pdfs/Educators_Technology_21stCentury-Skills_GRUNWALD-WALDEN_Report.pdf)
- Hafner, K. (2009, May). *Texting may be taking a toll*. New York Times. Retrieved from <http://www.nytimes.com/2009/05/26/health/26teen.html>
- Hipps, S. (2005). *The hidden power of electronic culture: How media shapes faith, the gospel, and church*. Grand Rapids, MI: Zondervan.
- Instagram. (2017). *Strengthening our commitment to safety and kindness for 800 million*. Retrieved from <http://blog.instagram.com/post/165759350412/170926-news>
- International Society of Technology for Education. (2016). *ISTE standards for students*. Retrieved from <http://www.iste.org/standards/standards/standards-for-students>.
- Isaacson, W. (2011). *Steve Jobs*. New York, NY: Simon & Schuster.
- Karabenick, S. A., Woolley, M. E., Friedel, J. M., Ammon, B. V., Blazevski, J. B., Boonney, C. R., et al. (2007). Cognitive processing of self-report items in educational research: Do they think what we mean? *Educational Psychologist*, 139-151.
- Kedrosky, P. (2007). The Jesus phone. *The Wallstreet Journal*. Retrieved from <http://www.wsj.com/articles/SB118308453151652551>
- Keller, T. (2009) *Counterfeit gods*. New York, NY: Dutton.
- Kissinger, J. S. (2013). The social & mobile learning experiences of students using mobile e-books. *Journal of Asynchronous Learning Networks*, 17(1), 155-170. Retrieved from <http://files.eric.ed.gov/fulltext/EJ1011365.pdf>
- Kopcha, T. (2010). A systems-based approach to technology integration using mentoring and communities of practice. *Educational Technology Research and Development* 58(2), 175-190.
- Lei, J., and Zhao, Y. (2007). Technology uses and student achievement: A longitudinal study. *Computers and Education*, 49, 284-296.

- Lenhart, A. (2015). *Teen, social media and technology overview 2015*. Pew Research Center. Washington, D.C. Retrieved from [http://www.pewinternet.org/files/2015/04/PI\\_TeensandTech\\_Update2015\\_0409151.pdf](http://www.pewinternet.org/files/2015/04/PI_TeensandTech_Update2015_0409151.pdf)
- Lochte, B. (2005). *Christian radio: The growth of a mainstream broadcasting force*. Jefferson, NC: McFarland & Company.
- Madden, M., Lenhart, A. Cortesi, S. Gasser, U., Duggan, M., Smith, A., and Beaton, M. (2013, May 21). *Teens, social media, and privacy*. Pew Research Center and Berkman Center for Internet & Society. Retrieved from [http://www.pewinternet.org/files/2013/05/PIP\\_TeensSocialMediaandPrivacy\\_PDF.pdf](http://www.pewinternet.org/files/2013/05/PIP_TeensSocialMediaandPrivacy_PDF.pdf)
- Mason, L. L. (2016). *Are we ready to web 2.0? web 2.0 in higher education classrooms* (Order No. 10099263). Available from ProQuest Dissertations & Theses Global: The Humanities and Social Sciences Collection. (1782296776). Retrieved from <https://search.proquest.com/docview/1782296776?accountid=130758>
- McLeod, S. A. (2013). *Erik Erikson*. Retrieved from [www.simplypsychology.org/Erik-Erikson.html](http://www.simplypsychology.org/Erik-Erikson.html)
- McLuhan, M. and McLuhan, E. (2007). *Laws of media: The new science*. Univ. of Toronto Press.
- McLuhan, M. (1964) *Understanding media: The extensions of man*. Retrieved from <http://web.mit.edu/allanmc/www/mcluhan.mediummessage.pdf>
- Mone, M.A., Baker, D.D., & Jeffries F. (1995). Predictive validity and time dependency of self-efficacy, self-esteem, personal goals, and academic performance. *Educational and Psychological Measurements*, 55, 716-727.
- Moore-Hayes, C. (2011). Technology integration preparedness and its influence on teacher-efficacy. *Canadian Journal of Learning and Technology*, 37(3), 1-15. Retrieved from <http://files.eric.ed.gov/fulltext/EJ960790.pdf>
- Norman, D. (2013). *The design of everyday things*. New York, NY: Basic Books.
- Odom, J. (2012). *A study of the impact of mobile phones as learning tools for youth*

- in Southern Baptist churches* (Doctoral dissertation). Retrieved from ProQuest Dissertations and Theses. (Accession Order No. AAT 3535543)
- O'Reilly, T. (2005, September 30). *What is Web 2.0: Design patterns and business models for the next generation of software* [Web log post]? Retrieved from <http://oreilly.com/web2/archive/what-is-web-20.html>
- Pajares, F., & Kranzler, J. (1995). Self-efficacy beliefs and general mental ability in mathematical problem-solving. *Contemporary Education Psychology*, 20, 426-443.
- Pajares, F., & Miller, M.D. (1994a). Role of self-efficacy and self-concept beliefs in mathematical problem-solving; A path analysis. *Journal of Educational Psychology*, 86, 193-203.
- Palfrey, J. G., & Gasser, U. (2008). *Born digital: Understanding the first generation of digital natives*. New York, NY: Basic Books.
- Palfrey, J. & Gasser, U. (2016). *Born digital: How children grow up in a digital age*. New York, NY: Basic Books.
- Plano Clark, V. L. & Creswell, J. W. (2007) *The mixed methods reader*. Los Angeles, CA: Sage Publications.
- Plato & Hamilton, W. (1973). *Phaedrus and the seventh and eighth letters*. Harmondsworth, England: Penguin.
- Postman, N. (1992). *Technopoly: The surrender of culture to technology*. New York, NY: Vintage Books.
- Postman, N. (1998a). *Five things we need to know about technological change*. Retrieved from <http://web.cs.ucdavis.edu/~rogaway/classes/188/materials/postman.pdf>
- Postman, N. (1998b). Technology and Society [Television broadcast]. In n.p., *American perspectives*. Washington, D.C.: C-SPAN. Retrieved from <https://www.c-span.org/video/?98576-1/technology-society&start=2>
- Prensky, M. (2012). *From digital natives to digital wisdom: Hopful essays for 21st century learning*. Thousand Oaks, CA: Corwin.

- Przybylski, A. K., & Weinstein, N. (2012). Can you connect with me now? How the presence of mobile communication technology influences face-to-face conversation quality. *Journal of Social and Personal Relationships*, 30(3), 237–246., doi:10.1177/0265407512453827.
- Rainie, L., & Anderson, J. (2017). *The internet of things connectivity binge: What are the implications?* Pew Research Center. Retrieved from [http://www.pewinternet.org/2017/06/06/the-internet-of-things-connectivity-binge-what-are-the-implications/pi\\_2017-06-06\\_future-of-connectivity\\_0-01/](http://www.pewinternet.org/2017/06/06/the-internet-of-things-connectivity-binge-what-are-the-implications/pi_2017-06-06_future-of-connectivity_0-01/)
- Rice, J (2009). *The church of facebook: How the hyperconnected are redefining community*. Colorado Springs, CO: David C. Cook.
- Rosen, C. (2007, Summer). Virtual friendship and the new narcissism. *The New Atlantis*. p. 15-31. Retrieved from <https://www.thenewatlantis.com/publications/virtual-friendship-and-the-new-narcissism>
- Samuel F. B. Morse Papers at the Library of Congress, 1793 to 1919* [collection]. (n.d). Retrieved from <https://www.loc.gov/collections/samuel-morse-papers/articles-and-essays/invention-of-the-telegraph/>
- Shaw, M. H., & Shaw, B. B. (2003). Copyright in the age of photocopiers, word processors, and the Internet. *Change: The Magazine Of Higher Learning*, 35(6), 20-27.
- Solove, D.J. (2004). *The digital person: Technology and privacy in the information age*. New York, NY: NYU Press.
- Surrey, J.L. (2015). Relational psychotherapy, relational mindfulness. In C.K. Germer, R.D. Siegel, & P.R. Fulton (Eds.), *Mindfulness and psychotherapy* (91-110). New York: Gilford Press.
- Turkle, S. (1995). *Life on the screen: Identity in the Age of the Internet*. New York, NY:

Simon and Schuster.

Turkle, S. (2011). *Alone together: Why we expect more from technology and less from each other*. New York, NY: Basic Books.

Turkle, S. (2015). *Reclaiming conversation: The power of talk in a digital world*. New York, NY: Penguin Press.

Volti, R. (2014). *Society and technological change*. (7th ed.). New York, NY: Worth Publishers.

Wade, J. (2017). *How to use snapchat marketing in 2018 as part of your social media strategy*. Retrieved from <https://www.smartinsights.com/social-media-marketing/social-media-strategy/snapchat-statistics-2017/>

Wise, J. (2014). *The social church: A theology of digital communication*. Chicago, IL: Moody Publishers.

Wood, R.E., & Bandura, A. (1989). Social cognitive theory of organizational management. *Academy of Management Review*, 14, 361-384.

Zsupan-Jerome, D. (2014). *Connected toward communion: The church and social communication in the digital age*. Collegeville, MN: Liturgical Press.